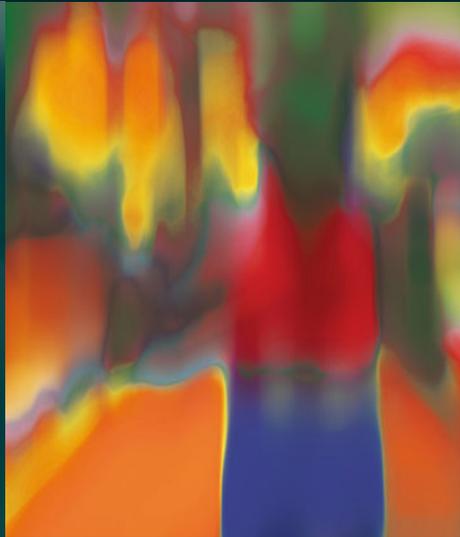


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Ina Wunn · Davina Grojnowski

# ANCESTORS, TERRITORIALITY, AND GODS

A Natural History  
of Religion

 Springer

# THE FRONTIERS COLLECTION

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Ina Wunn · Davina Grojnowski

# ANCESTORS, TERRITORIALITY, AND GODS

A Natural History of Religion

 Springer

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# Acknowledgements

The German predecessor of this book is called “Götter, Gene, Genesis. Die Biologie der Religionsentstehung”. The main topic was and still is the development of religion overall, the first beginnings of what we would call a “belief in something”, and subsequently also the further development of these primary notions of belief.

In contrast to all previous current approaches which attempt to explain religion in a rather monocausal manner and which frequently reach rather fascinating results which unfortunately are only convincing in regard to one specific culture or for a certain historical period, “Götter, Gene, Genesis” was based strictly on empirical data only—initially on palaeo-anthropological data and then on archaeological findings. This information is now—and this is also novel—not interpreted individually and separately but instead the data are brought together in a context of historical development.

The basis of this approach, again, is an observation, namely the observation that religions change. We can trace these changes and can observe them from historical times until today. Ultimately, we have subjected religions to a hypothesis of actualism, in order to research their developments and to explain them (the expression was coined by the geologist Charles Lyell; such a hypothesis was the scientific-theoretical basis for his postulate of earth’s history, thus the basis for our modern conviction that animate and inanimate nature develops). In order to be allowed to do so correctly from a scientific point of view, I (Ina Wunn) had already developed a scientific-theoretical model of the evolution of religions, whose basic principles we (the authors of “Götter, Gene, Genesis”) presented briefly. Thus, if the famous evolutionary biologist Theodosius Dobzhansky writes: “Nothing in biology makes sense except in the light of evolution”,<sup>1</sup> then this must also be relevant for the early history of religions. The results at least are almost as revolutionary as the biology of 150 years ago: viewed from the perspective of a natural,

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<sup>1</sup>Dobzhansky, Theodosius (March 1973). Nothing in Biology Makes Sense Except in the Light of Evolution. *American Biology Teacher* 35(3): pp. 125–129.

organic development, it becomes clear that the corpulent colossal statues of Malta cannot be anything else except ancestral figures and that the double spirals on Malta's sanctuaries cannot be anything else except patterns of eyes, modified as defined by cultural ethology! The frequent and disturbing cases of decapitation and the manipulation of skulls dating back to prehistory suddenly make sense, and so do all the different female figurines and amulets from the Upper Palaeolithic through to the Neolithic.

The reactions to our German book were correspondingly positive. However, it also became clear that perhaps the rather short methodological overview was not as helpful or illuminating for a reader not versed in the philosophy of science and specifically in evolutionary biology. Consequently, the authors of the present book have attempted to rectify this. In "Ancestors, Territoriality, and Gods. A Natural History of Religion", we emphasise a methodological focus, in so far as that the respective approaches from behavioural biology, art history, cultural anthropology, and of course evolutionary biology are presented more clearly and in great detail. This, however, meant that the original, German work has had to be rewritten extensively. In terms of the aims of the book and its results, namely the attempt to explain and to describe the origins and evolution of religion, the German and the English versions do not differ; and this book also owes numerous passages to the co-authors of the German work, highlighted throughout the book; we would like at this point again to express our utmost gratitude.

We also thank Rüdiger Vaas, Springer, who took it upon himself to read critically the German edition and who kindly pointed out the passages and scientific details rather difficult to digest. We have done our utmost to remedy the flaws!

Lastly, we kindly thank Springer Publishers for their excellent assistance which made writing this book a pure pleasure, especially Dr. Angela Lahee as well as Frank Wigger and Bettina Saglio.

Hannover  
Frankfurt am Main  
April 2016

Ina Wunn  
Davina Grojnowski

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# Chapter 1

## Of Men and Apes

### Gorillas in the Mist

Eastern Congo, Virunga Mountains: high mountains, dense jungle atmosphere. In the background the mighty Nyiragongo volcano, whose lava buried the city of Goma only a few years ago, and who still today emits the occasional grumble. Once in a while, the volcano erupts in a dark grey cloud of ashes which gently rains down onto the thick canopy of trees. Even though the sun has already risen over the horizon, inside the forest it remains dim and quiet, an untouched and virginal nature. A pearly mist rises from damp hollows in the ground and forms a thin veil between the high tree trunks.

Suddenly loud noises disrupt the idyllic scene of this primeval paradise, branches are broken under heavy footfalls; with loud snorts and screeching something large, strong, and heavy forces its way through the jungle. Birds take flight as the shrubs are torn apart and HE emerges—a mighty silverback, absolute ruler over a harem of gorilla females and their offspring. Carefully he notes the surrounding scents, moves aside the dense shrubs, and analyses the surroundings before he emerges onto the clearing and safely leads his group forwards. Here the young bamboo grows plentifully, a delicious treat, and with evident contentment the females and young children of the group devour the juicy plants. The silverback also helps himself, grabbing at the bamboo shoots, whose soft centre he clearly enjoys. Nevertheless, he conscientiously interrupts his meal from time to time to eye the area and ensure its safety, allowing his family to enjoy their meal. Soon the pups are satisfied and begin to play; the air is filled with shrieks and quarrels, until one of the females loses her patience and smacks one of the noisy brats. Sulking and grumbling, the delinquent pulls back. Another pup, still very small, lies down on a soft grassy patch, pushes its thumb into its mouth, and sucks contentedly.



**Fig. 1.1** Silverback at Virunga-Rainforest, Kongo (© Davina Grojnowski)

Slowly the entire group quietens down; everyone is content and satisfied and rests a while before the silverback encourages his group to make their way back (Fig. 1.1).<sup>1</sup>

Separated only by a mountain ridge, there is another clearing, this one lined with low, round huts built from loose branches and leaves. A few women are working next to the fire, cooking roots in the hot ashes, whilst the children entertain themselves with the imitation of animal sounds; loud laughter rewards the more successful attempts. In some distance three young men squat over the earth. They are dressed with only a loincloth fashioned out of bast, made of gently softened tree bark. Between their hands they turn a web made of bark fibers, containing a brown, damp mass of plant matter. They catch the juices with a large leaf. Arrowheads are dipped into the extract and heated over the open fire. All this is done with great care, because these plant juices are poison, similar to the South American curare. If such an arrow merely scratches the skin of its prey, complete paralysis sets in within seconds; the animal falls to the ground and can be killed without danger to the hunter. After a successful hunt these hunters will disembowel their prey and place a part of its heart into the forest, as a thank offering for the forest who gave them their food. Later, a member of the group will bring out a set of drums, another a stringed instrument, and others will dance to the music, because singing and dancing is their passion and also pleases the forest (Fig. 1.2).

The jungle is home and habitat for both gorillas and pygmies, providing them with sustenance and security. This is where they live; the silverback with his harem and offspring, and the small group of humans; they hunt for their daily food, protect

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<sup>1</sup>Wunn, Ina (2014). *Feldforschungen in Ostafrika*. Manuscript.



**Fig. 1.2** Pygmies at Mount Hoyo, Kongo (© Karl Ulrich Petry, with kind permission)

themselves from possible danger, and raise their children. Sometimes their behaviour is so similar—for example when gorilla babies and human babies suck their thumbs or mothers lose their temper—that the boundaries between man and animal seem to fade. This was already noted by the famous primatologist Dian Fossey, who at times thought of her charges as the better humans.<sup>2</sup> And yet there remains one significant difference: gorillas do not pray, and neither do our closer relatives, the chimpanzees.

## More About the Mbuti-Pygmies

The Mbuti-Pygmies, foragers, live in the north-easterly part of the large equatorial rainforest, which politically belongs to the Democratic Republic of the Congo. There they live in band societies of about seven to at the most 30 core families in light, simply built, half-round huts, support themselves by hunting and gathering, and cover an area which can be measured by several days' march. The society of the Mbuti-Pygmies is an egalitarian one. Adult males and females are both equally responsible for the children and subsistence activities; children support the adults according to their abilities, and the elderly have the right to be looked after by the

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<sup>2</sup>Fossey, Dian (1983). *Gorillas in the Mist*. London: Penguin.

community. The entire group hunts together, especially when hunting with nets. The men are positioned next to the nets, set up in a half-circle, and the women drive the prey into the nets. After a successful hunt there follows an extensive discussion as to how to divide the prey amongst all families to ensure an acceptable division, a manoeuvre which allows the group to avoid dispute and conflict. Should however disagreements arise, or should the group become too big, each individual is free to leave the group at any time and join a neighbouring band. Such a change also frequently takes place without any previous disagreements, so that the constellation of the groups is flexible. The main constant therefore are the hunting grounds, whose borders are permanent, while the members of the bands which use these grounds are interchangeable.

In this habitat, the rainforest with its mild temperatures—the temperature under the thick canopy measures a comfortable 27 °C year-round—and the dense population of huntable wildlife alongside edible plants guarantees the Mbuti-Pygmyies a secured existence; the low population density and the mobile life-style successfully prevent parasite infestation and the eruption of epidemics, a constant danger for the nearby Bantu settlements along the large thoroughfares.

The religion of the Mbuti-Pygmyies is as uncomplicated as their daily life. The forest, which supplies them with everything they need for survival, gains a dimension which transcends the perception of the purely materialistic—the forest has anthropomorphic features and is referred to as mother and father who watches over his children, the Mbuti.<sup>3</sup> Consequently, their prayers are directed towards the forest, and when a series of mishaps strikes the small community, this can only be understood as the forest sleeping and thus logically it must be awakened. This occurs within the framework of a large festival, the *molimo*-festival. In the course of this usually several weeks-long festive period, the Mbuti hunt more than their usual quota and the prey serves as food for communal meals in the evenings; song and dance supply the entertainment and encourage a festive atmosphere, pleasing the forest. An important method of communication with the forest is the *molimo*-trumpet, which is only played by the grown men at the times of a *molimo*-festival. At this time, women and children stay in their huts. Seen from a social aspect, the *molimo*-festival serves to strengthen the community in the wake of possible misfortunes or fatalities and to restore the harmony within the group. Despite some few constants and symbolic actions in the course of the festival—such as the playing of the trumpet or the quenching and restarting of the campfire—the sequence of the festival does not follow any rules; instead, the forest is entertained by new methods, its benefactions are prayed for directly without any larger ceremonial background.<sup>4</sup>

We know of another, larger Mbuti festivity; the only festival which relates to life's different stages, and which can be understood as a transition in the sense of

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<sup>3</sup>Turnbull, Colin M. (1963). *Molimo. Drei Jahre bei den Pygmäen*. Köln: Kiepenheuer & Witsch, pp. 101–103.

<sup>4</sup>Quack, Anton (2004). *Hexer, Heiler und Schamanen. Die Religion der Stammeskulturen*. Darmstadt: Wissenschaftliche Buchgesellschaft, pp. 44–46.

van Gennep's thesis. A brief overview here might be in order: Arnold van Gennep in his seminal, if initially overlooked study *Les rites de passage* (1909), recognised that not only are transitions in human life (seasonal, professional, or personal) generally accompanied by rituals, but that these so-called *rites de passage* display a common pattern and structure.<sup>5</sup> In this case, the *elima*-festival relates to the physical maturity and marriageability of young women, who with the onset of menstruation move into a hut with other young women and there are taught everything they need to know about sexuality, pregnancy, and motherhood by the elder women of the community—including the knowledge of certain herbs to prevent illness or a pregnancy. In this time the unmarried young men court the girls, there is an air of sexual freedom, and future partnerships are formed. The search for characteristic phases of a typical rite of passage, as described by van Gennep and also Victor W. Turner,<sup>6</sup> however remains futile, as does the search for any symbolic actions or the reference to ultimate values or even any constant ritual actions. It is merely the *elima*-songs and dancing in and for the forest which have their firm place in this period. The social component is evident: the bond between the young women and their families is loosened, while simultaneously the social cohesion is strengthened. From a religious perspective, the forest is understood by the Mbuti as a pervasive “life and salvation providing reality,” which leads to a primeval trust and offers security in all crises of human life.<sup>7</sup>

## What Is Religion?

This brief description of the religion of the Mbuti-Pygmyies on a tributary of the Congo is more than just ethnological colouring outlining the question asking for the origins of religion. Firstly: when and why during the long process of hominization did what we now refer to as religion come into being? Why are humans, in this case the Mbuti specifically, able to perceive of the forest as a higher reality, which can be approached, spoken to, interacted with, but gorillas and chimpanzees cannot? The obvious answer would be that despite all their impressive abilities and similarities with humans, gorillas and chimpanzees remain fundamentally different; they are not intelligent enough and not capable of symbolic thoughts, aspects which remain fundamental for religious ideas.<sup>8</sup> Each and every analysis discussing the origins of

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<sup>5</sup>Van Gennep, Arnold (1909). *Les rites de passage. Étude systématique des rites*. Paris: Ed. de la Maison des Sciences de l'Homme.

<sup>6</sup>Turner, Victor W. (1957). *Schism and Continuity in an African Society. A Study of Ndembu Village Life*. Manchester: University of Manchester Press.

<sup>7</sup>Literally: “[die] zu einem Grundvertrauen führt und die Sicherheit in allen Krisen des menschlichen Lebens gibt”. Quack, Anton (2004). *Hexer, Heiler und Schamanen. Die Religion der Stammeskulturen*. Darmstadt: Wissenschaftliche Buchgesellschaft, p. 43.

<sup>8</sup>The decisive developmental steps are explained by Tomasello, Michael (1999). *The cultural origins of human cognition*. London/Cambridge, Mass: Harvard University Press.

religion must therefore apply itself to the question of determining the period when humans began to demonstrate the intellectual faculties allowing for religious thoughts and actions.<sup>9</sup> However, the fact that the religion of hunters and gatherers, such as our ancestors, or for example that of the Mbuti, does not leave behind any specifically religious artefacts in the sense of sacrificial altars or even ritual space, but on the contrary does not offer any physical evidence, allows for speculation concerning the origins of religion; for example, the assumption has been voiced that ritualised communicative behaviour automatically results in rituals, thus religion,<sup>10</sup> or the statement that humans (a member of the genus *Homo*) must automatically have been religious when they undertook any activities which surpassed the bare minimum necessary for survival.<sup>11</sup>

Both theories however are easily rebutted. Firstly, today at least not all people are religious. Especially in Europe we find regions in which religiosity only

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<sup>9</sup>Bouzouggar, A., N. Barton, M. Vanhaeren, F. d'Errico, S. Collcutt, T. Higham, E. Hodge, S. Parfitt, E. Rhodes, J.-L. Schwenninger, C. Stringer, E. Turner, S. Ward, A. Moutmir, and A. Stambouli (2007). 82,000-year-old shell beads from North Africa and implications for the origins of modern human behavior. *Proceedings of the National Academy of Science USA* 104(24): pp. 9964–9969.

d'Errico, Francesco (2008). *Le Rouge et le Noir: Implications of Early Pigment Use in Africa, the Near East and Europe for the Origin of Cultural Modernity*. *South African Archaeological Society Goodwin Series* 10: 168–174.

d'Errico, Francesco, Chris Henshilwood, and Peter Nilssen (2001). An engraved bone fragment from c. 70,000-year-old Middle Stone Age levels at Blombos Cave, South Africa: implications for the origin of symbolism and language. *Antiquity* 75: 309–318.

d'Errico, Francesco, Chris Henshilwood, Michael Vanhaeren, and K. van Nierkerk (2005). Nassarius kraussianus shell beads from Blombos Cave: evidence for symbolic behaviour in the Middle Stone Age. *Journal of Human Evolution* 48: 3–24.

Henshilwood, Chris, Francesco d'Errico, R. Yates, Z. Jacobs, C. Tribolo, G.A.T. Duller, N. Mercier, J.C. Sealy, H. Valladas, I. Watts, and A.G. Wintle (2002). Emergence of Modern Human Behaviour: Middle Stone Age Engravings from South Africa. *Science* 295: 1278–1280.

Henshilwood, C.S., F. d'Errico, and I. Watts (2009). Engraved ochres from the Middle Stone Age levels at Blombos Cave, South Africa. *Journal of Human Evolution* 57: 27–47.

Hovers, E., S. Ilani, O. Bar-Yosef, and B. Vandermeersch (2003). An Early Case of Color Symbolism. Ochre Use by Modern Humans in Qafzeh Cave. *Current Anthropology* 44(4): 491–522.

Mackay, A. and Welz. 2008. Engraved ochre from a Middle Stone Age context at Klein Kliphuis the Western Cape of South Africa. *Journal of Archaeological Science* 35: 1521–1532.

Mayer, D.E.B.-Y., B. Vandermeersch, and O. Bar-Yosef (2009). Shells and ochre in Middle Paleolithic Qafzeh Cave, Israel: indications for modern behavior. *Journal of Human Evolution* 56: 307–314.

Wilkins, J. (2010). Style, Symboling, and Interaction in Middle Stone Age Societies. *vis-à-vis: Explorations in Anthropology* 10(1): 102–125.

<sup>10</sup>Rossano, Matt J. (2010). *Supernatural selection: How religion evolved*. Oxford: Oxford University Press.

<sup>11</sup>Eliade, Mircea (1978). *Geschichte der religiösen Ideen. Von der Steinzeit bis zu den Mysterien von Eleusis*. Freiburg: Herder, pp. 17–20.

constitutes the exception, for example in Scandinavia, and even more so in Eastern Germany.<sup>12</sup> Thus, if people nowadays do not necessarily believe in something, it is difficult, if not impossible, to see why religious notions must have been part of the state of mind of our ancestors.

Therefore, religion must have come into being at some point—at a certain point in time and for an equally specific reason. And this reason is not, as occasionally suggested in contemporary publications, the ritualization of human communication, because not every ritual has a religious context. On the contrary, both secular and even laical modern states with their military parades or the ceremonial welcome of a foreign head of state as well as our daily communication, for example mutual greetings including doffing a hat, a smile, a handshake, all know of a multitude of ritualised behaviour, even transition rituals, for example a graduation at school, which nowadays in no manner includes any religious content.<sup>13</sup>

Religion thusly does not equal ritual. Admittedly, a large part of human communication can and must be ritualised when the communication with the other side is essential, if any misunderstandings in communication are to be avoided. This is especially pertinent if the counterpart is an entity with supernatural abilities, for example an ancestor, a spirit, or a deity. This is the reason why many rituals can be found in a religious context, and why strict adherence is of extreme importance in many religions. This however does not mean that each religion necessarily must be connected with a ritual, or rather with ritualised cultic behaviour,<sup>14</sup> and the reverse conclusion, that everything which includes ritualised behaviour must consequently be religion, is equally wrong and not helpful, at the very least in the search for the origins of religion.<sup>15</sup>

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<sup>12</sup>Steinfels, Peter (February 28, 2009). Scandinavian Nonbelievers, Which Is Not to Say Atheists. In: New York Times, New York edition, p. A16.

Pickel, Gert (2010). Säkularisierung, Individualisierung oder Marktmodell? KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie Volume 62, Issue 2, pp. 219–245.

Pickel, Gert (2009). Secularization as a European Fate?—Results from the Church and Religion in an Enlarged Europe Project 2006. In: Pickel, Gert and Olaf Müller: Church and Religion in Contemporary Europe. Results from Empirical and Comparative Research. Heidelberg: Springer, pp. 89–122.

<sup>13</sup>Rothenbuhler, Eric W. (1998). Ritual Communication. From Everyday Conversation to Mediated Ceremony. Thousand Oaks, California/London: Sage Publications.

<sup>14</sup>Today more so than ever, the so-called “spirituality”, a variation of the religious, which has decidedly rejected all religious organisation, consciously subsists without any rituals. Streib, Heinz and Hood, Ralph W. (2011). “Spirituality” as Privatized Experience-Oriented Religion: Empirical and Conceptual Perspectives, in: *Implicit Religion* 14.4, pp. 433–453.

<sup>15</sup>The discussion concerning the relevance of the ritual arose when the theologian and orientalist William Robertson Smith correctly pointed out that the contemporaneous religious research focussed too strongly on the investigation of religious texts, and neglected the study of religious actions. Robertson-Smith, William (1889). *Lectures on the religion of the Semites. First Series: The fundamental institutions* (Burnett Lectures 1888/89). London: Black. Meanwhile, an opposing trend is evident, namely a one-sided emphasis on rituals neglecting the importance of sacred lore. The consequence is a blurred, indistinct concept of religion, which on the one hand understands religion as the presence of ritualistic actions, but on the other hand excludes the “belief in

This is especially evident if we return to the Mbuti and their religion, because the fact that they have a religion cannot be doubted. The forest for them constitutes not only their habitat which sustains them, but they also attribute to the forest anthropomorphic features and human-like characteristics and sentience. In the case of any misfortune, the forest must be asleep and therefore needs to be awakened. Song and dance are employed for the pleasure of the forest, he accepts sacrificial offerings, and he receives prayers. For the Mbuti, the forest not only has a spiritual dimension, as also for the poets of the German Romanticism or the *Naturphilosophen* of the late 18th century, but he also carries the clear features of a very concrete supernatural entity—the Mbuti “believe” in the forest. This belief in “postulated transempirical powers or beings”<sup>16</sup> or, more specifically, „alle Vorstellungen, Einstellungen und Handlungen gegenüber jener Wirklichkeit, die Menschen als Mächte oder Macht, als Geister oder auch Dämonen, als Götter oder Gott, als das Heilige oder Absolute oder schließlich auch nur als Transzendenz annehmen und benennen“, ultimately constitutes religion.<sup>17</sup> And exactly this is the question which is of interest in connection with the origins of religion: how and why did it occur that humans at some point in the course of their developmental steps began to believe in spirits, deities, supernatural ancestors, in an omnipotent invisible god, or the redemptive powers of a Bodhisattva? This belief in something, which at least for those people raised in the western scientific tradition does not exist or whose existence cannot be determined with scientific methods, this “credo quia absurdum”,<sup>18</sup> is what has fascinated researchers, from the philosophers of history of the Reformation, to the so-called Evolutionists, up until the contemporary representatives of evolutionary psychology and cognitive science.<sup>19</sup> Expressed in the words of an archaeologist: “How can the human mind... believe in religious ideologies when not a trace of these are found in the chimpanzee, our closest living relative?”<sup>20</sup>

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(Footnote 15 continued)

something”, or rather replaces this with arbitrary ultimate values—whereby these ultimate values can also be the ideology of a state or even a sports club. Bell, Catherine (1997). *Ritual. Perspectives and dimensions*. New York/Oxford: Oxford University Press, pp. 128–135, 154.

<sup>16</sup>Definition by Geertz, Armin (1999). Definition as an empirical strategy in the study of religion. *Historical Reflections/Reflexions Historiques* 25(3), pp. 445–475.

<sup>17</sup>“All notions, attitudes, and actions in the face of this reality which humans appreciate and nominate as spirits or demons, as gods or God, as the holy or absolute, and ultimately only as the transcendent”; Antes, Peter: Article Religion, religionswissenschaftlich In: *Evangelisches Kirchenlexikon* Vol. 3, Göttingen 1992, p. 1543.

<sup>18</sup>V. Soden, Hans (1927). Article Credo quia absurdum. In: *Religion in Geschichte und Gegenwart*, 2nd edition, Vol.1. Tübingen: Mohr, p. 1741.

<sup>19</sup>Geertz, Armin (2015). Religious Belief, Evolution of. In: James D. Wright (ed.) *International Encyclopedia of the Social & Behavioral Sciences*, 2nd edition, Vol. 20. Oxford: Elsevier, p. 384 (384–395).

<sup>20</sup>Mithen, Steven (1996). *The prehistory of the mind. The cognitive origins of art and science*. London: Thames and Hudson., p. 9.

## Religion and Environment

So, we are searching for the cause and origins of this belief in trans-empirical powers. The short discourse on the religion of the Mbuti has shown that religion, this “belief in something”, is closely connected to the way of life of the believers. In the case of the Mbuti, who live in closest symbiosis with the forest, it is the natural environment which plays the crucial role for their world view. Religion therefore always has a clear reference to lived reality. Religion, so the sociologist of religion Volkhard Krech, “as a part of the cultural processing of primary experiences” relates to the “elementary conditions and powers of human life”.<sup>21</sup>

The same observation had been made half a century earlier by Åke Hultkrantz (1920–2006). He noted that not only were social organisations and economy important for the cosmic worldview of an ethnos, but that also simultaneously the natural environment had a decisive influence. In his research on the religion of the peoples living in the Arctic, Hultkrantz pointed out the similarities of their religious ideals and notions, a similarity which cannot be traced back to a possible relationship between the different peoples and consequently must have developed in dependence of the natural environment.<sup>22</sup> This reference to a scholar who has wrongly been overlooked during the last years is extremely important in the present context because the close connection between the world view and habitat of a people is usually disregarded in more recent publications on the origins of religion, which can easily lead to premature conclusions.<sup>23</sup>

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<sup>21</sup>Literally: “[Religion]als Teil der kulturellen Verarbeitung von Primärerfahrungen[ ist abhängig von den] elementaren Bedingungen und Kräften menschlichen Lebens”. Krech, Volkhard (2002). *Opfer und Heiliger Krieg: Gewalt aus religionswissenschaftlicher Sicht*, in: Heitmeyer, Wilhelm/Hagan, John (eds.): *Internationales Handbuch der Gewaltforschung*, Wiesbaden: Verlag für Sozialwissenschaften, pp. 1255–1275.

<sup>22</sup>Hultkrantz, Åke (1962). *Die Religion der Lappen*. In: Ivar Paulson, Åke Hultkrantz and Karl Jettmar: *Die Religionen Nordeurasiens und der amerikanischen Arktis*. Reihe *Die Religionen der Menschheit*, edited by Christel Matthias Schröder. Stuttgart: Kohlhammer, pp. 283–303.

Hultkrantz, Åke (1962). *Die Religion der amerikanischen Arktis*. In: Ivar Paulson, Åke Hultkrantz and Karl Jettmar: *Die Religionen Nordeurasiens und der amerikanischen Arktis*. Reihe *Die Religionen der Menschheit*, edited by Christel Matthias Schröder. Stuttgart: Kohlhammer, pp. 357–415.

Karl Jettmar, co-editor, writes: „Die Darstellungen von... Hultkrantz sind ‚phänomenologisch‘ ausgerichtet; sie bemühen sich um die Darlegung des jeweiligen ökologischen Hintergrundes.“ (The depictions by Hultkrantz are “phenomenologically” aligned; they endeavour to present the respective ecological backgrounds.) Jettmar, Karl (1962). *Die Aussage der Archäologie zur Religionsgeschichte Nordeurasiens*. In: Hultkrantz, Åke (1962). *Die Religion der Lappen*. In: Ivar Paulson, Åke Hultkrantz and Karl Jettmar: *Die Religionen Nordeurasiens und der amerikanischen Arktis*. Reihe *Die Religionen der Menschheit*, edited by Christel Matthias Schröder. Stuttgart: Kohlhammer, p. 307 (307–356).

<sup>23</sup>Thus, Jean Clottes’ and David Lewis-Williams’ attempt to reconstruct the religion of the hunters during the Late Palaeolithic by means of a comparison with the San, living in southern Africa today, but without considering that the respective natural landscapes differ greatly and that both cultures are separated by 30,000 years of historical development. Clottes, Jean and David

While the relevance of the natural environment for the manifestation of a religion was for a long time underestimated, other parameters, specifically economy and social organisation, quickly became the focus of science, encouraged by the fact that with the Reformation the absolute belief in the literal truth of the bible, also in a scientific sense, was severely shaken. During the French Revolution, the mathematician and philosopher Antoine de Condorcet (Marie Jean Antoine Nicolas Caritat, Marquis de Condorcet, 1743–1794) concluded from his research into the course of human history that the entire human development progressed through 10 stages, from the primitive band society enthralled by magical practices over the polytheistic empires of antiquity to the lofty heights of an enlightened republican era. These historical epochs are characterised by Condorcet by means of the level of development in the areas of social organisation, economy, and the sciences, and the respective advances are clearly reflected by the respective stage of religion. Thus, it is the different societies with a certain social organisation and the corresponding economic form for whom a certain type of religion is characteristic.<sup>24</sup> Condorcet's ideas were entirely compliant with the contemporaneous notions of biology, a time at which for example the famous biologist and mastermind of evolutionist thought Jean Baptiste de Lamarck (Jean-Baptiste Pierre Antoine de Monet, Chevalier de Lamarck, 1744–1829) formulated an original theory of transmutation of species assuming that creatures in the course of their phylogenetic development change from primitive origins to ultimately highly complex creatures due to an inherent urge for perfection. The logical consequence of such ideas of natural development in the sense of an automatic ascending development was to assume a similar perfectionism for humans—which is exactly what Condorcet did (Fig. 1.3).

Condorcet's stage model of the social and religious development was so convincing that it became the base of all future historical philosophical models, amongst which August Comte's *Law of Three Stages* even today remains extremely influential.

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(Footnote 23 continued)

Lewis-Williams (1998). *Shamans of Prehistory: Trance and Magic in the Painted Caves*. New York: Harry N. Abrams.

<sup>24</sup>Condorcet, Antoine de (1976). *Entwurf einer historischen Darstellung der Fortschritte des menschlichen Geistes*, edited and commented by Wilhelm Alff, Frankfurt.

Montesquieu himself had already included the description of non-European societies in his analysis of historical change, in order to deduce the conditions for the appearance of certain social and political phenomena. Voltaire continued this approach and, with the inclusion of the contemporaneous extensive travel literature attempted a full historical theory. The discovery that the living conditions of the Native North Americans were in many aspects similar to those of Ancient Greece was generalised by Condorcet to a law of an uneven and, more importantly, non-contemporaneous course of history. Thus, Condorcet was able to include the non-European people into his general development scheme and to highlight certain developmental stages. The world's present condition therefore demonstrates the entire historical progress of humanity, beginning with the Stage of Barbarism through to the heights of civilisation. This approach remained determinative not only for the historical philosophical and sociological theories of his spiritual descendants such as Herbert Spencer, but also shaped theories of religious development from the 19th century until today.

**Fig. 1.3** Jean Baptiste de Lamarck (From © J. Pizzetta, Galerie des naturalistes 1893)



## Stages of the Development of Religion

Based on Condorcet, the mathematician and founder of sociology Auguste Comte (Isidore Auguste Marie François-Xavier Comte, 1798–1857) developed his *Law of Three Stages*, on which all modern, so-called evolutionary models in the study of religions are ultimately based.<sup>25</sup> As its name suggests, the orderly process of human history develops through three stages, the *Theological stage*, the *Metaphysical*, and the *Positivity stage*. The first stage, the theological, is distinguished by the human soul’s search for the intrinsic nature of things, for the original causes, and the sense of the world. The *beginnings* of this stage, which in itself can further be separated into three stages, marks the “Condition of Fetishism”, during which all natural and artificial things are considered to possess spirits. Comte gathered several of the characteristics of this most primitive religion together: a priestly class and any manner of religious organisation were still unknown, as were deities with a larger scope of responsibility or more defined characteristics, and, in a political sense, he noted the lack of government. The Fetish Stage was, according to Comte, subsequently replaced by the Polytheistic Stage, as a consequence of natural development. The Greek deities of earth and ocean clearly demonstrate this transition from an ensouled item towards an independent deity. From a social aspect, polytheism was distinguished by an early grouping into social classes. First can be traced the separation of a priestly class, concerned only with speculative and aesthetic problems. A worldly power emerged from the leaders of clans and warfare, which on the lower end of the social spectrum was opposed by slaves. A cult developed in religious life, whose regular festivities now held a binding social function. Ultimately, from the concept of fate, and its personalisation as a deity, monotheism developed out of polytheism. On a political level, a fundamental aspect of monotheism here was the separation of religious and secular power. Politically, the equivalent of the *Monotheistic stage* was the feudal system, which emerged from

<sup>25</sup>For more detail, see Wunn, Ina (2002). *Die Evolution der Religionen*. Habilitationsschrift, UB/TIB Hannover. <http://edok01.tib.uni-hannover.de/edoks/e01dh04/473535297.pdf>.

antiquity's shattered empires. But also this third sub-stage of the *Theological stage* ultimately expired, because the assumption of a single deity led to philosophic speculation, which in turn led towards theories of *Naturphilosophie* (roughly: the philosophy of nature) and the realisation of the Laws of Nature—the *Theological stage* was replaced by the *Metaphysical stage*, which in terms of social organisation was marked by the dissolution of the old structures and politically by a growing despotism. Protestantism especially, as a characteristic religious development with its doctrine of a freedom of belief and thought, contributed to the destruction of the previous power balance, as now dogma no longer judged the validity of a construct of ideas, but instead in principle all philosophical notions, theological and political, could equally claim recognition. The final stage, the *Positivity stage*, according to Comte, is achieved when any metaphysical speculation has been replaced through positive knowledge. A precursor and driving force of this development is firstly industry, followed subsequently by the complex sciences.<sup>26</sup>

Comte's *Law of Three Stages*, only briefly summarised here, is by no means only of interest for the history of science, but on the contrary extremely important in the search for the origins of religion. Comte emphasises, just as his precursor Condorcet did, the relationship between the forms of religion and society. Fetishism, so Comte, is characteristic for band societies—although we have seen in the case of the Mbuti that Comte, who admittedly based his theory only on a European development, was mistaken—while polytheism was characteristic for the early stratified societies comprised of priestly class, rulers, and slaves, and monotheism related to a feudal society. Expressed differently: a certain form of society can only have an equally definite form of religion! The economic and social environment consequently is just as determinative for the form of religion as the natural environment. The search for a polytheistic pantheon therefore amongst the foraging cultures and at the beginning of the development of any religion must remain futile. We can afford to be more specific at this stage: a mother goddess or a goddess with her son and lover, known for example in the ancient cults of Attis and Kybele or Ishtar and Tammuz, cannot have stood at the origins of religion.

The importance attributed to Comte's *Law of Three Stages* in religious science is evident in that leading religious sociologists consciously build on Comte in their notions of the historical development of religions, such as the renowned American sociologist Robert N. Bellah (1927–2013). In contrast to Comte, however, Bellah, who focuses on the religions themselves and not like Comte on the social progress, distinguishes five developmental stages, of which the first three (the stages of *primitive religion*, *archaic religion*, and *historic religion*) are identical with Comte's three sub-stages of the *Theological stage*, above. Equally similar are Comte's *Metaphysical* and Bellah's *early modern stages*. Only in regards to the final stage, Comte's *Positivity stage*, does Bellah reach entirely different conclusions, influenced of course by more recent religious developments: instead of a

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<sup>26</sup>Comte, Auguste (1842). *Cours de philosophie positive*, édition originale en six tomes. Paris: Rouen Frères.

positivist world view, in which religion no longer plays a part, Bellah sees the retention of religion's importance, although here religion is no longer governed by an institution, but becomes a private matter. His characterisation of the first stage of religious development, referred to as *primitive religion*, is also much more insightful than Comte's as Bellah does not limit himself to a European development, but instead, in the vein of Condorcet, includes non-European religions as well. Accordingly, both human and animalistic ancestors play the driving force in *primitive religion*, whose powers and abilities overcome the measure of human power, but who nevertheless are not considered deities. The myth links man and ancestor with the world. The ritual is characteristic for religious actions during which the acts of the mythical creatures are repeated. Society is not stratified; everyone enjoys the same rights and responsibilities, bar only possible age or gender-related specifics. Only the *archaic religion*, the second stage of religious development, knows of a real cult with deities, priests, worship, possible sacrifices, and divine or priestly royalty. Mythical creatures acquire more definition, they are attributed with certain features, they have a personality. Humans can turn to them, can interact with them, but can no longer become one with them as part of a ritual. The relationships amongst the deities themselves and their responsibility for a certain aspect of the world become the content of religious speculation and systematisation. The relationships between humans and these deities are structured with the help of communication systems, represented through worship, sacrifice, and prayer. In order to maintain this communication, a special priestly class becomes necessary. The divine order encompasses the created cosmos as much as the deities themselves, men, and nature, so that there are barely any differences between religious commandments and social norms. Social conformity is secured through religious sanction. The next stage consists of the *historic religions*. For the first time, the empirical world steps in next to the entirely different world of religious reality. The focus of religious life is no longer focused onto the here and now, but onto the afterlife, life after death. Religious actions therefore resolutely concentrate on salvation. Religious and political hierarchies are now separated. The dual class system of antiquity is replaced by a four-class system, in which a cultural-religious and a cultural-military class emerge, along with an urban and a lower, rural class. The era of an early modern religion is marked by the collapse of the hierarchical structuring of the religious and the political world, just as we have seen in Comte's metaphysical stage. Salvation can no longer be found in escapism, but instead must be sought by acting in the here and now. Early modern symbolism discussed the direct relationship between the individual and transcendental reality. Hierarchy is similarly eliminated in forms of religious organisation. The two levels of religious qualification were replaced by the differentiation between the Chosen and the Rejected. The former four-class system dissolves and is replaced by a multi-centric type of social organisation. Church and state receive their own areas of authority, even though the church retains its role as ethical approval authority, until this stage itself is replaced with the briefly described stage of the *modern religion*.

## The Driving Force of Development

Far from being merely an excursus into the history of the sociology of religion, this overview from Condorcet over Comte to Bellah—of course there are many more who can be included—demonstrates that the contents of religions, that religious symbolic systems, are in no manner a random occurrence, but rather that they are closely related with the economic system, the social organization of the respective ethnos or group, and their natural landscape. If we apply a biological terminology, we would say that the respective natural, social, and economic environment exerts a selection pressure onto the concrete religion, which in turn adapts itself to its respective environment.<sup>27</sup> This biological terminology could be paradoxical or appear to be out of place in the context of religions, if not Bellah himself had progressed down this route, a step towards a biological point of view. Just as his precursor Condorcet, Bellah also understood the developmental history of religions as an evolutionary process, i.e. as the result of a natural, teleological process which progresses almost automatically. The driving force of this process, according to Bellah, is no longer Lamarck's understanding of an inherent progressiveness, which leads towards a more and more rational understanding of reality with the rise in human intelligence, but instead an equally automatic process of differentiation. Thus we read in Bellah's paradigmatic essay of 1964: "Evolution at any system level I define as a process of increasing differentiation and complexity of organization which endows the organism, social system or whatever the unit in question may be, with greater capacity to adapt to its environment so that it is in some sense more autonomous relative to its environment than were its less complex ancestors".<sup>28</sup>

Bellah's belief to have found in the automatic process of differentiation the perpetuum mobile and simultaneously the characterizing feature of religious evolution is borrowed from the great British philosopher and sociologist Herbert Spencer (1820–1903). Spencer was an enthusiastic follower and defendant of the evolutionary thought as formulated by Lamarck and also his contemporary Etienne Geoffroy Saint-Hilaire (1772–1844), and understood the concept as the key to any form of development, making these differentiation processes responsible both for biological and social developments—just as Bellah would do a century later: "This is the history of all organisms whatever. It is settled beyond dispute that organic progress consists in a change from the homogenous to the heterogeneous".<sup>29</sup>

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<sup>27</sup>For the Neolithic, this argument is stressed by Gebel, Hans-Georg K. (2014). *Territoriality in Early Near Eastern Sedentism*. *Neo-Lithics* 2/14, pp. 23–44; especially p. 29.

Lewis-Williams, David and D. Pearce (2005). *Inside the Neolithic Mind: Consciousness, Cosmos, and the Realm of Gods*. London: Thames and Hudson.

<sup>28</sup>Bellah, Robert N. (1964). *Religious Evolution*, in: *American Sociological Review*, Vol. 29, No. 3, p. 358 (pp. 358–374).

<sup>29</sup>Spencer, Herbert (1857/1915). *Progress: Its Law and Cause*. In: Herbert Spencer, *Essays: Scientific, Political, and Speculative*. Volume 1. New York: Appleton, p. 12.

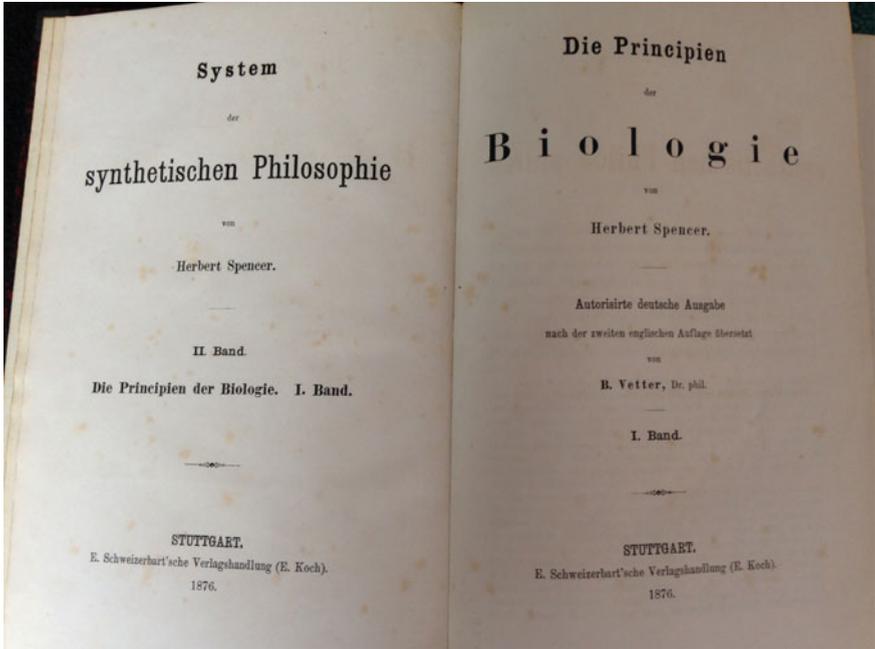


Fig. 1.4 Herbert Spencer's principles of biology, German edition

Spencer substantiated his claims of an orderly and straightforward development of social organizations in the course of human history from the simple to the differentiated forms with the help of a detailed analysis of the different social forms. In doing so, Spencer did not stop at a mere description, but assigned these social forms to different stages of differentiation, and simultaneously interpreted this change of forms as the progress of civilization. With this interpretation of the diversity of human communities under the viewpoint of a rising differentiation of the social organization, Spencer not only described the evident fact of diversity with scientific terminology, but also included an implicit judgment. Those peoples living close to nature during his times therefore found themselves at the lower scale of the development spectrum, thus are backward in their development and to be considered as a form of living fossils allowing an unimpeded view back into the prehistory of human development—but this is in fact pure Lamarckism! Effectively, Spencer, who enthusiastically welcomed Darwin's *Origin of Species*, never understood the fundamental difference between his own Lamarckian understanding of evolution (as an ultimately teleological, thus ascending and goal-oriented process) and Darwin's theory of natural selection (Fig. 1.4).<sup>30</sup>

<sup>30</sup>Wunn, Ina (2002). Die Evolution der Religionen. Habilitationsschrift, UB/TIB Hannover. <http://edok01.tib.uni-hannover.de/edoks/e01dh04/473535297.pdf>.

A further assumption growing out of the biological discussions of the 19th century also entered into the social sciences through Spencer and ultimately found its way into the religious science to Bellah, and that is the question of the evolving unit, which we shall focus on further below in more detail. The evolving, thus changing, unit for Bellah is clearly the notion of religion. It is thus, and for our present discussion this is of the utmost importance, religion itself which develops with the processes of differentiation, and not, as suggested by many so-called evolutionary models discussed nowadays, a developing humanity for whom religiosity represents a selective advantage.<sup>31</sup> Now, when compared to the abundance of biological species, the number of religions referred to by Spencer, and subsequently also by Bellah, the *primitive, archaic, historic, early modern, and modern* religion appear almost laughably few in number. Why? The famous French natural scientist Etienne Geoffroy Saint-Hilaire already in 1795 ventured forth the opinion that all the different forms belonging to a certain species were instead the degenerated forms of a single type.<sup>32</sup> Thus, in Spencer's theory the different religions within a developmental stage are ultimately only variations of a single religion, or, again expressed in a biological manner, religio-species—just as they can be found in Bellah's paradigmatic article *Religious Evolution*.<sup>33</sup>

This marks the end of our brief excursus into the history of the evolutionary thought, which, as mentioned above, helps to clarify how and through what kinds of questions certain ideas develop in science, how they assert themselves, and how they are passed through the generations without their preconditions being reexamined—and thereby possibly standing in the way of new realizations.

## Temporary Results and New Questions

Previous religio-scientific designs concerned with the question of the evolution of religion are thus based on older ideas of an ascending development of religion, which itself can be traced back to pre-Darwinian understandings of evolution in biology and therefore from our contemporary perspective must be considered lacking in all issues relating to the actual processes of evolution in the larger sphere of religions. Specifically: evolutionary accounts in the study of religion until today have not been able to demonstrate what the one original religion could have looked

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<sup>31</sup>Kundt, Radek (2016). *Contemporary Evolutionary Theories of Culture and the Study of Religion*. London, Oxford, New York, New Delhi, Sydney: Bloomsbury.

<sup>32</sup>Darwin, Charles (1872). *The Origin of Species by Means of Natural Selection*, London: John Murray, p. XIV.

<sup>33</sup>In his book *Religion in Human Evolution* (2011), a very broad and comprehensive presentation of his thoughts from 1964, religion itself no longer evolves, but man. However, this decisive paradigm shift in fact does not find any resonance in the results. Bellah, Robert N. (2011). *Religion in Human Evolution. From the Paleolithic to the Axial Age*. London/Cambridge, Mass.: Belknap Press.

like, nor can they show—again, to be specific—in what relationship the religion of Neolithic Malta stands with the contemporaneous religions in the Mediterranean, nor can it explain how the sacrificial cults of Ancient Greece are to be understood. In short: the actual historical relations between the individual religions have been disregarded by the previous models. But these relationships, these historical developmental connections, are in fact relevant both for the question of a possible evolution of religions as well as for the subsequent search for the origins of religion. Only if we know the actual historical development of religions, their family tree so to speak—and especially the laws which govern this development—can we trace back the course of the history of religion into these earliest of times. Only then do we know for what kind of interpretable indices, artefacts, and religious fossils to search for.

In this case, to once again refer to an example from the field of biology, palaeoanthropological discoveries and archaeological cultures are our fossils with whose help we can reconstruct the evolution of a religion, or even that of a whole family of religions. Therefore, when in the course of the present discussion reference is made to archaeological cultures, this does not imply that this is an analysis of archaeology or palaeoanthropology, but rather that the progress of religious evolution is being traced with the help of these cultures, our “religious fossils”.

Another brief remark regarding the stage models discussed above: it is important not to underestimate the momentous contributions of these social and religious-scientific evolution models despite the above-mentioned criticism. Here mention must be made of the realization that the respective economic and social environment is decisive for a religion—not for the specific contents, but for the type or stage of religion. Thus even though an egalitarian society, i.e. socially not stratified, of hoe cultivators conducting snake rituals such as are known amongst the Hopi in New Mexico, multi-level internments such as those among the Toraja on Sulawesi, the large puberty festivals of the Makonde of Eastern Africa, the Katchina dolls of the Hopi, the TauTau figures of the Toraja, and the Makonde Lipico masks from an evolutionary viewpoint stand in absolutely no relation to one another in any manner, i.e. cannot be traced back to one common religion, they all do in fact have one feature in common, namely an entity in the typology of religion, or, in Comte’s terms, the religious stage. All three examples listed here, the religions of southern North America, the Indonesian Archipelago, and Eastern Africa, belong to the Bellah’an stage of *primitive religion*, which is to say that they do not have a polytheistic pantheon with defined deities, but instead their cosmos is ruled by over-dimensional ancestral figures who in the mythical, primeval times had created the world order, an order which with the help of rituals must be renewed over and over again. This realization is of unmeasurable value if we discuss, for example, the reconstruction of Neolithic religions, let us say on Malta. The obese colossal rock sculptures cannot, as is constantly asserted, represent a mother goddess, because an egalitarian society of hoe cultivators did not know of such a type of religion—social forms and religious forms are not cohesive, and thus do not allow such an interpretation (Fig. 1.5).



**Fig. 1.5** A typical religion of socially non-stratified hoe cultivators. The Lipico dancer of the Makonde in Eastern Africa wears a mask which identifies him as a representative of the powerful ancestral world (© Karl Ulrich Petry with permission)

A further fundamental concern must not be neglected, namely the above-mentioned question of what exactly is meant to evolve: does humanity evolve, or the human species, such as more recent publications have asserted?<sup>34</sup> In this case,

<sup>34</sup>Wunn, Ina (2016). The Crux of a Darwinian Approach on Evolution: What is Evolution, and what did evolve? In: Hartung, Gerald & Matthias Hergen (eds.) *Interdisziplinäre Anthropologie. Jahrbuch 3/2015: Religion und Ritual*. Wiesbaden: Springer, pp. 83–98.

Kundt, Radek (2015). *Contemporary Evolutionary Theories of Culture and the Study of Religion*. London [et al.]: Bloomsbury.

the focus lies on an aspect of the cultural evolution of man and the question if and in how far the cultural evolution has replaced the genetic. This was Condorcet's concern, and for him it was evident that the automatic development towards more intelligence, as a consequence of man's inherent drive to perfection, was the driving force of this evolution of human society, including religion. It cannot of course be doubted that in some aspects, religion can be of the utmost importance for the success or failure of a group. However, such an analysis would then focus on the evolution of man and describe the change in human society, but not the change of religion itself. Expressed differently: if the question focuses on which advantage a religious world view holds for the evolution of man, then the focus rests on humans and their evolutionary success; religiosity becomes merely a positive characteristic relevant in the selection process of humans, such as for example the ability of adult Europeans to digest dairy (an advantage in a diet rather lacking in protein) or their lighter skin able to synthesize Vitamin D in a natural environment with weaker light penetration. The dynamics of religions themselves, the change of their characteristics, cannot be included in such an approach.<sup>35</sup>

Robert Bellah's earlier article of 1964 is different: for him, religions change, a change instigated by changing selective constraints in parallel with the economic and social changes of the respective society. For Bellah, the respective social and economic environment (he disregards the natural environment) exert corresponding selective constraints onto the respective religion and forces it to adapt. The consequence, that this adaptation via a process of differentiation must lead to an automatic, higher development, lastly is an inheritance of the underlying, outdated Lamarckian ideas.

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<sup>35</sup>Kundt, Radek (2015). *Contemporary Evolutionary Theories of Culture and the Study of Religion*. London: Bloomsbury, pp. 65–74.

## Chapter 2

# The Crux of a Darwinian Approach to Evolution

### Evolution—What Is It?

The search for the origins of religion to date has remained futile, or at the very least unsatisfactory, as either the definition and concept of religion used was unclear,<sup>1</sup> as it was never clarified what exactly was evolving—man or religion?,<sup>2</sup> or an outdated notion of evolution was used, as a teleological process, which can ultimately be traced back to Lamarck.<sup>3</sup> In addition, the issue is further complicated by the fact that many humanists are not even aware of the difficulty. So what then is evolution?

The biological evolution describes changes of organisms in the history of the earth, beginning with the first living organism. We cannot directly trace these changes, but merely reconstruct them based on processes observable today. Strictly

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<sup>1</sup>For example: Rossano, Matt J. (2010). *Supernatural Selection. How Religion Evolved*. Oxford: Oxford University Press.

<sup>2</sup>Kundt, Radek (2016). *Contemporary Evolutionary Theories of Culture and the Study of Religion*. London, Oxford, New York, New Delhi, Sydney: Bloomsbury.

Geertz, Armin W. (2015). Religious Belief, Evolution of. In: *International Encyclopedia of the Social & Behavioral Sciences*, Second Edition, pp. 384–395.

Feierman, Jay R. (2009). How Some Major Components of Religion Could Have Evolved by Natural Selection? In: Eckart Voland/Wulf Schiefenhövel (eds.) *The Biological Evolution of Religious Mind and Behavior*. Dordrecht, Heidelberg, New York, London: Springer, pp. 51–66.

<sup>3</sup>See, for example, Bellah, Robert N. (1964). Religious Evolution, in: *American Sociological Review*, Vol. 29, No. 3, p. 358 (pp. 358–374).

Bellah, Robert N. (2011). *Religion in Human Evolution. From the Paleolithic to the Axial Age*. Cambridge, Mass. and London: The Belknap Press of Harvard University Press.

speaking, evolution is “a story to explain what we observe. It is an explanation of the hierarchic encaptic system of species, in which some species seem to be closer related to each other than others.”<sup>4</sup> What we see today is in fact a hierarchical-encaptic system of similarities between these organisms: organisms can be assigned to groups based on their similarities, and these groups in turn can be integrated into groups on a higher level based on their respective similarities.<sup>5</sup> If one takes these groups and relates them to one another chronologically, the result is a picture of a complex, ramified tree, the tree of life. This genealogical tree can only be explained by the fact that the vast diversity of fossils and recent organisms known today ultimately all emerged from one principal form—and thus we are faced with the search for the mechanisms responsible for this process.

Famous natural scientists of the late 18th and early 19th centuries were preoccupied by this quest for the mechanisms responsible for the changes in species, which Lamarck thought to have answered with his hypothesis of transformation. Even though Lamarck’s theory was brilliant in some aspects and fully in line with his times—especially his notion of an automated process of increasing complexity—nevertheless it lacked strength especially when searching for the mechanisms of evolution, which Lamarck himself wanted to trace back to this automated perfectionism; he was unable to convince science in the long term. The British natural scientists Charles Darwin and Alfred Russel Wallace were ultimately responsible for the discovery of these mechanisms; in their famous joint paper of 1858, they recognised selection in the sense of a natural selection as the decisive mechanism for change.<sup>6</sup> The theory of natural selection only became popular, however, with Charles Darwin’s *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*. Darwin primarily based his theory of a slow and natural change in species in the history of Earth on two factors: the variability of phenotypes as well as the preferential treatment of those individuals who demonstrate certain advantageous deviations from the norm by the process of a

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<sup>4</sup>„Evolution ist eine Geschichte, die wir erdacht haben, um das zu erklären, was wir beobachten. Es kann sich dabei um die Erklärung der Existenz von Fossilien handeln, die den heutigen Organismen unähnlich sind. Oder um eine Erklärung für das deutlich hierarchisch gegliederte System der Arten, in dem sich einige ‚näher‘ stehen als andere. Oder um Organe, die heute offensichtlich zu nichts gut und kaum anders zu interpretieren sind, als dass es sich um Spuren vorheriger evolutionärer Stadien handelt.“ Zrzavý, Jan, Hynek Burda, David Storch, Sabine Begall und Stanislav Míhulka (2009). *Evolution. Ein Lese-Lehrbuch*. Heidelberg: Springer Spektrum, pp. 8–9.

<sup>5</sup>The Swedish natural scientist Carl von Linné (1707–1778) in his seminal essay *Systema naturae* introduced a new type of classification into the field of zoology, which is based on a consistent subordination of categories of different grades. Jahn, Ilse and Schmitt, Michael (2001). Carl Linnaeus (1707–1778). In: Ilse Jahn and Michael Schmitt (eds.) *Darwin & Co. Eine Geschichte der Biologie in Portraits*. München: Beck, pp. 9–30.

<sup>6</sup>Darwin, Charles; Wallace, Alfred Russel (1858). *On the Tendency of Species to form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection*, *Zoological Journal of the Linnean Society* 3: 46–50, doi:[10.1111/j.1096-3642.1858.tb02500.x](https://doi.org/10.1111/j.1096-3642.1858.tb02500.x), retrieved 14 January 2007.

continuous selection. Here, with the expression of a “struggle for existence”, Darwin describes the individual’s fight for survival, but emphasized that he understood the expression in a purely metaphorical sense and in no manner wanted it to be misunderstood as a fight of everyone against each other.<sup>7</sup> Instead, the imbalance between a large number of descendants and the available resources, a phenomenon evident especially in nature, plays an important role which ultimately leads to the death of numerous individuals. For Darwin, such causes are the limited amount of food, the competition between competing species, the climate, and especially predators who can decimate a species. The constant fight for survival must lead to the death of those varieties of a species who are the least adapted to their environment. In addition to natural selection, Darwin emphasised the aspect of a sexual selection, in contrast to Wallace. This he understands as a competition of same-sex individuals within a species for a suitable sexual partner, which leads to a selection of certain characteristics and therefore to a significant change in their habitus.<sup>8</sup> Only those individuals can procreate and successfully pass on their characteristics to the next generation who are the most successful in the daily competition for limited resources such as sustenance, sexual partners, nesting, and accommodation. This selection must lead to changes in the habitus of any species when measured over a long period of time (Fig. 2.1).

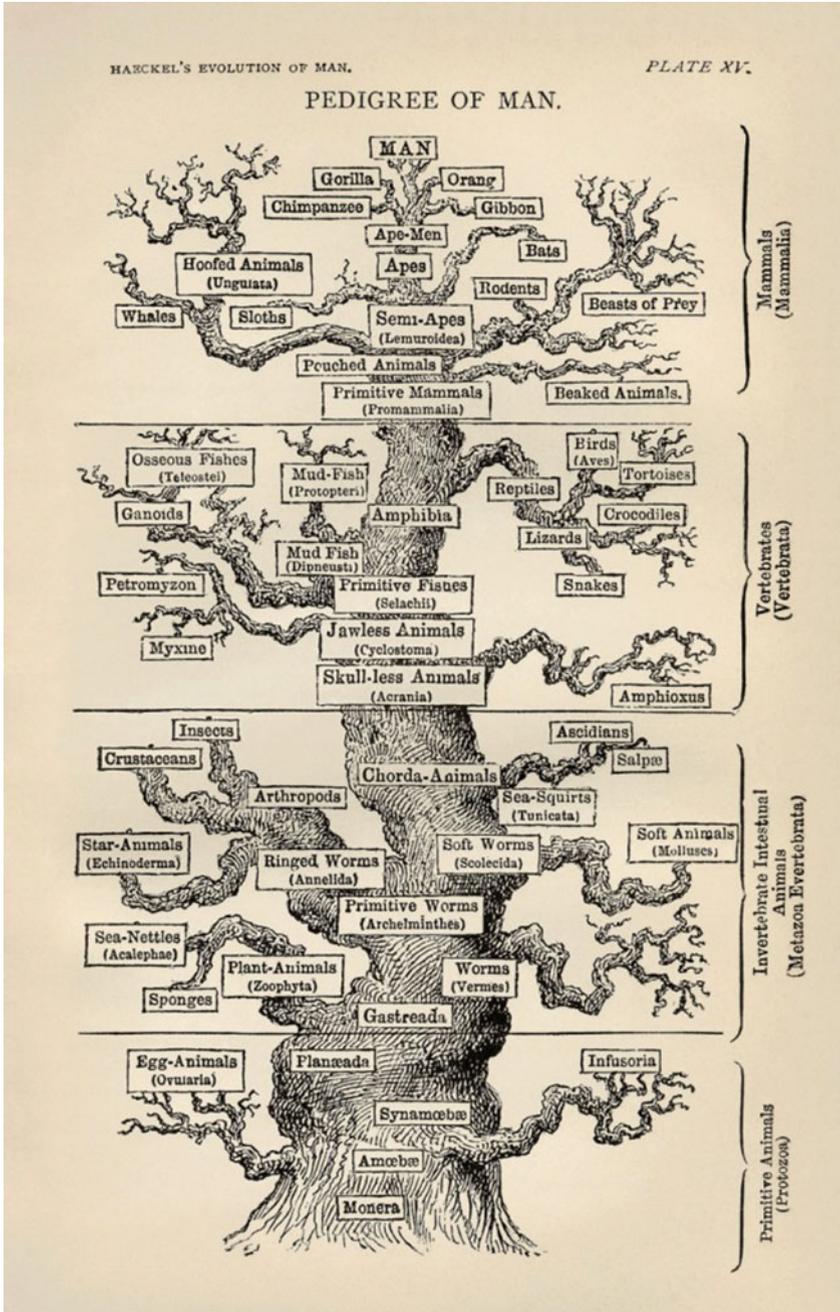
In connection with selection and its influence on the change of species, Darwin also referred to the question of a possible development of increasing complexity of organisms in the course of earth’s history. On account of the importance of this question especially in regards to the possible transference of the biological account onto social and religious development and the consistent misinterpretation of the qualitative features of evolution it is worth reproducing the entire passage:

The ultimate result [of natural selection] is that each creature tends to become more and more improved in relation to its conditions. This improvement inevitably leads to the gradual advancement of the organisation of the greater number of living beings throughout the world. But here we enter on a very intricate subject, for naturalists have not defined to each other’s satisfaction what is meant by an advance in organisation. Amongst the vertebrata the degree of intellect and an approach in structure to man clearly come into play..... If we take as a standard the amount of differentiation and specialisation of the several organs in each being when adult, (and this will include the advancement of the brain for intellectual purposes), natural selection clearly leads towards this standard: for all physiologists admit the specialisation of organs, inasmuch as in this state they perform their functions better, is an advantage to each being; and hence the accumulation of variations tending towards specialisation is within the scope of natural selection. On the other hand, we can see, bearing in mind that all organic beings are striving to increase at a high ratio and to seize on every unoccupied or less well occupied place in the economy of nature, that

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<sup>7</sup>The idea of the *survival of the fittest* goes back to Herbert Spencer, as could be shown in Chap. 1. It is therefore Herbert Spencer and not Charles Darwin and his theory, who is responsible for the so-called Social Darwinism!

<sup>8</sup>This aspect is decisive in connection with the origins of religion, specifically in reference to ranking.



**Fig. 2.1** The genealogical tree of man according to Haeckel (1874). It is clear that also Haeckel, despite being an enthusiastic follower of Darwin, misunderstood the evolution of man as the result of a teleological development

it is quite possible for natural selection gradually to fit a being to a situation, in which several organs would be superfluous or useless: in such cases there would be retrogression in the scale of organisation.<sup>9</sup>

Darwin knew what he was talking about. A precursor to his *Origins of species* was a large systematic study of the Cirripedia, in the subphylum Crustacea, which in the course of evolution not only returned to a sessile way of life but also simplified themselves—including those forms amongst whom the male adult, reduced only to his reproductive organs, lives inside the female as a parasite.<sup>10</sup> Darwin's carefully developed and convincing argument should suffice to halt any fantasies of an increasingly complex development of the organic world once and for all. Nevertheless, even today teleological notions can be found in works such as Pierre Teilhard de Chardins' (1881–1955) *The Phenomenon of Man*,<sup>11</sup> and also the famous biologist Bernhard Rensch was convinced of such a development in the course of phylogeny, without being able to name any criteria for such a development.<sup>12</sup>

Even though evolution of living nature originated with simple forms which eventually, although apparently still during the Precambrian Era,<sup>13</sup> began to differentiate, still it remains impossible to recognise a principle of evolution either in this increasing differentiation or in an increasing complexity. The conquest of earth by animate beings must instead be understood as a process in whose course the organisms continuously made better use of adaptive zones, step by step. Initially, these were the oceans in which the creatures slowly began to occupy the various ecological niches and thereby exhausted the entire spectrum of life from the single-cell organism through to the highly complex arthropods, mollusca, and vertebratae. Subsequently, with the conquest of the continent, several phyla

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<sup>9</sup>Darwin, Charles (1872). *The Origin of Species by Means of Natural Selection*, 6th edition. London: John Murray, pp. 85–86.

<sup>10</sup>“I have lately got a bisexual cirripede, the male being microscopically small & parasitic within the sack of the female... I tell you this to boast of my species theory, for the nearest & closely allied genus to it is, as usual, hermaphrodite, but I have observed some minute parasites adhering to it, & these parasites, I now can show, are supplemental males, the male organs in the hermaphrodite being unusually small, though perfect and containing zoosperms: so we have almost a polygamous animal, simple females alone being wanting. I never should have made this out, had not my species theory convinced me, that an hermaphrodite species must pass into a bisexual species by insensibly small stages; & here we have it, for the male organs in the hermaphrodite are beginning to fail, & independent males ready formed.” quoted from: Clark, Ronald W. (1984). *The Survival of Charles Darwin. A Biography of a Man and an Idea*, New York: Random House, pp. 54–55.

<sup>11</sup>Teilhard de Chardin, Pierre (1959). *The Phenomenon of Man*. New York: Harper Perennial 1976.

<sup>12</sup>Rensch, Bernhard (1972). *Kultureller Evolutionismus*. In: Ritter, Joachim (ed.), *Historisches Wörterbuch der Philosophie 2*. Darmstadt: Wissenschaftliche Buchgesellschaft, pp. 835–386.

<sup>13</sup>Schopf, J. William; Kudryavtsev, Anatoliy B.; Czaja, Andrew D.; Tripathi, Abhishek B. (5 October 2007). “Evidence of Archean life: Stromatolites and microfossils”. *Precambrian Research* (Amsterdam, the Netherlands: Elsevier) 158 (3–4): 141–155.

accomplished the decisive step into a new adaptive zone, in which in turn again all possibilities were realised, from the simple to the complex organic structures. The conquest of air space meant another step, accomplished first by the arthropods (insects) and subsequently by the vertebratae (birds and bats).

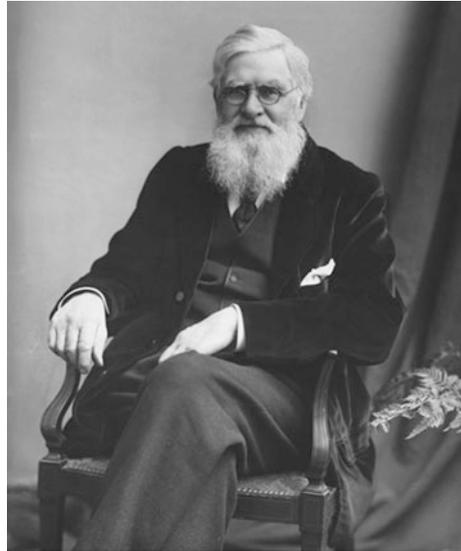
## The Origin of Species

Although Darwin succeeded in explaining the change in species with his theory of natural selection, as each generation of a group produces more individuals than are able to procreate, he could not keep his promise to explain *the origin of* [new] *species*. This instead was accomplished by his congenial contemporary and co-author Alfred Russel Wallace. Already in his famous essay of 1858 (part of the Joint Paper), Wallace could for the first time conclusively answer the question of how independent species can originate from varieties. According to Wallace, varieties differ from the principal form both in their habitus as well as in their behaviour. These small differences however are still sufficient to allow the varieties to be more or less successful under accustomed circumstances. According to Wallace's understanding, the issue of nutrition here plays a decisive role. Those varieties who can solve the issue of sustenance more successfully than others will always have a certain advantage over other varieties, and fewer of their descendants will die. As the size of a population is governed by its ability to source for food and not by its ability to procreate, the more successful variety will proliferate to the disadvantage of the weaker forms. Should now the environmental conditions change, for example through a shortage of food, individuals of all varieties will die, and the less successful even more so, so that ultimately all lesser varieties including the principle form will have become extinct. Only the successful variety can survive. If the food situation should then ameliorate itself, the surviving variety can increase again until it reaches the size of the initial population. In this manner, the variety finally replaces the original phenotype and represents the new. The repetition of this process over a long period of time leads to a progressive development of species and increasing deviation from the principle forms.<sup>14</sup> As Wallace demonstrates, not only was the variety not a fixed unity, but neither was the principle form; instead they were changeable in regards to their form and extent. It was thus Wallace who with his empirically proven theory of the tendency of species to change supplied the concept for an impartial analysis of the criteria, the

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<sup>14</sup>Wallace, Alfred Russel (1858). On the Tendency of Varieties to Depart Indefinitely from the Original Type, In Darwin, Charles und Alfred Russel Wallace, On the tendency of species to form varieties; and on the perpetuation of varieties and species by natural means of selection. J. Proc. Linn. Soc. London, Zoology 3, pp. 53–62.

**Fig. 2.2** Alfred Russel Wallace (© The Darwin-Wallace celebration held on Thursday, 1st July 1908, by the Linnean Society of London)



characteristics, the terminology, and the definition of forms. Just as pervasive as his research into the concept of forms is the discovery of the function of isolation mechanisms, as he described them for the first time in his article *On the law which has regulated the introduction of new species*. Without the presence of isolating mechanisms, a speciation, i.e. the disintegration of a species into several subsidiary species, is not possible. Even though Charles Darwin could also demonstrate the change of species over time, he could not produce a convincing analysis of the problem of the duplication of species, a shortfall which can be traced back to Darwin's lack of appreciation for the essence of the species (Fig. 2.2).

However, this means that in contrast to all higher taxonomic entities such as group, family, rank, or class (which all represent a system of staggered similarity), the species is a natural entity which plays a decisive role for the process of evolution. They are not only types or varieties of a group of individuals similar amongst themselves who change in the course of evolution, but it is the **species** which plays the decisive role for evolution as the **naturally evolving unit**.

The same principle applies to any other evolving system, thus also for a description of the change of religions as evolution. It remains important, however, as has already become clear in the discussion of Bellah's notions of *religious evolution*, to identify correctly the naturally evolving unit.

**No evolution without a naturally evolving unit, without an analogy for the biological species!**

## The Concept of Species and Evolution

A century after Wallace, the prominent evolutionary biologist Ernst Walter Mayr (1904–2005) recognised the tremendous importance of the concept of species. Mayr had begun his career as a biologist when experimental genetics had discovered the process of mutation and thus believed to have found the cause for changes even beyond the boundaries of each species. However, evolutionary biologists had disregarded the basic principles of inheritance, which had already been published in the works of Gregor Mendel and August Weismann.<sup>15</sup> Within the framework of sexual reproduction, the parental hereditary factors, or genes, do not mix like liquids during the process of fertilisation, but instead both parental partners contribute a set of genes which in turn form the chromosomes of the new individual and determine its phenotype. In the subsequent generation, this diploid chromosome set is once again split during the formation of new egg or semen cells, and here the genes of the previous generation are divided randomly. Through this process, no offspring created through sexual reproduction is the exact image of his parents, but the product of a new, unique arrangement of half of the respective parental hereditary dispositions. Thus, not only is the contribution of both sexes equal during reproduction, but simultaneously it becomes a fact that each new organism created through sexual reproduction is unique—because the genetic material of the parents is combined differently each time. Simultaneously, the extant organisms represent only a fraction of the theoretical combinations, so that evolution of life on earth is a historically unique process which cannot be repeated.

However, this also means that creatures of any species are never represented by an individual or an ideal type, but that instead the entire genetic property of a population determines the genetic achievement and adaptation potential of the species. Species, thus, are not, as the biologist and father of modern taxonomy Carl von Linné (1756–1778) surmised, groups of individuals similar amongst themselves (typological species concept), but “groups of actually or potentially interbreeding natural populations which are reproductively isolated from other such groups.”<sup>16</sup> Species therefore are “reproductive communities. The individuals of a species of animals recognize each other as potential mates and seek each other for the purpose of reproduction ... The species is also an ecological unit that, regardless of the individuals composing it, interacts as a unit with other species with which it shares the environment. The species, finally, is a genetic unit consisting of a large, intercommunicating gene pool, whereas the individual is merely a temporary vessel holding a small portion of the contents of the gene pool for a short period of time. In each new generation, a population’s genes are mixed anew and passed on to the

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<sup>15</sup>Mendel, Gregor(1995). *Versuche über Pflanzenhybriden*. Zwei Abhandlungen 1866 und 1870, ed. by Erich von Tschermak-Seysenegg, Frankfurt am Main: Verlag Harry Deutsch.

Weismann, August (1892). *Aufsätze über Vererbung und verwandte Fragen*, Jena: Fischer.

<sup>16</sup>Mayr, Ernst (1973 [1963]). *Animal Species and Evolution*. Fifth edition. Cambridge, Mass.: The Belknap Press of Harvard University Press, p. 19.

individuals in unique combinations. It is this individual which has to prove itself in the selection.”<sup>17</sup>

To summarise: the biological theory of evolution is based on three principles, which in modern terminology can be formulated as follows: the individuals of a population differ amongst each other in numerous features; phenotypes proliferate in various degrees of success dependant on the conditions of the respective milieu; aptitude is inheritable and passed on from one generation to the next. Evolution thus is a two-stage-process: “The first step consists of the production of variation in every generation, that is, of suitable genetic or phenotypic variants that can serve as the material of selection, and this will then be exposed to the process of selection. This first step of variation is completely independent of the actual selection process, and yet selection would not be possible without the continuous restoration of variability.”<sup>18</sup>

This process, the purely random production of individuals with different combinations of characteristics inherited from the grandparent generation, makes evolution blind. Evolution therefore cannot purposefully react to possible environmental changes. Merely the competition for resources, the struggle for existence, ultimately allows those individuals who have adapted best to increase in disproportionate numbers over the long term.

Thus far the characteristics of the biological evolution—simultaneously also the basis of a general theory of evolution which comprises the gradual change of any system with memory, i.e. the ability to save information and pass it on to the next generation. For each possible evolving system, therefore, it is mandatory to pinpoint first the evolving unit in order to specify in more detail the evolutionary factors.

## Religion and the Naturally Evolving Unit

Before we progress, however, perhaps a brief look back to the results of the previous discussion: religions and their changes play an important role in the history of man, and research is accordingly focused on the question of the origin and evolution of religions. At some point in the course of phylogeny, man learnt not only to produce tools but he also discovered interaction with supernatural entities—with all inherent positive and negative consequences. The cultural evolution joins the biological, influences the biological fitness, and ultimately replaces the biological evolution in the course of phylogeny. Religion can also have a considerable impact on the biological fitness of a group, according to the evolutionary biologist Richard Dawkins.<sup>19</sup> If religion is analysed in this context, as part of human behaviour, it

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<sup>17</sup>Mayr, Ernst (1973 [1963]). *Animal Species and Evolution*. Fifth edition. Cambridge, Mass.: The Belknap Press of Harvard University Press, p. 21.

<sup>18</sup>Mayr, Ernst (1988). *Toward a New Philosophy of Biology. Observations of an Evolutionist*. Cambridge Mass. and London: The Belknap Press of Harvard University Press, p. 98.

<sup>19</sup>Richard Dawkins (1976). *The Selfish Gene*. Oxford: Oxford University Press.

becomes a human characteristic relevant for selection, i.e. for his evolution. The problem raised here is of course highly interesting and has produced impressive results in the scientific field,<sup>20</sup> but does not grasp the dynamic of the change of religions themselves. If however the focus is to determine trends in the development of religion (which we have to do in the search for the origins of religion and religions), then the evolution of man with his characteristics cannot be the central focus of the investigation, but instead it must be religion itself—focus must be the evolution of religions!

Yet if religions themselves evolve, as already postulated correctly and forcefully by Robert Bellah, the next step must therefore be the search for the naturally evolving unit.

Let us here take a step back to biology. Ernst Mayr highlighted the connections between the species as evolving unit and the evolutionary process. Accordingly, a species is not characterised by the fact that the corresponding examples are similar to one another (we also know of poly-typical species), but rather because the individuals **recognise** themselves as part of the same species. Ultimately, the recognition and acceptance of the Other as potential and actual partner for reproduction makes clear that a species is first of all a reproductive community.

The same concept applies to the many historical and more recent religions, let us call them a religio-species. Here again, it is not the resemblance of as many features as possible which decides if people recognise each other as part of the same religious community. Let us take, for exemplary purposes, a highly simplified form of Judaism: neither a certain habitus (shtreimel or kippah, sidelocks, caftan) nor the acceptance of authoritative religious texts (the Talmud, which is rejected by Karaite Judaism), and not even the belief in the existence of God are decisive! Instead, Judaism defines itself as a community of faith with a common destiny, even including atheistic Jews. Jewish atheists thus see themselves as being a part of Judaism and distinguish themselves from non-Jewish atheists. We see that also in the distinction of the individual religions, the relevant factor is again not the highest possible resemblance within the individual religion, but in contrast the strict boundaries to the competing religion. The definition follows that:

Religion as a natural, systematic unit can be understood as a well-adapted and well-aligned complex of belief ideals and actions. Religions as systematic units are defined by a strict demarcation and not by differences in features and characteristics, i.e. they are defined by their relationship to other groups not belonging to the same religion (isolation), and not by the relationships of individuals with the same religious affiliation. Religions thus are not random, coincidental aggregates of individuals whose religious convictions and actions are demonstrated through superficially similar symbols, but they are entities in which the affiliated individuals recognise themselves as belonging to the same religious community.

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<sup>20</sup>Geertz, Armin W. (2015). Religious Belief, Evolution of. In: International Encyclopedia of the Social and Behavioral Sciences, Second Edition, pp. 384–395.

Eckart Voland/Wulf Schiefenhövel (eds.) (2009). The Biological Evolution of Religious Mind and Behavior. Dordrecht, Heidelberg, New York, London: Springer.

The respective environment exerts selective constraints onto these entities and forces the individual religions to adapt, thus enforcing a change. Referring back to the discussion above, Åke Hultkrantz had already described this process for the natural, and Robert Bellah for the social/political and economic environment, neither however reaching a satisfactory conclusion in regards to the evolving unit.

Consequently, only one question remains, namely the problem of information transfer from one generation to the next, or expressed differently: how does the memory of our system “religion” actually function?

## Heredity

In the field of biology, we know that information is saved in the genetic make-up and transferred onto the next generation—following familiar, highly complex mechanisms. However, we see a different case of information transfer for a cultural rather than biological inheritance, the laws of which had been discovered by the population geneticist Luigi Luca Cavalli-Sforza (\*1922) in the course of his research into the connections of genetic and linguistic kinship of different peoples.<sup>21</sup> According to Cavalli-Sforza, the cultural information is in principle subordinate to the same mechanisms as the biological information inscribed on genes. While the genome however is transmitted by means of reduplication and transfer from generation to generation, the cultural information is conveyed by the nerve cells within the brain of one individual to the other, in the course of which deviations within the information transfer and information conversion can lead to variations.<sup>22</sup> While the direction of the genetic information transfer is dependent on coincidence (in the new combinations of the parental genes), cultural changes are possible also as deliberate and goal-oriented innovations. Information through communication (verbal communication and imitation) is the medium with whose help cultural knowledge is transmitted. Here, hunting techniques and production of tools belong just as much as ethical demands and social norms, but also aesthetic understanding, art, narrative tradition, and possibly religious tradition; even Cassirer’s “symbolic forms” language, mythical thought, and phenomenology of realisation are subject to the cultural evolution and in turn influence, through a retrospective effect on cognition, the development of man.<sup>23</sup>

As Cavalli-Sforza could show using empirical research, in the history of mankind cultural knowledge was for centuries transferred almost exclusively in a

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<sup>21</sup>Cavalli-Sforza, Luigi Luca (2000). *Genes, Peoples, and Languages*. New York: North Point Press.

<sup>22</sup>Skirms, Brian (2010). *Signals. Evolution, Learning, & Information*. Oxford: Oxford University Press, pp. 61–62.

<sup>23</sup>Cassirer, Ernst (1995). *Zur Metaphysik der symbolischen Formen*. Nachgelassene Manuskripte und Texte. Ed. by John Michael Krois. Hamburg: Meiner.

vertical fashion from parents to children. Consequently, cultures changed only very slowly under stable environmental conditions. Under these circumstances, as a rule we see that only when groups see themselves challenged by a change in the natural, economic, or social environment do they tend towards a higher degree of variety, meaning they see themselves forced to behavioural changes which are reflected in, and influence, their world view.

In the course of history however, the horizontal flow of information, i.e. the transmission of information between members of the same or subsequent generation, has grown in importance and surpassed the vertical. Impressive examples for the meanwhile decisive importance of the horizontal transmission of information is on the one hand education through a third party, such as in schools, on the other hand the mass media; in both cases, the vast amount of information transmitted is much higher than would have been possible between parents and children.

Ultimately, it is the manner of information transfer that decides the dynamic of the flow of information. A largely vertical flow from parents to child, or adults to a small group of children, as practiced even today in band-societies, is more prone to strengthen conservative tendencies, while a horizontal transmission of information opens itself up for change and innovation.

At this point the difference of inheritance between culture and biology becomes clear: culture can react to environmental changes immediately and more directly. Thus the changes occurring through communication are much more hardy than those changes evoked through the slower, biological reproduction, and that is the reason why the cultural evolution in terms of its repercussions on human existence has surpassed the biological evolution.

However, in terms of the possible changes of the individual religions we must highlight an important caveat, whose importance in connection with the deliberations concerning evolution is frequently overlooked, and which must equally apply to the evolution of religion: the search for the basic raw material of the evolution. Evolution can only work with extant material, evolution can only modify previously existing characteristics, but it cannot create anything new. Thus if evolution in an extreme case has manoeuvred itself into a corner through overspecialisation, an organism cannot react to environmental changes and the species must die out. We see this in human evolution, in the case of the robust Australopithecines (today a *Paranthropus*) who reacted to the increasing aridity of the African savannah by adapting their jaws (a strong dental set to chew hard-shelled foods), and then with an increasing humidity had become inferior to the gracile Australopithecines and became extinct. Other characteristics are senselessly carried through the generations and only emerge as useful hundreds of generations down the line, offering evolution a further platform. Expressed in the words of Ian Tattersall: “We are all built on modified versions of a template ultimately furnished us by an ancient ancestor”.<sup>24</sup> The same applies to the cultural evolution, including religions and the

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<sup>24</sup>Tattersall, Ian (2012). *Masters of the Planet. The Search for our Human Origins*. New York: Palgrave Macmillan, p. XX.

corresponding rituals. Here as well nothing new is invented, but the extant cultural-religious inheritance is modified in the course of generations and adapted to the changing social conditions; occasionally old traditions and customs are carried over—rituals for example, such as the Agni-ritual described by Frits Staal, no longer understood in modern India, as well as sacrificial customs in Ancient Greece which did not correlate with the ancient form of religious worship: a sacrificial cult on the basis of a gift exchange would have been expected, whereas instead the sacrifice as part of the ritual corresponded to the primordial sacrifice of foragers.<sup>25</sup>

Religions thus do not evolve freely, nor are they guided towards a certain direction by a religious mastermind in order to adapt to the contemporary requirements, but instead they have to revert back to their stock of ancient traditions for every desired renewal, which is then modified, perhaps weighted differently, and interpreted anew in a different context in order to survive in the struggle for existence, i.e. in the competition of religious providers.<sup>26</sup>

## The Evolution of Religions

To summarise: the evolution of religions describes the changes of religions in the course of history, beginning with the first, possibly rudimental religion to the complex theological and ethic religions of our modern times. While we can trace these historical changes with the help of records and other writings, and can even see the changes during our modern times in real time (on account of the alacrity of cultural heredity), we can only reconstruct events for prehistoric and protohistoric times by using the processes we can witness today). The evolution of religions is a justified theory developed in order to explain what we observe with the help of scientific terminology. This could be an explanation for the clearly hierarchical system of religions, in which some are more closely related than others. Or for the contents, dogma, or elements of a cult which today are incomprehensible and cannot be interpreted in any other way than as traces of previous evolutionary stages. What we see today is in fact an hierarchical-encaptic system of similarities between religions—religions, just like organisms, can be divided into groups on account of their similarities, whereby subsequently these groups, on account of their respective similarities, can be combined to groups of a higher level. If we take these groups and organise them chronologically, we recognise a tree of life for the system

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<sup>25</sup>Meuli, Karl (1946). Griechische Opferbräuche. In: Phyllobolia (Festschrift Peter von der Mühl), pp. 185–288. Basel, Switzerland; reprinted in Karl Meuli. Gesammelte Schriften, vol 2. Basel, Switzerland: Schwabe, pp. 907–1021.

Staal, Frits (1989). *Rules Without Meaning: Ritual, Mantras, and the Human Sciences*. New York: Lang.

<sup>26</sup>Wunn, Ina (2016). The Crux of a Darwinian Approach on Evolution: What is Evolution, and what did evolve? In: Gerald Hartung/Matthias Herrgen (Eds.) *Interdisziplinäre Anthropologie, Jahrbuch 03/2015: Religion*. Wiesbaden Springer: pp. 83–98.

of religions. This tree of life can now be explained by the fact that the vast number of known historical and extant religions ultimately all stem from the one, or from a very few, principle form(s)—which remain to be discovered.

The shape of such a search for the principle form becomes clear from the above-mentioned characterisation of the process of religious evolution. We cannot search for arbitrary possible appearances of the religious in each and every period of prehistory, as in the approach of the author of one of the first comprehensive works of prehistorical religions, Joseph Maringer—his conclusion was a potpourri of unrelated, frequently fantastic customs and traditions, of which a cult of cave bears and notions of rebirth from the womb of Mother Earth were the more harmless varieties.<sup>27</sup> Equally impossible is the reconstruction of religion's origins, specifically a prehistoric religion, exclusively of those processes which are part of the human psyche or cognition and explain why humans tend towards religious thought and behaviour at all.

In order to prevent misunderstandings: this does not imply that the appropriate research in the field of cognitive science of religion, neurotheology, or evolutionary psychology of religion are superfluous or unable to offer results, but it does mean that these sciences in and of themselves are not sufficient to answer conclusively and satisfactorily the question of the origins of religions and the subsequent evolution of religions as historical events.<sup>28</sup>

So what does this mean for the search for the origins of religion? Let us go back to our hierarchic-encaptic system of religions, in which the individual religions are assigned to groups based on their graded similarities, whereby certain characteristics have proven taxonomically more important than others.<sup>29</sup> We are now able to search for these taxonomically relevant features of the religions in question. This means that the material available, our religio-fossils, must be analysed specifically for these features, which then in turn, evaluated by comparison with other religions, can take their place in our tree of life desideratum.

It is a reflection of the nature of this search that the tree of life cannot be complete but that instead it will resemble, similar to the tree of life for prehistoric man, a patchwork rug in which individual aspects can suddenly highlight and explain the reconstructed development. Many a culture, which in our presentation is genetically related to a cultural precursor or descendant, can strictly speaking only be integrated into the larger religious development with a dotted line, broken up by at least one, if not more question marks. Here and there, especially concerning the

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<sup>27</sup> Maringer, Johannes (1960). *The Gods of Prehistoric Man*. London: Weidenfeld & Nicolson.

<sup>28</sup> See as well Witzel, Michael (2012). *The Origins of the World's Mythologies*. New York: Oxford University Press, pp. 22–24.

<sup>29</sup> In contrast to the theory of *Kulturkreis* of Fritz Graebner and Bernhard Ankermann, who have produced a comprehensive catalogue of characteristics and attempted to determine similarities, i.e. cultural relationships, with the help of a process of pure abstraction. Father Wilhelm Schmidt, S. V.D., employed the same method, resulting in the first impressive attempt to construct a tree of life of religions. Schmidt, Wilhelm, S.V.D. (1912). *Der Ursprung der Gottesidee. Eine historisch-kritische und positive Studie. 1. Historisch-kritischer Teil*. Münster: Aschendorf.

beginnings of religion's development, disjunctive places of discovery are evaluated and their findings generalised. The fact that realistically only the rough outlines of an early religion can be demonstrated, whose contours in some cases were filled in differently in life, is a drawback which cannot be fully avoided if one is reliant on fossils—and our prehistorical religions are just that!

In sum: having formulated the problem of our research question—we are searching for the origins of religions, specifically the first religion whose evolution we can trace and comprehend—and having clarified the appropriate scientific-theoretical background—focus on evolutionary events which follow clear rules—we can now proceed to the next phase, the search for answers of questions posed at the outset:

When did religion come into being?

Why did religion come into being?

# Chapter 3

## The Question of When? (Lower Palaeolithic, C. 2.6 mybp–300,000 ybp)

### Preliminary Conclusions and Next Steps

Let us summarise the results of the previous discussions:

1. Primary focus rests on the origins and evolution of religion; the second step then looks at the evolution of the different religions, which includes both the changes in existing religions over the course of time as well as the emergence of daughter religions. In order to solve this problem, an epistemological model of the evolution of religions was developed.
2. This evolution of religions must not be mistaken for the evolution of man, even though religion belongs to the culture of man, and thus is a part of human behaviour—and behaviour plays an important role in human evolution. This human behaviour, his sensitivity to culture, was decisive for the success of the human species.
3. The closest living relatives of men, the bonobos, the chimpanzees, and the gorillas, are all intelligent; they are able to use and cleverly employ tools, they can even make tools. But despite this intelligence, and despite many behavioural similarities with humans, gorillas and chimpanzees are not capable of symbolic thought. They do not pray. From this we derive the question of “When?” At which point in time in human phylogeny was the family *Hominidae* capable of symbolic thought? When were hominids intelligent enough to conceive of supernatural entities and to communicate with them?<sup>1</sup>
4. What was the precursor of this notion of supernatural entities, or expressed differently: the precursor of religion cannot have been a religion in the factual

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<sup>1</sup>What does the term “symbolism” mean in this context? As Michael Witzel puts it, “The human being is a homo symbolicus, and all of his activities comprise symbolism, therefore all religious acts necessarily have a symbolic character... In addition, language itself is a system of mutually agreed signs and symbols... that indicates a reality beyond the mere sounds produced.” Witzel, Michael (2012). *The Origins of the World’s Mythologies*. Oxford University Press: Oxford, pp. 6–7.

sense, but must have belonged to the normal behavioural repertoire of man, in order to subsequently be connoted religiously and in order to develop into religion.

5. The same step must be taken in connection to the search for the first, original religion. We must search for a pattern in human behaviour, which—in itself not yet religious—has the **potential** to be related to supernatural powers and thus has the potential to offer a point of contact for all those psychic abilities which are described by the cognitive science of religion, neurotheology, or the evolutionary psychology of religion.

## But First the Question of When!

In this regard, the more recent paleoanthropological research has focused on those finds which relate the Palaeolithic man with behaviour that extends beyond life-sustaining actions and thus represents a distinctive point in time of the human evolution. Thus it was demonstrated that hominids already 300,000 years ago, in the Middle Pleistocene, systematically collected different iron and manganese minerals, in order to—possibly—paint their own bodies.<sup>2</sup> Although of course it is not possible to derive the ability of symbolic thought from these early beginnings of a sense of beauty, the contemporaneous ability to manufacture tools with the help of complex techniques shows that our ancestors already possessed a complex behavioural repertoire which at least allows the conclusion of a highly developed intelligence. Only much later, 75,000 years ago in Africa and roughly 45,000 years ago in Europe, do we see the emergence of other jewellery, pearls, fashioned out of the pierced shells of marine gastropods, with which both the anatomical modern man as well as the contemporaneous Neanderthal decorated their clothes or hair, or even produced necklaces. The question whether this jewellery and body paint was only an expression of a sense of beauty or had further signalling functions has been discussed in much detail.<sup>3</sup> One fact however is clear: at the latest in the Middle Palaeolithic our ancestors were able to develop complex thoughts.

While palaeoanthropology and paleoanthropologically-informed approaches see the origins of religion in the Middle Palaeolithic, other researchers go back

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<sup>2</sup>Barham, Lawrence (2002). Systematic pigment use in the Middle Pleistocene of South Central Africa. In: *Current Anthropology*, Vol. 43, 1, 2002, pp. 181–190.

<sup>3</sup>Kuhn, Steven L., Mary C. Stiner (2007). Body ornamentation as information technology: towards an understanding of the significance of early beads. In: Paul Mellars, Katie Boyle, Ofer Bar-Yosef and Chris Stringer (editors). Cambridge: McDonald Institute Monographs, pp. 45–54.

However, animals such as the bowerbirds (more detail below), also employ aesthetic elements in order to up their market value during mating season. The present authors thus suggest to classify the body art and jewellery of the Middle Paleolithic man in this context. Body art and jewellery create added value which is meant to raise the chances of potential sexual partners. Jewellery and paint thus become secondary sexual characteristics and serve the sexual selection.

considerably further into the human past. Thus Robert Bellah, in his late work *Religion in Human Evolution*, sees a *mimetic culture* precede his *mythic culture*, both of which he assigns to the stage of the *tribal religion* (a different term for the early developmental stage he had originally termed *primitive religion*) and which he suggests began with *Homo erectus*.<sup>4</sup> The psychologist Matt Rossano is even more explicit, correlating the origins of religion with ritualised behaviour, and dating the roots for religious behaviour to 500,000 ybp.<sup>5</sup> He realises that this was not of course an elaborate religion in our present understanding, but our ancestors, so Rossano, were intellectually capable of “group-coordinated movements” which involved “newly emerging vocalizations—singing and chanting accompanied marching and dancing”, and these new abilities resulted in rituals.<sup>6</sup> As proof for this hypothesis, Rossano points to the discovery of the so-called Peking man, *Homo erectus pekinensis*, near Zhoukoudian, well-known amongst paleoanthropologists. During this sensational discovery in the late 1920s, the local situation on the one hand and the scientific climate at the beginnings of paleoanthropological research on the other led scholars to trace the discoveries of scattered skull elements back to ritual cannibalism—and this would be proof for Rossano’s theory to search for the origins of religion during the times of *Homo erectus*. From a modern point of view however, the evidence of visible cut marks on a skull found and described at Bodo D’ar, in the Awash River Valley of Ethiopia, is unequivocal. The skull is 600,000 years old and in terms of its anatomical characteristics an intermediate between *Homo erectus* and *Homo sapiens*; other scholars include the skull with *Homo heidelbergensis*.<sup>7</sup> However, the experienced paleoanthropologist and curator of the American Museum of Natural History, Ian Tattersall, expressively warns of over-interpreting exactly these (possible) cutmarks: “We should be careful not to

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(Footnote 3 continued)

Doucet, Stephanie M. and Robert Montgomerie (2003). Multiple sexual ornaments in satin bowerbirds: ultraviolet plumage and bowers signal different aspects of male quality. *Behavioral Ecology* 14 (4): 503–509.

Doucet, Stephanie M.; Robert Montgomerie (2003). Structural plumage colour and parasites in satin bowerbirds *Ptilonorhynchus violaceus*: implications for sexual selection. *Journal of Avian Biology* 34: 237–242.

<sup>4</sup>Bellah, Robert N. (2011). *Religion in Human Evolution. From the Paleolithic to the Axial Age*, Cambridge Mass: The Belknap Press of Harvard University Press, pp. 120–138.

<sup>5</sup>In this approach, Rossano wrongly equates ritual and religion. Wunn, Ina (2016). The Crux of a Darwinian Approach on Evolution: What is Evolution, and what did evolve? In: Gerald Hartung/Matthias Herrgen (eds.). *Interdisziplinäre Anthropologie, Jahrbuch 03/2015: Religion*, Springer, Wiesbaden, pp. 83–98.

<sup>6</sup>Rossano, Matt (2010). *Supernatural Selection. How Religion Evolved*. New York: Oxford University Press, p. 141.

<sup>7</sup>White, Tim (2005). Cut marks on the Bodo cranium: a case of prehistoric defleshing. *American Journal of Physical Anthropology* 69: 503–10. (However, Tim White is a fan of the defleshing hypothesis!).

read into these marks evidence of ritual in the sense in which it is familiar to us today.”<sup>8</sup>

The discussion concerning the intellectual faculties of our ancestors is therefore controversial. Aside from the reference to a possibly very early defined sense of beauty it is the issue of cannibalism which repeatedly leads to heated discussions and far-reaching conclusions. Only two generations of scientists ago, standing in the tradition of the so-called social Darwinism (or rather Spencerism!), cannibalism was proof for the unimaginable primitivism of our ancestors, while today it is meant to act as proof for early ritualistic behavior!<sup>9</sup> In order to bring the discussion to a more objective level, let us here briefly look towards the cradle of humanity alongside brief insights into the *Forschungsgeschichte*. This includes possible conclusions for human intelligence and an interconnected capability for symbolic thought.

## Our Bloodthirsty Ancestors

Let us first, once again, look towards the *Forschungsgeschichte* (History of human evolution research). The question when our ancestors indeed began to act and think in a “human” fashion has occupied scholars for generations. The congenial founder of the theory of evolution, Albert Russel Wallace (1823–1913) still thought it necessary to assume that living nature must have developed according to the principles of selection discovered by himself and Darwin, but that man also came into being through a divine act of creation. Only the discovery of human fossils—which coincidentally Darwin already assumed to lie in Africa—made it clear that the origins of man must have followed the same principles and rules as were applicable to nature in general.<sup>10</sup> It is difficult nowadays to fathom the passionate controversies related to these discoveries and their interpretations, the most prominent concerning the Neanderthal. Even the famous pathologist Rudolf Virchow (1821–1902) felt it necessary to become involved, stating that the discovered skeleton could only have been the remains of a modern man with pathologically deformed bones (see Chap. 4), and thus, as we know today, committed an immeasurable mistake.<sup>11</sup>

Similar heated and highly emotional discussions surrounded a further sensational discovery. In 1924, South African anatomist and paleoanthropologist Raymond

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<sup>8</sup>Tattersall, Ian (2012). *Masters of the Planet. The Search for our Human Origins*. New York: Palgrave Macmillan, p. 138.

<sup>9</sup>Rust, Alfred (1991). *Der primitive Mensch*, in: Mann, Golo und Alfred Heuß (ed.), *Propyläen Weltgeschichte Bd. 1*; Berlin, Frankfurt a.M.: Propyläen Verlag, pp. 155–226.

<sup>10</sup>Darwin, Charles (1871). *The Descent of Man, and Selection in Relation to Sex*. London: John Murray.

<sup>11</sup>Glick, Thomas F. (1988). *The Comparative reception of Darwinism*. Chicago: University of Chicago Press, pp. 86–87.

Arthur Dart (1893–1988) received fossils from the South African quarry Buxton near Taung, which Dart after long investigation classified as belonging to an ancestor of man and to which he then assigned the scientific name *Australopithecus africanus*. In order to support his at the time revolutionary arguments, that this so-called “Baby of Taung” was indeed a predecessor of modern man, Dart purposefully searched for traces of typical human behavior near the place of discovery and believed that he had found his proof in animal bone fossils and blackish soil coloration within the same sedimentary layers. It was his argument that the still uncivilized man, comparable to the South African bushman cultures Dart himself knew personally, sustained himself largely by hunting, in contrast to great apes. Thus, if it one could prove that *Australopithecus* also hunted and in addition roasted his prey over the fire, it would be near impossible to contradict his, Dart’s, interpretation of the bone fossils. It is one of the ironies of science that Dart’s systematic classification of the child’s skull as belonging to a new early human species is still today accepted in scholarship, but that his interpretation of the *Australopithecus* as hunter has been conclusively rejected. The accumulation of animal remains found in the local surroundings of the human fossils were, as we know today, the result of sedimentary processes, and the dark discoloring in which Dart had seen the remains of our hunting ancestors’ campfires are in fact manganese soil horizons.<sup>12</sup> Nevertheless, Dart’s notions of man’s hunting ancestors remained popular over many decades and formed the image of early man: *Australopithecus* and the subsequent links to humans today were considered to be competent and successful hunters who, driven by constant hunger and bloodthirstiness, pursued their prey, animals and maybe even humans. It was simple then to add further coloring to this image, by voicing assumptions concerning the world view of these primeval wild creatures. As the immediate discovery spots could only supply little information in this matter, scholars gladly reverted back to the colorful pool of ethnology and attributed to our ancestors the most interesting characteristics and a highly complex world view, in which shamanism and hunting magic were the more harmless varieties, and cannibalism and skull cults the more brutal.<sup>13</sup> As dark and as brutal *Australopithecus* and co. might appear in these early theories, they did all have one thing in common: the assumption of symbolic actions and a complex worldview in which actors, for example the prey, could be influenced through ritual or magical behavior. This however presupposes a higher intelligence which by far surpasses the capabilities of even such intelligent animals as chimpanzees or gorillas. We cannot of course directly measure the intelligence of our ancestors, but nevertheless extant remains of skulls do allow clear conclusions as to the relative size of the brains and in turn further inferences regarding the intelligence of the respective

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<sup>12</sup>Schrenk, Friedemann und Timothy G. Bromage (2002). Adams Eltern. Expeditionen in die Welt des Frühmenschen, München 81–106. Tattersall, Ian (2012). Masters of the Planet. The Search for our Human Origins. New York: Palgrave Macmillan, p. 57.

<sup>13</sup>The theoretical scientific basis of this free association, as we would say today, was nevertheless the stage model of intellectual development following Comte and Spencer, which informed the tacit knowledge of entire generations of scientists.

species. At the latest now it becomes clear that this small *Australopithecus*, with a brain volume of roughly 400 ccm, would barely have been able to develop complex thoughts regarding magic, witchcraft, or the Otherworld (in comparison: the brain volume of *Homo sapiens* measures about 1350 ccm).<sup>14</sup>

## The Human Tree of Life

The geologist Charles Lyell in his work *Geological Evidences of the Antiquity of Man* (1863) had already asked the question of the so-called missing link, the question of the phylogenic link between man and ape, and thus instigated a concerted search for human fossils.<sup>15</sup> Meanwhile, palaeoanthropology can offer a large number of discoveries and can trace the line of our ancestors back into the Miocene (23–5 mybp). Even though modern discoveries of an early hominid no longer evoke such passionate discussions as during the times of Darwin and Virchow, nevertheless the respective discoverers are assured large scientific and media attention, because what could be more interesting than the question of where we came from?

The oldest fossil in our ancestral lineage, *Sahelanthropus tchadensis*, was discovered in 2002 in Chad/Central Africa by a group of French scientists surrounding Michel Brunet and dated to be 6–7 million years old. In the same year, the phylogenetic classification of the discovery as the oldest form in the human tree of life was contested by an American team, who instead considered *S. tchadensis* as a representative of the great apes of the Miocene era, and thus a precursor to modern chimpanzees and gorillas. In the controversial discussion, still on-going, both progressive, i.e. human characteristics such as teeth as well as primitive characteristics play a large role, which all work together to allow a probable, but not definite classification of the *S. tchadensis* at the roots of the human tree of life. How future generations of scholars—should further discoveries allow new interpretations and theories—may decide the question, it is confirmed that *Sahelanthropus* must be closely associated with the origins of the human tree of life and already demonstrates characteristics which would prove defining for the future development of man. However, should one for this point in time already hope for an accelerated growth of brain size, one must face disappointment: the internal volume of our presumed ancestor's skull measured only 320–380 ccm, comparable to the brain size of modern chimpanzees, whose physical size he also shared (Fig. 3.1).

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<sup>14</sup>But, nevertheless, as Sonia Harmand of Stony Brook University and her team recently found out, a member of the genus *Australopithecus* or probably even *Kenyanthropus platyops* was already capable of making and using stone tools 3.3 million years ago. Wong, Kate (April 15, 2015). Archaeologists Take Wrong Turn, Find World's Oldest Stone Tools. Scientific American. Retrieved April 18, 2015.

<sup>15</sup>Lyell, Charles (1863). *The Geological Evidences of the Antiquity of Man, with remarks on theories of the origin of species by variation*. London: J.W. Childs.

**Fig. 3.1** *Sahelanthropus tchadensis* (© Didier Descouens; Creative Commons Attribution-Share Alike 3.0 Unported license)

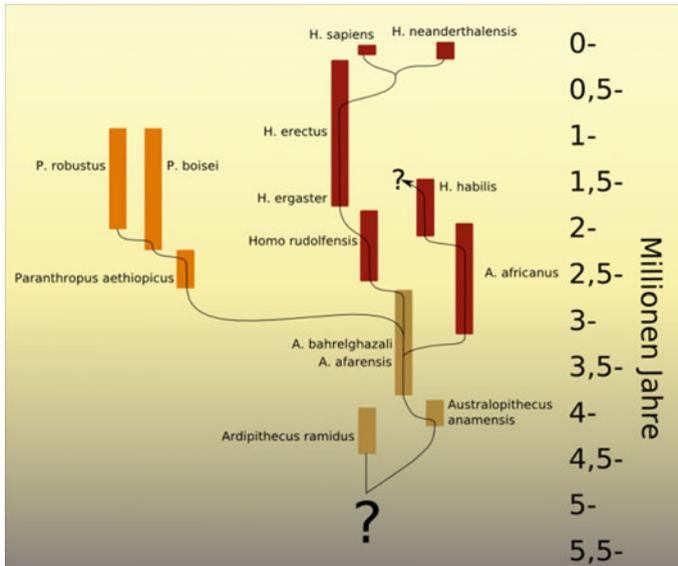


Only two years earlier in the Tugen Hills of central Kenya, a French-Kenyan team of researchers had found the oldest known representative of the human genealogical tree in the scattered teeth and bones of *Orrorin tugenensis*, who had populated the light forests surrounding expanses of water over 6 mio. years ago, and who had probably already walked upright. In contrast, the skeletal reconstruction of the 4.4 mio. year old *Ardipithecus ramidus*, discovered between 1992 and 1994 in Ethiopia's Awash region known for its abundance of human fossils, seems rather ape-like despite being considered the immediate ancestor of the *Australopithecus*.<sup>16</sup>

With the *Australopithecus*, we enter a period of accelerated evolution, during which this genus pursued various paths of adaptation and formed a variety of types who went on to populate the African bush and savannahs in the decamillenia between 4 and 2 mybp and who lived alongside the ancestors of our modern gorillas and chimpanzees (Fig. 3.2).

The first ever discovered specimen of the species *Australopithecus* was this "Baby of Taung", whose description by Dart resulted in many controversial discussions with Dart at their very center. The subsequent decades saw further, often spectacular discoveries in East African digs; amongst them Mary Leakey's discovery of a skull of the *Australopithecus boisei* in Tanzania's Olduvai Gorge in 1959, or the skeleton of a female *Australopithecus afarensis* in the Ethiopian Hadar by the American paleoanthropologist Donald Johanson, of which nearly a full quarter has been preserved and which is known today as "Lucy". These two types exemplify the difficulties paleoanthropologists soon faced after the number of finds classified as *Australopithecus* proliferated and their systematic position had to be discussed. New insights soon made it clear that not all Australopithecines could be considered ancestors of the genus *Homo*, but that instead the robust types evidently went through a process of specialization: they had reacted to the world wide climate change and an increasing aridity with a specific adaptive feat which allowed them to

<sup>16</sup>Tattersall, Ian (2012). *Masters of the Planet. The Search for our Human Origins*. New York: Palgrave Macmillan, pp. 6–19.



**Fig. 3.2** Tentative hominid family tree under consideration of climate and biogeography. Loosely based on the interpretation of the contemporary discovery status by Friedemann Schrenk (© Bwd, Gemeinfreie Mediendatei)

make use of hard and hard-shelled foods, while the gracile line of the Australopithecines had moved towards a higher degree of versatility and possibly intelligence. We can thus consider only Lucy's descendants in the search for the ancestors of modern humans, and this realization resulted in the re-classification of the former robust Australopithecines, assigning them to their own genus, *Paranthropus*.

Standing at the foot of the human genealogical tree, the brain volume of the Australopithecines, measuring about 400–550 ccm, was only marginally larger than that of modern chimpanzees; both were also roughly the same physical size, with a height of 1.00–1.60 m. In terms of movement and lifestyle, it seems that the tried and tested was preferred, keeping to the trees and only occasionally practicing walking upright on the ground. The use of tools or even their production could not be proven for our ancestors, not to mention any evidence for the use of symbols.

It is likely that we must consider the same case for the descendants of *Australopithecus africanus*, the *Homo rudolfensis* (2.4–1.8 mio ybp), the first representative of our own genus, who was found by a group of scientists surrounding Richard Leakey near Koobi Fora in Kenya in 1972. Definite certainty of the systematic classification of the fossil was achieved only with further discoveries, including a lower jaw unearthed by the German paleoanthropologist Friedemann Schrenk in Malawi in 1991, which made it clear that the fossils classified as *Homo rudolfensis* differed considerably from the Australopithecines and

the roughly coeval *Homo habilis* in terms of the missing bulging eyes and the positioning of the lower jaw; consequently, they were justifiably assigned their own genus, *Kenyanthropus*. Here we must imagine an early ancestor who surely walked mainly upright, who was roughly 1.50 m tall, weighed about 45–50 kg, and possibly already used tools which were found in contemporaneous, or only marginally younger layers at Lake Turkana in Kenya. Dart's assumptions relating to the successful hunter again cannot apply to *K. rudolfensis*: our ancestors' cousin consisted on a largely vegetarian diet.<sup>17</sup>

To round off the picture, mention must be made of *Homo habilis*, who only a few years ago had been considered as part of the original human lineage by paleoanthropologists. *Homo habilis*, who inhabited the East African forests 2.1–1.5 mio years ago, was also discovered and described in 1959 by members of the team surrounding Louis Leakey. More than anything, scoring in the bones of the accompanying fauna, interpreted as cut marks, led to the conclusion that *H. habilis* subsisted partially on meat. Original assumptions, that *H. habilis* must be a direct ancestor of *H. ergaster* and thus modern man, must now be considered as disproven.<sup>18</sup>

On the other hand, the discovery known as “Turkana Boy” from Koobi Fora in Kenya can surely be considered as a direct ancestor. The fossils were originally dated to an age of 1.6 mio years and classified as *H. erectus*. Today, Turkana Boy is placed with *Homo ergaster*, a species distinguished by a relatively large brain volume of 700–900 ccm, and whose skeleton was already adapted to sustained walking on two legs.<sup>19</sup> Possibly this species already used tools from the so-called Oldowan culture and supplemented its diet with meat, although one should take care not to imagine *H. ergaster* as courageous hunter. It is more likely that our ancestor appropriated the prey of more successful hunters like lions or hyaenas and cut the meat off the bones using lithic tools: our ancestors were likely nothing more than klepto-parasites!<sup>20</sup>

<sup>17</sup>Schrenk, Friedemann (1997). Die Frühzeit des Menschen. Der Weg zum Homo sapiens. München: C. H. Beck, pp. 70–71.

<sup>18</sup>Schrenk, Friedemann, Ottmar Kullmer and Timothy Bromage (2007). The Earliest Putative Homo Fossils. In: Winfried Henke und Ian Tattersall: Handbook of Paleoanthropology. Berlin/Heidelberg: Springer, pp. 1611–1631.

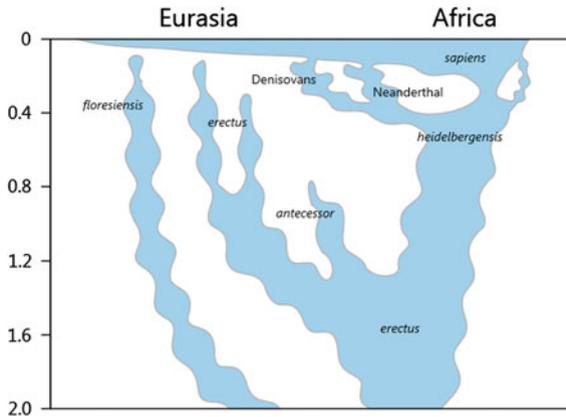
<sup>19</sup>Tattersall, Ian and Jeffrey Schwartz (2001). Extinct Humans. Boulder, Colorado: Westview/Perseus.

<sup>20</sup>This was surely the case for the Australopithecines, who were by no means successful hunters, but rather the prey. As the paleoanthropologists Donna Hart and Bob Sussman demonstrated on the grounds of anatomical characteristics of early Australopithecines and the reconstruction of their habitat, our ancestors lived in larger groups of 25–75 individuals, stayed small and generalized and were successful by “combining seemingly contradictory specializations”. In this context both a progressive brain development and bipedalism played an important role, because whoever is intelligent can flee possible enemies and whoever can walk upright can see his enemies in the open grass savannahs. Tattersall, Ian (2013). Masters of the Planet. The Search for Our Human Origins. Palgrave Macmillan: New York, p. 59.

Hart, Donna, Bob Sussman (2009). Man the Hunted: Primates, Predators, and Human Evolution. Expanded Edition. Boulder, CO: Westview Press.

In *Homo erectus*, then, for the first time a representative of the *Homo* genus left the African continent and triumphantly conquered the old world. This feat was made possible partly by the meanwhile notably higher intelligence and thus adaptability of this species, whose European version even today is frequently considered an independent species, *Homo heidelbergensis*. Clear use of tools and fire and a much more “humanlike” appearance have fascinated men beyond the smaller circle of paleoanthropologists, also because *Homo erectus*, or rather *Homo heidelbergensis*, is held to be the immediate ancestor of both *Homo neanderthalensis* as well as *Homo sapiens*, our own species (Fig. 3.3).

In this context we can also trace the history of discovery back to the earliest times of paleoanthropological research, and of course it mirrors the contemporaneous world view. Ernst Haeckel (1834–1919), the German biologist and enthusiastic follower of Darwin, had in contrast to Darwin suspected the cradle of mankind to lie in Asia, and in fact the Dutch anthropologist and army physician Eugène Dubois (1858–1940) discovered early remains of a humanlike fossil on the Indonesian island Java in 1891. After several name changes, these remains are today classified as *Homo erectus*, and represent its holotype. Further discoveries followed in the first decades of the 20th century, including the so-called Peking man, according to Matt Rossano proof for early ritualistic actions, who was unearthed initially in 1921 by Otto Zdansky and his team, and subsequently excavated by Davidson Black, Pei Wenzhong, and Jia Lanpo, from 1927 to 1937 after the first publications and a generous contribution from the Rockefeller foundation. The fragmentary condition of overall 14 skulls, or rather skull fragments, 14 lower jaws, more than 150 teeth, and numerous skeletal remains encouraged the



**Fig. 3.3** The mutual relationship between *H. erectus* and *H. heidelbergensis* (Chris Stringer in his version of the genealogical tree of the species *Homo* emphasises the in his opinion central position of *Homo heidelbergensis* as link between the Neanderthal, the Denisovan, and *Homo sapiens*. Other paleoanthropologists still assign the African discoveries identified as *heidelbergensis* to *Homo erectus*. Chris Stringer (2012) *Evolution: What makes a modern human?* Nature 485, pp. 33–35) © Chris Stringer 2012

phantasies of scientists and laymen alike, leading to the suggestion that they were dealing with the remains of cannibalistic meals and proof for an early skull cult.<sup>21</sup> Today however scholars are certain that taphonomic processes and more importantly improper excavation of the fossils were responsible for the serious damage to the skulls.<sup>22</sup> It is a fact, however, that the fossils, who stem from different layers and roughly 40 individuals, have been dated to an age bracket of 770.000–400.000 years, used Oldowan tools, and had a brain volume of up to 1059 ccm and higher, which measures roughly two thirds of men's volume today. Further evidence pertaining to the intellectual abilities of *Homo erectus* can be found on the skeletons, specifically on the nearly fully extant pelvis of a female *H. erectus* from Ethiopia, which shows that *H. erectus* was born with a brain volume roughly 32–36 % of the size of an adult (compare: man today 28 %, chimpanzee 40 %). This implies that the childhood of *Homo erectus* was still considerably shorter than that of *Homo sapiens*, but already much longer than the childhood of the *Australopithecus*, which in turn allows the conclusion that rigidly inherited behavioural patterns regressed in favour of a new behaviour to be appropriated in the respective cultural context. Or expressed differently: *H. erectus* was already extremely adaptive, and this ability allowed him to conquer new living space successfully, to populate new continents, to adapt to different climate conditions, and in turn to develop new strategies to sustain himself. It must therefore not be surprising that *H. erectus* soon produced progressive lithic tools of the Achleulean type, so-called hand-axes, whose production was complicated, from which follows that the corresponding techniques were passed on through the generations. Final proof for the diet of *H. erectus* was delivered by a sensational discovery near Schöningen in Lower Saxony, where both wooden throwing spears and a throwing stick tapered at both ends were excavated in an open-cast lignite mine, dated to an age of 400.000 years and thus attributed to *Homo erectus* (or rather *Homo heidelbergensis*). Not only the weapons themselves but also the associated remains of more than 15 wild horses offer impressive proof for the fact that *H. erectus* at least from this point forward must have been a successful hunter of big game—including the corresponding intellectual and social abilities necessary to develop and agree upon hunting strategies.<sup>23</sup>

*Homo erectus* thus was not only intelligent, and surely much more intelligent that modern chimpanzees and gorillas, but also demonstrated characteristics and behavioural patterns which are humanlike and which cannot be found amongst our

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<sup>21</sup>Wernert, Paul (1948). Le culte des crânes à l'époque Paléolithique. Histoire Générale des Religions, edited by M. Gorce and R. Mortier, Vol. 1, Paris: Quillet.

<sup>22</sup>Schrenk, Friedemann (1997). Die Frühzeit des Menschen. Der Weg zu Homo sapiens. München: CH Beck, pp. 83–85.

<sup>23</sup>Thieme, Hartmut (1997). Lower Palaeolithic hunting spears from Germany. In: Nature. Band 385, pp. 807–810.

Thieme, Hartmut (2007). Der große Wurf von Schöningen: Das neue Bild zur Kultur des frühen Menschen. In: Thieme H. (ed.) Die Schöninger Speere – Mensch und Jagd vor 400,000 Jahren. Stuttgart: Konrad Theiss Verlag, pp. 224–228.

closest living relatives. This includes the systematic use of fire to prepare food and the production of effective and complicated weapons, a technique carefully passed down the generations. Possible evidence for actions loaded with symbolism however have not been found, unless one is inclined to interpret the afore-mentioned use of mineral colour pigments for body art in this manner. Statements which aim to trace the condition of the *H. erectus* fossils back to cannibalistic or ritualistic practices could also not be verified. On the contrary: scratches originally interpreted as traces of lithic tools turned out to be traces of hyena bite marks, cuts as a consequence of being transported in debris, or even the result of improper excavation methods. Proof for continuous artistic work could also not be found for this early human species, even though a large number of early resting places and colonies in both southern Africa and Europe have been investigated thoroughly.

Even if we will have to return to the issue of the treated skulls in relation to the Neanderthal and the contemporaneous modern man, one thing has become clear: it cannot have been cannibalism, nor can there have been traces for early rituals. On the other hand, research which had only a few years ago assumed that our ancestors during the time of the Peking man had not been capable of successfully hunting big game has had to be revised: at the latest the spectacular finds of throwing spears including the remains of prey near Schöningen, Germany, have made it clear that representatives of the *Homo* genus had already been capable of producing effective weapons and coordinating their activities for a successful hunt 400,000 ybp. This must surely demonstrate higher intelligence combined with a distinct faculty for learning, and these are exactly the prerequisites necessary to pass on individually acquired knowledge within a cultural context on to the next generation. Evidence for symbolic actions however could not be proved from a paleoanthropological standpoint. The discoveries of early pieces of jewellery in the shape of pierced marine snail shells, referred to by Rossano as proof for symbolic actions, must be dated considerably later: this jewellery (if it even was that) was not worn by *H. erectus* respectively *H. heidelbergensis*, but rather by early *H. sapiens* or the contemporaneous Neanderthal!

## Chapter 4

# My Cave Is My Castle—Middle Palaeolithic, Territoriality, and Death

### Our Preliminary Results

Despite clear indications for a comparatively highly developed intelligence of *Homo erectus* respectively *Homo heidelbergensis*, which is mirrored not only in his anatomy and ontogeny, but also in his progressive hunting behaviour and the possible use of colourful minerals for body painting, we could not uncover any evidence for an extended understanding of symbolism amongst the humans of the Lower Palaeolithic (approx. 2.6 mybp–300,000 ybp). Our search for the “when”, the point in time of the (possible) origins of religion, must continue. Consequently, therefore, we must turn our attention to the Middle Palaeolithic (300,000–45,000 ybp), to the descendants of *H. heidelbergensis*, and begin our search for the first references pointing to both symbolic actions and religion or proto-religion!

### The History of Cannibals

Indeed, albeit only from about 90,000 ybp, we can uncover clear signs for early symbolic actions both amongst the anatomical modern man (*Homo sapiens*) as well as for the contemporaneous Neanderthal (*Homo neanderthalensis*).

Especially the latter has demanded scientific interest relating to the issues of his intellectual capabilities and possible early religious practices; on the one hand, because the discovery situation in Europe with its many karst caves offers ideal conditions for the preservation of evidence, and on the other because the Neanderthal was one of the first ever paleo-anthropological discoveries. As a human species which originated in and spread through Europe before the anatomical modern man

even migrated from Africa,<sup>1</sup> it was of course the Neanderthal who was discovered and described in the course of paleo-anthropological digs during the second half of the 19th century, and who formed the idea of man of the Middle Palaeolithic.

The image of humankind of the Middle Palaeolithic, dominated by the Neanderthal, initially does not demonstrate many sympathetic characteristics. The Neanderthal largely appeared to be a naïve brute to whom the most fantastic habits could be attributed. It is therefore not surprising that the previously rejected issue of cannibalism, in the context of the *erectus*-discoveries of Zhoukoudian, consistently appears even in the more recent scientific publications.<sup>2</sup>

The discovery history here again is crucial for these assumptions, especially the moment the first Neanderthal was discovered in 1857, two years before Darwin's *On the origin of species* focused the public's attention onto the issue of species variation. The eponymous Neanderthal skeleton was discovered in the Kleine Feldhofer Grotte, in the Valley of Neander near Dusseldorf, Germany, in a limestone quarry (Fig. 4.1).

Luckily, the discoveries were handed to the teacher and natural scientist Johann Carl Fuhlrott, who immediately recognised their importance and together with Hermann Schaaffhausen, professor for anatomy in Bonn, presented the results of their anatomical studies at the general assembly of the *Naturhistorischer Verein der preußischen Rheinlande und Westfalens*.<sup>3</sup> They correctly described the Neanderthal as an early inhabitant of Europe, who had lived here even before the Celts and the Germanic tribes. Disregarding the fact that this evolutionary perception predating Darwin's seminal publication initially strained and over-taxed the academic world, Fuhlrott and Schaaffhausen shaped the image of the Neanderthal until today. In order to understand the contemporaneous, and from our point of view recklessly

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<sup>1</sup>Tattersall, Ian (2012). *Masters of the Planet. The Search for our Human Origins*. New York: Palgrave Macmillan, pp. 154–158.

Morris, Alan G., Anja Heinze, Eva K.F. Chan, Andrew B. Smith, and Vanessa M. Hayes (2014). *First Ancient Mitochondrial Human Genome from a Pre-Pastoralist Southern African*. Published by Oxford University Press on behalf of the Society for Molecular Biology and Evolution. Open Access article <http://gbe.oxfordjournals.org/content/early/2014/09/10/gbe.evu202.full.pdf>.

<sup>2</sup>See, for example, Maringer, Johannes (1956). *Vorgeschichtliche Religion. Religionen im steinzeitlichen Europa*. Zürich, Köln: Benziger Verlag, pp. 79, 82.

James, E.O. (1960). *Religionen der Vorzeit*. Köln: Dumont Schauberg, pp. 15–16.

Defleur, A., White, T., Valensi, P., Slimak, L., Cregut-Bonnoure, E. (1999). Neanderthal Cannibalism at Moula-Guercy, Ardèche, France. *Science* 286: pp. 128–131.

White, Tim D. (September 15, 2006). Once were Cannibals. *Evolution: A Scientific American Reader*. Chicago and London: The University of Chicago Press, pp. 308–346

Owen, James (December 5, 2006). “Neanderthals Turned to Cannibalism, Bone Cave Suggests.” *National Geographic News*.

Rossano, Matt (2010) *Supernatural Selection. How Religion Evolved*. Oxford, New York: Oxford University Press, p. 142.

<sup>3</sup>Fuhlrott, Johann Carl (1859). *Menschliche Ueberreste aus einer Felsengrotte des Düsselthals. Verhandlungen des naturhistorischen Vereins der preussischen Rheinlande und Westfalens*, pp. 131–153.

**Fig. 4.1** The Neander Cave  
1835 (© J.H. Bongard,  
Wanderungen zur  
Neanderhöhle 1835)



**Fig. 4.2** Reconstruction of  
the Neanderthal following the  
original descriptions of  
H. Schaaffhausen



distorted, image, one has to consider that during Fuhlrott's and Schaaffhausen's times there was absolutely no literature pertaining to the human phylogeny—neither *The origin of species* nor *The Descent of man*—had been written at this point. However, brilliant biologists such as Étienne Geoffroy Saint-Hilaire (1772–1844) and Jean Baptiste de Lamarck had previously confronted the public with the issue of the transmutation of species,<sup>4</sup> so that for Fuhlrott, the classification of his discoveries as “antediluvian man” was a logical consequence of the biological findings of his times—and both Fuhlrott and Schaaffhausen presented themselves as informed and at the height of a revolutionary biological level of knowledge that clearly challenged many of their contemporaries (Fig. 4.2).<sup>5</sup>

<sup>4</sup>Geus, Armin (2004). Article “Zoologische Disziplinen”. In: Ilse Jahn (ed.) *Geschichte der Biologie*, pp. 324–336.

<sup>5</sup>Fuhlrott had already grappled with and published on issues of systematics before he was presented with the Neanderthal skeleton. An example is his early attempt pertaining to the systematics of plants: Fuhlrott, Johann Carl (1829). *Jussieu's und De Candolle's natürliche Pflanzen-Systeme, nach ihren Grundsätzen entwickelt und mit den Pflanzen Familien von Agardh, Batsch und Linné, sowie mit dem Linné'schen Sexual-System verglichen. Für Vorlesungen und zum Selbstunterricht*. Bonn: Eduard Weber.

Fuhlrott, Johann Carl (1865). *Der fossile Mensch aus dem Neanderthal und sein Verhältnis zum Alter des Menschengeschlechts*. Duisburg: Falk & Volmer.

Tattersall, Ian (1996). *The Last Neanderthal: The Rise, Success, and Mysterious Extinction of Our Closest Human Relatives*. Macmillan Publishing Company. p. 74.

Possibly the largest obstacle for the recognition of the *H. neanderthalensis* as a form of early man was the then firmly entrenched notion, vehemently defended by the church, that man was created as the crown of creation by God. The possibility that man could have had ape-like ancestors aroused the tempers so much that during a discussion of Darwin's theory of evolution, Darwin's follower Thomas Henry Huxley and the Anglican Bishop Wilberforce insulted each other and the discussion ended in a large commotion.

In this context the authors were helped by their biological knowledge in the systematic classification of the findings, but due to the contemporaneous level of knowledge could barely offer any colouring to the image of the "*Vormensch*", his lifestyle, and his environment. For further interpretation they thus reverted back to approved sources: the literature of the humanities, in which classical philology and theology defined the scientific paradigm. Only a short while earlier, modern natural science with famous names such as the palaeontologist Georges Cuvier (1769–1832) or the geologist Charles Lyell (1797–187) had verified the *Deluge*: sediments in the Paris Basin had shown that parts of Europe must have been flooded in the prehistoric past; in the contemporaneous geological technical terminology this era was referred to as the Diluvium, in light of the biblical *Deluge*. And the writings of classical antiquity, full of stories of wild, flesh-eating barbarians, proved that sinister creatures must have populated especially the northern countries during these mythical times. With this, the character and intellectual abilities of the Neanderthal were defined once and for all, and future generations of researchers could only integrate their own discoveries into the picture of a bloodthirsty creature.<sup>6</sup>

In fact, it was to be another decade before the Neanderthal was recognised as a prehistoric man; in this regard the pioneering pathologist Rudolf Ludwig Karl Virchow (1821–1902) played a rather disreputable role, who as a declared opponent of the theory of evolution illegally gained access to Fuhlrott's materials and interpreted them as the remains of a pathologically deformed modern man.<sup>7</sup>

Already in 1832, discoveries of bones in Belgium had been interpreted as the fossils of an antediluvian man, followed several years later by the discovery of a

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(Footnote 5 continued)

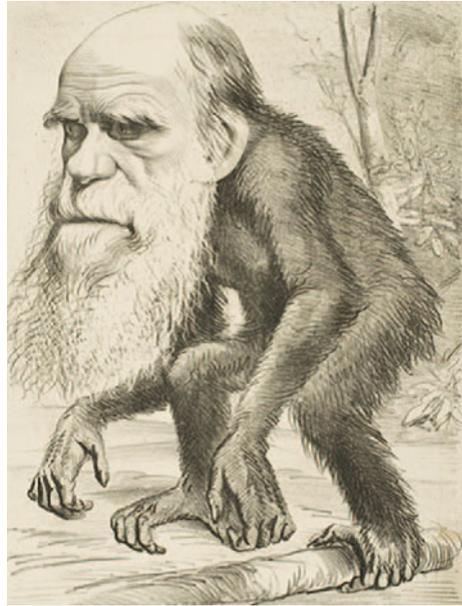
Henke, Winfried (2007). Historical overview of paleoanthropological research. In: W. Henke—I. Tattersall, *Handbook of Paleoanthropology: Vol I: Principles, Methods and Approaches*. Heidelberg and Berlin: Springer, pp. 12–14.

<sup>6</sup>Potonié, R. (1957). Zu Cuvier's Kataklysmentheorie. *Paläontologische Zeitschrift*, 31: 9–14. Stuttgart.

Lyell, Charles (1830–1833). *Principles of geology, being an attempt to explain the former changes of the Earth's surface, by reference to causes now in operation*. vol. 1–3. London: John Murray.

<sup>7</sup>Glick, Thomas F. (1988). *The Comparative Reception of Darwinism*. Chicago: University of Chicago Press. pp. 86–87.

**Fig. 4.3** Caricature of Darwin. This famous caricature was published 22nd March 1871 in the magazine *The Hornet* and was entitled “A venerable orang-outang. A contribution to unnatural history”



well-preserved skull on Gibraltar, and in 1864 the Neanderthal received his scientific name *Homo neanderthalensis* by the geologist William King; but only after two nearly fully preserved Neanderthal skeletons were found in a cave in Spy, Belgium, in 1886, did the notion of the existence of a second—early!—form of man penetrate wider public awareness (Fig. 4.3).

The results of this overview of the discovery history: once the Neanderthal was finally recognised as an early form of man, his characteristics were also defined, which depending on the scientist and discovery environment ranged from the beastly to the bizarre. In this intellectual context, we can consequently classify alleged proofs of early cultic behaviour, which, despite having been disproven in palaeontological and paleoanthropological literature, consistently even today find their way into serious scientific publications concerning the origins of religion.<sup>8</sup> The sensational discovery by the hobby archaeologist Emil Bächler acquired much fame in this context, who at the beginning of the 20th century discovered a cave in the Alps in which he uncovered large stores of fossil bones of bears. Several assemblages of bear skulls clearly demonstrated not only the same orientation, but seemed to have been deposited in a kind of stone box. Bächler brought these bear fossils into a contextual relationship with the Neanderthal and interpreted the bone

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<sup>8</sup>The most recent example is the reference to the alleged bear cult practiced by the Neanderthal: Witzel, E. J. Michael (2012). *The Origins of the World's Mythologies*. Oxford, New York and others: Oxford University Press, p. 243.

collections as the remains of a bear cult as practiced by the Ainu and Giljak today.<sup>9</sup> Thus was born the theory of a bear cult, which seemed to acquire further validation in the subsequent years. Only today do new examinations and careful excavation methods make it clear that the accumulation and orientation of bear bones must be traced back to sedimentological processes—such as the transportation by cave waters—while cut marks and holes on the fossils were the results of hungry hyenas which during the era of the Neanderthal enriched the local fauna together with the cave bear, cave lion, and other, now extinct, species.<sup>10</sup>

An alleged skull cult was also frequently insinuated, thus for example in context with excavations near Weimar-Ehringsdorf between 1908–1925. Indications for this assumption were alleged strike marks on excavated skulls. Meanwhile, further examinations have proven that both the earlier excavation techniques, the documentation of the findings, and the preparation and evaluation of the postcranial skeleton parts were severely lacking. Accordingly, renewed examinations of the skeletal findings did not provide any evidence for previous skull deposits, any more than for contemporaneously excavated finds of the Neanderthal and his ancestors.<sup>11</sup> Further, the allegedly unambiguous evidence for a skull cult including anthropophagy in the Grotta Guattari on Mount Circeo, Italy, also did not bear closer scrutiny. Originally, workers had found a Neanderthal skull lying on its side within a stone wreath in one of the cave's rearward chambers. The skull revealed an injury in the temporal area that was assumed to have been the cause of death. Damages in the subcranial region were interpreted as an artificial extension of the foramen magnum. Until today, the skeletal finds from the Grotta Guattari are considered as unquestionable evidence for the creepy, cultic actions of the Neanderthal and thus considered typical for his crude and barbaric religiosity.<sup>12</sup> However, renewed examinations of the finds have demonstrated that the previous stereotypical notions of the Neanderthal have led to a typical misjudgement, because in contrast to earlier assumptions, these injuries in the subcranial region and the posterior cranial fossa

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<sup>9</sup>Bächler, Emil, (1934). *Das Wildenmannisloch am Selun*. St Gallen, Fehr'sche Buchhandlung.

Sternberg, Leo (1905). *Die Religion der Giljaken*. In: *Archiv für Religionswissenschaft* 8, Leipzig, pp. 244–274.

Adami, Norbert R. (1991). *Religion und Schamanismus der Ainu auf Sachalin*. Ein Beitrag zur historischen Völkerkunde Nordostasiens. München: Iudicum Verlag 1991.

<sup>10</sup>Wunn, Ina (1999). *Bärenkult in urgeschichtlicher Zeit. Zur religiösen Deutung mittelpaläolithischer Bärenfossilien*. *ZfR* 7/1999, pp. 3–23.

Wunn, Ina (2008). *Emil Bächler und der angebliche Höhlenbär-Kult. Über wissenschaftstheoretische Paradigmen und ihren Einfluss auf die Forschung*. *Stalactite. Zeitschrift der Schweizerischen Gesellschaft für Höhlenforschung* 58/2, pp. 81–83.

<sup>11</sup>Vlček, Emanuel (1993). *Forschungsgeschichte*. In: Vlček, Emanuel (ed.), *Fossile Menschenfunde Weimar-Ehringsdorf*, Stuttgart: Theiss, pp. 56–63.

<sup>12</sup>Blanc, Alberto Carlo (1942). *I Paleantropi di Saccopastore e del Circeo*. In: *Quartär 4. Jahrbuch für Erforschung des Eiszeitalters und seiner Kulturen*. Berlin, pp. 1–37.

were the result of predatory attacks, most likely of hyenas whose fossilized excrements were found at the discovery site.<sup>13</sup>

The historical background which attributed cave bear or skull cults to the Neanderthal is also responsible for the alleged evidence of further obscure religious practices, which supposedly ruled the Neanderthal's spiritual life: around 30 years after the first descriptions of Fuhlrott and Schaafhausen, the contemporary assumptions concerning the Neanderthal's cannibalistic way of life appeared to be proven when the palaeontologist Dragutin Gorjanović-Kramberger (1856–1936) executed a systematic large-scale excavation in the Croatian region of Krapina; this excavation led to the discovery of a veritable bone-bed of the Neanderthal. Despite the pioneering achievements of this palaeontologist, educated in Germany, who amongst other things used the new X-ray technology to work on his discoveries, he also could not distance himself from the original picture painted of the Neanderthal. For Gorjanović-Kramberger, the condition of the human fossils and their density were the deciding evidence indicating that he had discovered the victims of a hunt targeting fellow Neanderthals.<sup>14</sup> Meanwhile, however, it is accepted fact that the Neanderthals discovered in Krapina were not the victims of a raid or even a natural disaster, but that their remains were encased with cave sediments over a period of thousands of years, between 130,000 and 80,000 years of age. The situation is complicated by the fact that excavators used dynamite, hence the fractionated condition of the bone remains cannot be considered evidence for the manner of death. Ultimately, the deceased of Krapina as well as the “suspicious” bear skulls accumulated in the cave as a consequence of natural sedimentary processes, where they found their temporary final resting place until arrival of enthusiastic palaeoanthropologists.<sup>15</sup>

In the meantime, the cannibalism hypothesis had been discredited not only in prehistorical research, but also in anthropology more general. The anthropologist William Arens especially could provide minute evidence that all apparent references of socially acceptable cannibalism (i.e. not cannibalism in extreme emergency situations, which is documented) all stem from second hand accounts, had never been observed, and were used to discriminate against other peoples. Exactly these unverifiable allegations were used by palaeoanthropologists as comparative material, in order to attribute to the “primitive” Neanderthal the same customs as were attributed to the so-called contemporaneous “primitive” peoples.<sup>16</sup>

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<sup>13</sup>Giacobini, Giacomo and Marcello Piperno (1991). Taphonomic Considerations on the Circeo 1 Neandertal cranium. Comparison of the surface characteristics of the human cranium with faunal remains from the paleosurface. In: Piperno, Marcello and Giovanni Scichilone (eds.), *Il Cranio Neandertaliano Circeo 1. Studi e Documenti*, Roma, pp. 457–485.

<sup>14</sup>Gorjanović-Kramberger, Dragutin (1913). *Život i kultura diluvijalnoga čovjeka iz Krapine u Hrvatskoj: Hominis diluvialis e Krapina in Croatia vita et cultura*. Zagreb: Knjiž. Jugoslav. Akad.

<sup>15</sup>Trinkaus, Erik (1985). Cannibalism and burial at Krapina, in: *Journal of Human Evolution* 14/2, pp. 203–216.

<sup>16</sup>Arens, William (1979). *The Man Eating Myth. Anthropology & Anthropophagy*. Oxford, New York: Oxford University Press.

Here, the issue of cannibalism amongst the Neanderthal could be done away with, were it not for more recent discoveries which further fuelled corresponding speculations. To these belong the discoveries of Neanderthal skeletons in the cave of El Sidrón, Asturias. Over 1800 skull fragments, lower jaw bones, bones, and teeth as well as roughly 400 Mousterian tools were uncovered, belonging to at least 12 Neanderthals. Because one skull fragment and a piece of one humerus show traces of beatings with a hand axe and other bones carry further cut marks, suspicions of cannibalism arose; a cannibalism, however, which clearly could be traced back to times of immediate distress in the period of the downfall of the last of the Neanderthal population, and thus it cannot be set into any ritual context. The teeth of the respective three male and female adults as well as of 6 youths show clear evidence of a lack of food.<sup>17</sup> A French-American team of anthropologists led by Alban Defleur and Tim White came across a similar discovery site, and noted clear cut marks on 120,000–100,000 year old Neanderthal fossils from Moula-Guercy in the Ardèche.<sup>18</sup> Because the remains of hunted prey were found in the same layers, in contrast to the discoveries of El Sidron, this could not have been a time of extreme distress leading to cannibalism, as has been noted in history in the course of tragic events, such as the infamous plane crash in the Andes.

It is thus not surprising that the issue of the Neanderthal cannibalism has risen again and that scientists in this context again looked to these older discoveries. And in fact it became apparent that some of the observed cuts especially on the skulls could be explained by the use of lithic tools and the possible removal of the scalp—this also includes the holotype, the man found in the Kleine Feldhofer Grotte in the Neanderthal Valley.<sup>19</sup> However, it appears not to have been a practice attributable only to the Neanderthal, as the same results were uncovered during examinations of *Homo sapiens*, belonging to a much younger era: for example, interments dating to

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<sup>17</sup>Tattersall, Ian (2012). *Masters of the Planet. The Search for Our Human Origins*. New York: Palgrave Macmillan, p. 174.

Erik Trinkaus explains these finds as follows: “There’s little mystery about the underlying reasons for outbreaks of Neandertal cannibalism. I think it’s just these people were hungry. They had periods of seasonal starvation, and on occasion, when they are really starving and members of their social group are already dead, they consumed their remains... It’s what I call survival cannibalism.” Commentary of Erik Trinkaus in: *National Geographic News*, Thursday, October 28, 2010: Neandertals Turned to Cannibalism, Bone Cave Suggests.

<sup>18</sup>Defleur Alban, White Tim, Valensi P., Slimak L, Crégut-Bonnoure E (1999) Neandertal Cannibalism at Moula-Guercy, Ardèche, France. *Science* 286: pp. 128–131.

<sup>19</sup>See here the palaeoanthropologist Erik Trinkaus: “There is plenty of evidence that Neanderthals were ‘processing’ the bodies of other Neanderthals (as were early modern humans ‘processing’ the bodies of their relations). The cut marks are genuine. The open question is whether they were disarticulating and breaking open bodies for food or some other purpose. If for food, my preference is that it was survival cannibalism. We have plenty of evidence in terms of growth arrest lines that they underwent frequent (seasonal) starvation, and they would have fully recognized humans as edible. It says nothing about religion, ritual, or other such factors. We know that they respected their dead kin, since they buried them as frequently as did early modern humans.” Trinkaus, Erik, in a personal note from 13.7.2014.

the Neolithic *Linear Pottery Culture* demonstrate that much later, roughly 7000 ybp, the deceased were first defleshed and their remains buried only subsequently. Thus, the manipulations of the Neanderthal bones—usually found on their skulls—must be interpreted in a new light. Blood-thirsty hunting campaigns can no longer be held accountable for the archaeological evidence, but instead a custom which is even today widely distributed: a secondary interment.<sup>20</sup>

## Secondary Interments Amongst the Neanderthals?

Secondary interments are elaborate burials in two steps: the deceased is buried temporarily, and after a pre-determined time period—usually after full decomposition or the removal of the soft tissue—finds his final resting place somewhere else. The time between the first and second interment is understood as a transition period into a different world. Secondary interments are therefore the visible sign of a more complicated world view with complex notions of the Hereafter. As example, one might take the Toraja people on the island of Sulawesi in Indonesia. For the Toraja, the physical death does not mandate the end of individual existence. The deceased is thus placed into a coffin which is kept inside the house. There, he is continued to be treated as a family member, albeit a family member with limited capacity to act, i.e. he is told of recent news from village life and is presented with food on a daily basis. Only after at least one year are the remains finally interred amongst elaborate celebrations. In the meantime, a statue representing the deceased is fashioned, in which his spirit can rest after the final burial. This second part of the interment, in which the deceased is ritually integrated into the world of the dead, is celebrated extensively. A space is cleared, galleries erected for the audience, food and masses of palm wine are provided, numerous lovely and fatty pot-bellied pigs are slaughtered, and a large number of water buffalo are ritually sacrificed—their life energy, spent in a rush of blood, is meant to replace the vital force of the deceased and thus allow him renewed life in the hereafter.<sup>21</sup> This brief overview of a ritual connected with the disposal of the dead, variations of which are spread throughout the Indonesian archipelago over the Salomon Islands all the way to northern Asia, makes it clear that we are dealing with complex rituals connected with sophisticated

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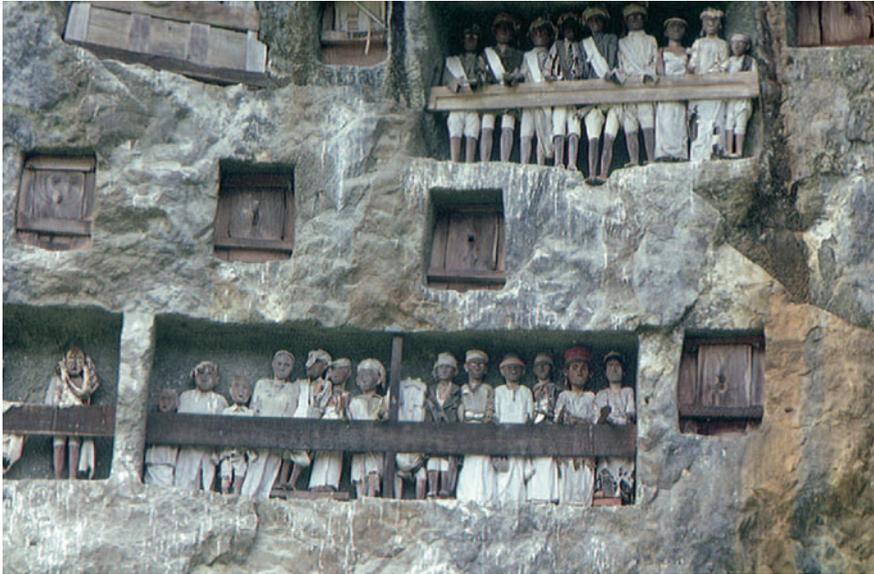
<sup>20</sup>Schmitz, Ralf W. and Peter Pieper (1992). Schnittspuren und Kratzer. Anthropogene Veränderungen am Skelett des Urmenschenfundes aus dem Neandertal. In: Das Rheinische Landesmuseum Bonn: Berichte aus der Arbeit 2, pp. 17–19.

Orschiedt, Joerg (1997). Beispiele für Sekundärbestattungen vom Jungpaläolithikum bis zum Neolithikum. *Ethnographisch-archäologische Z.* 38, pp. 325–345.

Orschiedt, Joerg (1997). Manipulationen an menschlichen Skelettresten. Taphonomische Prozesse, Sekundärbestattungen oder Kannibalismus? *Archäologische Inf.* 20, pp. 195–197.

<sup>21</sup>Hollan, Douglas (1995). To the Afterworld and Back: Mourning and Dreams of the Dead among the Toraja. *Ethos* 23 (4), pp. 424–436.

Berger, Peter (1999). *Die lange Reise der Toten: zwei Studien zu Ideologie und Praxis des Todes in Süd- und Südostasien.* Hamburg: Kovač.



**Fig. 4.4** Tau-Tau, ancestor figurines of the Toraja people (© Karl Ulrich Petry with kind permission)

notions of the hereafter; even with a great effort we cannot imagine such complexity to have stood at the origins of the development of religion (Fig. 4.4).

The reason: religious notions are connected to cultural transmission, which means these notions must have been transmitted and thus have developed from the simplest forms which lay within the natural understanding of the Neanderthal. The wildly spread custom of reaching into the colourful gardens of ethnology when confronted with inexplicable discoveries and thereby comparing cultures which themselves have respectively evolved over thousands of years is further equally misplaced in the case of the Neanderthal, because the complex burying rituals which are firmly linked with secondary interment have only been documented and make sense for hoe cultivators, i.e. settled peoples, but not for foragers; but more on this later.

Neanderthal funerals, on the other hand, are comparatively simple, as far as they have been documented in a way that allows for an evaluation in light of the current question of possible secondary interments. This caveat is necessary as it can no longer come as a surprise that not only topics such as skull cults, bear sacrifices, and cannibalism are controversially discussed in connection with the Neanderthal, his culture, and world view; also the question of whether he buried his dead has fascinated the world ever since the beginnings of Neanderthal research and has divided the scientific community. In France especially, researchers including the Abbés Amédée and Jean Boyssonie, Denis Peyrony or Louis Capitan—all of them laymen and declared lovers of primeval history rather than educated professionals—could unearth a series of alleged Neanderthal burials at the beginning of the 20th century, which further fuelled speculations of the Neanderthal world view, especially because

the positioning of the skeletons and their collation with tools or remains of the contemporaneous fauna had led to wide-reaching conclusions about complex notions of the hereafter.<sup>22</sup> From a modern point of view these excavations, like many early Neanderthal discoveries, are badly documented, so that a re-investigation is only rarely able to offer clear results. Clearly identifiable burial sites are therefore distinguishable only with much difficulty from these old findings; only trace evidence in some cases allows for the conclusion of intentional burials. Thus, we have evidence from La Ferrassie in France for the intentional interment of several individuals, although in contrast to the original statements no evidence indicating death rituals or certain burial practices has been found. There is also no evidence of burial objects, because none of the uncovered artefacts can be definitively associated with a burial; moreover, all of the findings stem from a geological layer full of artefacts. We are faced with a similar situation in La Chapelle-aux-Saints.<sup>23</sup> In Le Moustier, where in 1908 the skeleton of an approx. 15 year old Neanderthal was uncovered, followed 6 years later by the remains of a small child, imprecise descriptions only allow the conclusion that it might have been burials. The first Neanderthal uncovered in Germany similarly was likely buried or consciously deposited after death. The remains of this roughly 60 year old male have subsequently been examined frequently. Of interest in connection to the question of possible burial practices are the cut marks mentioned above on the fore and back of his head, which suggest manipulation of the deceased.

Less obscure, but no less sensational was the discovery of a Neanderthal grave in Shanidar, Iraq, by the American palaeoanthropologist Ralph Solecki in the 1960s. Here, an unusually high concentration of pollen allowed for the conclusion that the deceased was not only buried, but that flowers were laid into his grave.<sup>24</sup> In the meantime, however, this interpretation is also being re-evaluated, ever since it became known that the Persian jird, whose bones were also uncovered in the burial site, probably introduced the flowers thousands of years later in order to pad its nest.

Even though several paleoanthropologists critically face the question of intentional interment amongst the Neanderthal, after a careful re-examination of the relevant publications it remains a possibility that humans in the Middle Palaeolithic

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<sup>22</sup>Maringer, Johannes (1956). *Vorgeschichtliche Religion. Religionen im steinzeitlichen Europa*. Zürich, Köln: Benziger Verlag, pp. 61–78.

<sup>23</sup>Rendu, William, Cédric Beauval, Isabelle Crevecoeur, Priscilla Bayle, Antoine Balzeau, Thierry Bismuth, Laurence Bourguignon, Géraldine Delfour, Jean-Philippe Faivre, François Lacrampe-Cuyaubère, Carlotta Tavormina, Dominique Todisco, Alain Turq, and Bruno Maureille (2014). Evidence supporting an intentional Neanderthal burial at La Chapelle-aux-Saints. In: *Proceedings of the national academy of sciences (PNAS)* 111(1), pp. 81–86.

<sup>24</sup>Solecki, Ralph S. (1971). *Shanidar. The First Flower People*. New York: A. Knopf.

Solecki, Ralph S. (1975). Shanidar IV, a Neanderthal Flower Burial in Northern Iraq. In: *Science. New Series* 190 (No. 4217), pp. 880–881.

Leroi-Gourhan, Arlette (1975). The Flowers found with Shanidar IV, a Neanderthal Burial in Iraq. In: *Science. New Series* 190 (No. 4214), pp. 562–564.

Bolus, Michael and Ralf W. Schmitz (2006). *Der Neandertaler*. Stuttgart: Jan Thorbecke, p. 135.

(the Neanderthal and the contemporaneous *Homo sapiens*) in fact buried their dead; presumably they did so even more frequently than the small number of clearly proven burials indicate. We must factor in a not inconsiderable number of destroyed cave burial sites, as well as interments in the open, of which of course no traces remain. On the other hand, we must consider that even under ideal discovery conditions and a careful handling, we have no evidence pertaining to any rituals connected with burial, cultic actions or even rituals connected to the disposal of the deceased. Both the Neanderthal and the contemporaneous *Homo sapiens* clearly did not know of any customs which went beyond depositing the dead or burying them in a shallow hole.<sup>25</sup>

Nevertheless, the picture of a middle Palaeolithic man merely disposing of corpses appears to fall short. Were it merely an issue of hygiene or security, it would have been sufficient to remove the deceased from their immediate surroundings, as is common amongst certain native peoples even today. Hyenas and wolves would quickly take care of the corpses. However, going to the trouble of digging a hole or re-using existing depressions in the earth, covering the deceased and thereby protecting their material remains from destruction through thieves and scavengers, suggests clear intentions and ideas connected with the notion of a burial.<sup>26</sup>

### ***Homo neanderthalensis*—An Anthropological Positioning**

Who were these Neanderthals, this early human species, who appear to combine in themselves such contradictory characteristics as possible cannibalism in emergency situations and loving care for their deceased?

In the meantime, after a century and a half of anthropological research and a multitude of skeletal finds, our image of the Neanderthal is much more sophisticated than in the early stages of anthropological research. Anthropologists today assume that the classic Neanderthal developed from more delicate ancestors, similar to the above mentioned *Homo heidelbergensis*, who in turn can be traced back to *Homo erectus*. Referred to by some researchers as the Ante-Neanderthal, the oldest ancestors of the Neanderthal uncovered in Europe include the skull findings in Steinheim an der Murr (also referred to as *Homo steinheimensis*), Swanscombe in England, Petralona in Greece, and Vértesszöllös in Hungary, with an age range of 400,000–200,000 years. Discoveries of the so-called early Neanderthal—200,000–90,000 years—hail from Krapina in Croatia, the German Weimar-Ehringsdorf, Saccopastore in Italy, Forbes Quarry on Gibraltar, and Altamura in Italy. The classic Neanderthal, who populated Europe between 90,000–30,000 ybp, is familiar to us thanks to numerous discoveries including of course the Valley of Neander,

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<sup>25</sup>May, Fabienne (1986). *Les Sépultures Préhistoriques*, Paris: Ed. du CNRS.

<sup>26</sup>Bolus, Michael and Ralf W. Schmitz (2006). *Der Neandertaler*. Stuttgart: Jan Thorbecke, pp. 133–135.

Salzgitter-Lebenstedt in Germany, Engis and Spy in Belgium, Monte Circeo in Italy, Gibraltar, Kurdistan, and Israel, as well as from various excavation sites in France; the latter are of importance especially concerning the issue of Neanderthal burials.<sup>27</sup>

After his unhappy origins, the Neanderthal could only with difficulty lose the image as axe-wielding barbarian. Even after two generations of researchers, the discussion concerning the humanity of the Neanderthal has barely moved on; only with the anti-colonial movements in the 1970s did the Neanderthal acquire more human traits. Amongst other considerations, phylogenetic thoughts concerning the position of the Neanderthal within the human genealogical tree led to considerations of the Neanderthal as potential ancestor of the European *Homo sapiens*, thus allowing a classification not too different from modern man. Veritable burials with allegedly substantiated grave gifts such as flowers in the grave of Shanidar seemed to prove that empathy and thought of the Neanderthal barely differ from those of man today. However, several years later the results of DNA analyses demonstrated that the Neanderthal had to be considered as a separate species to which must be attributed specific psycho-social, meaning primitive character traits. Even today the conviction stands that the Neanderthal in comparison with modern *Homo sapiens* was “different”—he was apparently lacking in symbolic cognitive abilities.<sup>28</sup> However, simultaneously it is a known fact that so-called interbreeding must have occurred across the Neanderthal’s distribution area, the cross-breeding of Neanderthal and *Homo sapiens*—clearly the apparently fundamentally different thought processes of Neanderthal and modern man did not prevent both species occasionally accepting the other as potential mating partner—and as a consequence of these occasional affairs Europeans carry up to 4 % of Neanderthal genes!<sup>29</sup>

The extent to which the discussion surrounding the status of the Neanderthal as part of human genealogy and his intellectual capabilities, influenced so strongly by the contemporaneous world view, has obstructed an impartial examination of the Neanderthal discoveries can be measured using the case of the Vogelherd cave in the Swabian Alps, Germany, excavated in 1931. Tools and works of art from the stone-age, including a bone flute, were discovered alongside fossils of both the Neanderthal and modern man—tools and artefacts were naturally attributed to the modern man. Only renewed dating examinations, which place the skeletal finds of the modern man at an age of roughly 4000 years as opposed to an estimated age of roughly 30,000 years for both tools and Neanderthal bones, raised justified concerns about the assumptions that the origins of art in Europe must have been linked with the appearance of modern man.<sup>30</sup>

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<sup>27</sup>Henke, Werner and Rothe, Hartmut (1994). Paläoanthropologie. Berlin: Springer, pp. 449–450.

<sup>28</sup>Tattersall, Ian (2012). Masters of the Planet. The Search for Our Human Origins. New York: Palgrave Macmillan, pp. 175–177.

<sup>29</sup>Ibid., p. 168.

<sup>30</sup>Conard, Nicholas J. (2011). The Demise of the Neanderthal Cultural Niche and the Beginning of the Upper Paleolithic in Southwestern Germany. In Neanderthal Lifeways, Subsistence and Technology: One Hundred fifty Years of Neanderthal Study. pp. 223–240.

The issue of the Neanderthal's faculty of speech was discussed as controversially as the question of artistic ability: on the one hand, the Neanderthal demonstrably used highly potent weapons with whose help he successfully hunted beasts of prey, even in larger groups whose actions had to be coordinated. His clothing was sewn together in a way that offered sufficient protection from the wintery conditions of the Ice Ages. He prepared his food with the help of open fires, hung himself with necklaces, and painted his body<sup>31</sup>; even more importantly, he transmitted and communicated all these abilities. Yet despite this multi-faceted evidence for an awareness of art and high intelligence, scientists roundly denied him the ability of verbal communication. Only the discovery of a roughly 60,000 year old well-preserved Neanderthal skeleton in the Kebara Cave, Israel, in 1983 forced scholars to rethink their approach. Aside from the chest, spine, arms, and hands, excavators found a hyoid bone, an osseous structure on which the muscles and ligaments join up which give the tongue the flexibility necessary for speech.<sup>32</sup> In the meantime, however, a group of researchers at the Max-Planck-Institute have demonstrated that the decisive changes on modern man's so-called speech-gene (Forkhead-Box-Protein P2, FOXP2), leading to the development of clearly articulated speech, occurred only roughly 200,000 years ago; thus, it remains likely that the Neanderthal possessed a slightly less developed ability to articulate.<sup>33</sup> However one may ultimately wish to answer the question of the Neanderthal's verbal communication skills, learning speech even for modern man is the result of very complex learning processes including motor skills. Here as well both personal, i.e. learning in the course of ontogeny, as well as collective learning takes place as part of the process of phylogeny—thus, faculty of speech must have developed fairly slowly over the past 200,000 years in the course of man's evolution.

Let us compare the contemporaneous development of the anatomical modern man: in comparison to the large number of human discoveries from the Middle

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<sup>31</sup>Soressi, Marie, William Rendu, Jean-Pierre Texier, Émilie Claud, Loïc Daulny, Francesco D'Errico, Véronique Laroulandie, Bruno Maureille, Marion Niclot, Steve Schwartz et Anne-Marie Tillier (2008). Pech-de-l'Azé I (Dordogne, France): nouveau regard sur un gisement moustérien de tradition acheuléenne connu depuis le XIXe siècle. pp. In: Jaques Jobert, Jean-Guillaume Bordes and Iñuminada Ortega (eds.) *Les sociétés du Paléolithique dans un Grand Sud-Ouest de la France: nouveaux gisements, nouveaux résultats, nouvelles methods*. Paris: Société Préhistorique Française, pp. 95–132.

<sup>32</sup>Arensburg, B. et al. (1985). Une sépulture néandertalienne dans la grotte de Kebara (Israël). *Comptes Rendus des Séances de l'Académie des Sciences (Paris)*, Série II, 300: 227–230.

<sup>33</sup>Bolus, Michael and Ralf W. Schmitz (2006). *Der Neandertaler*. Stuttgart: Jan Thorbecke Verlag, p. 130.

However, the so-called speech-gene has been described mainly in relation to speech-disorders. Thus, one must be careful not to over-interpret! S. E. Fisher et al. (1998): Localisation of a gene implicated in a severe speech and language disorder. In: *Nature Genetics* 18/1998, pp. 168–170.

On the other hand, the psychologist Michael Owren makes clear that the evolution of speech started early in the evolution of hominids. Owren, Michael J. (2003). Vocal production and perception in nonhuman primates provide clues about early and speech evolution. *ATR Symposium HIS Series*, 1, pp. 1–12.

Palaeolithic in Europe and the Levant, the evidence for the origins of our ancestors in Africa is sparse, and any evidence for the artistic behaviour of our direct ancestors is even rarer. We do however know that *Homo sapiens* in Africa developed from ancestors similar to the *Homo heidelbergensis*.<sup>34</sup> The first clear proof for the African origins of *Homo sapiens* was provided by a discovery in Ethiopia, dated to an age of approximately 160,000 years.<sup>35</sup> Two fragmentary skulls from the Omo region in Southern Ethiopia are even older, dated to an age of roughly 195,000 years and clearly show modern anatomical characteristics.<sup>36</sup> The first step towards Asia Minor were made by our ancestors about 95,000 years ago, as skeletal finds from Qafzeh and Skhul in Israel show, where they were confronted with the contemporaneous Neanderthal.<sup>37</sup> In the same period, the first intentional burials appeared: both in Skhul as well as in Qafzeh the numerous skeletal finds were clearly intentionally interred; the position of the antlers, the mandible of a boar, suggests that this might already be considered a burial object.<sup>38</sup> Moving out from the Levant, early modern humans spread to Europe and Asia, slowly replacing the endemic Neanderthal population as well as the Denisovan population in the East, a *Homo* species inhabiting the Altai Mountains contemporaneously with the Neanderthal. With the exception of proven intentional burials and the fact that in the Levant, Neanderthal man and early modern humans co-existed in parallel, if not together, any evidence for the fundamental superiority of early modern humans remains minimal. Even the discovery that early modern humans decorated themselves with pearls fashioned from snail shells roughly 65,000–75,000 ybp merely adds a further aspect to the picture of human cultural development.<sup>39</sup>

Let us at this point attempt a preliminary evaluation of the more or less reliable facts, under consideration of the current state of research and of course our intention, the search for possible indicators of a proto religion: while in Africa the first *Homo sapiens* developed out of *Homo heidelbergensis* (or *Homo erectus* in other authors),

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<sup>34</sup>Bradshaw, John L. (1998). *Human Evolution: A Neuropsychological Perspective*. Hove and New York: Psychology Press, p. 185.

<sup>35</sup>White, Tim D., Asfaw, B., DeGusta, D., Gilbert, H., Richards, G. D., Suwa, G., Howell, F. C. (2003). Pleistocene *Homo sapiens* from Middle Awash, Ethiopia. *Nature* 423 (6491), pp. 742–747.

<sup>36</sup>McDougall, Ian; Brown, Francis H.; Fleagle, John G. (17 February 2005). Stratigraphic placement and age of modern humans from Kibish, Ethiopia. *Nature* 433 (7027), pp. 733–736.

<sup>37</sup>Trinkaus, Erik (1993). Femoral neck-shaft angles of the Qafzeh-Skhul early modern humans, and activity levels among immature near eastern Middle Paleolithic hominids. *Journal of Human Evolution (INIST-CNRS)* 25 (5), pp. 393–416.

<sup>38</sup>Hover, Erella and Steven L. Kuhn (eds) (2006). *Transitions Before the Transition: Evolution and Stability in the Middle Paleolithic and Middle Stone Age*. New York: Springer, pp. 171–188.

Mellars, Paul (2006). Why did modern human populations disperse from Africa ca. 60,000 years ago? *Proceedings of the National Academy of Sciences* 103 (25), pp. 9381–9386.

<sup>39</sup>Kuhn, Steven L. & Mary Stiner (2007). Body Ornamentation as Information Technology: Towards an Understanding of the Significance of Early Beads. In: Mellars, Paul, Katie Boyle, Ofer Bar-Yosef & Chris Stringer: *Rethinking the Human Revolution. New behavioral and biological perspectives on the origin and dispersal of modern humans*. Princeton, NJ: Princeton University Press, pp. 45–54.

whose presence after 200,000 years however is only documented by a small number of African sites, the Middle Palaeolithic in Europe is marked by the presence of the Neanderthal. Not only does he provide the most significant fossil finds, but the speculations regarding the intellectual capabilities of the Middle Palaeolithic human base themselves largely on the Neanderthal—mainly because the discovery situation in Europe is of a much higher quality than elsewhere thanks to the many karst caves. While the current palaeoanthropological literature may prefer to characterise the Neanderthal as “different” from an intellectual aspect, it is our opinion that the discoveries to date do not support such a conclusion. In how far it is possible to measure a human’s intellectual ability based on the skull form (low forehead and an assumed smaller prefrontal cortex) remains at the very least a topic for discussion, and whether indeed only early modern humans were the inventors of any form of art, body jewellery, and funerals cannot, in our opinion, be verified by the discoveries to date.<sup>40</sup> However, this does not, in fact, impact on our deliberations going forward.

The time factor, instead, is decisive, as it impacts on both the Neanderthal and the early *Homo sapiens*. It is in fact so important that it deserves a more extensive discussion at this point. In the course of evolution, frequent and speedy climate change required stronger feats of adaptation; in Africa, the increasing aridity resulting from geoclimatic events caused the evolutionary change of the phenotypes of the various Australopithecines and their descendants. In Europe, the rapid interchange of periods of heat and extreme cold dictated the course of adaptation: a constantly changing natural landscape encouraged a gradual reduction of inherited, strict behavioural patterns, which were replaced with such a behaviour as was acquired by an individual in their respective cultural context. Or expressed differently: instinctive behaviour, inherited through a slow biological process, had to make way for behavioural patterns acquired in a social context and therefore easily corrigible. This allowed humans to adapt quickly to constantly changing natural conditions. Man became intelligent. Knowledge acquired in a cultural context became the foundation of his success, and speech played a fundamental role.<sup>41</sup> Here one must however consider that ultimately, the sum of culturally transmitted human experiences in the Middle Palaeolithic had not yet reached the heights of subsequent generations, or rather rested on different core areas. We see a time at the beginnings of human cultural creation, although decisive inventions had already been made and decisive traditions established. This includes knowledge of fire, intelligent and clever hunting techniques, building works, the ability to fashion and use tools: it is a highly complicated process, to transform lumps of flint stone into the sharp and effective hand axes which are considered to be a typical Neanderthal tool and characteristic for their cultural period, the Mousterian period. Similarly, it

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<sup>40</sup>Our professional opinion is, of course, in regards to palaeoanthropology, a layman’s opinion—we can judge only from a palaeontological-biological point of view and from religious studies.

<sup>41</sup>Hurford, James R. (1999). The Evolution of Language and Languages. In: Dunbar, Robin, Chris Knight, and Camilla Power (eds.) The Evolution of Culture. An Interdisciplinary View. New Brunswick, New Jersey: Rutgers University Press, pp. 173–193.

was a pioneering idea to mount such a tool onto the tip of a shaft and then use it as axe or cudgel. These abilities, which require a high level of intelligence and skilled manual work, have to be transmitted from generation to generation, in social communities which cared for members who were ill, disabled, or unable to look after themselves. Thus, in addition to intelligence and crafts we see social competence and characteristics such as solicitousness and humanity. As we began our deliberations with the question: “at which point in time were our ancestors able to visualise symbolism? When was religion possible?”, we can now answer emphatically: at the latest in the Middle Palaeolithic, early modern man had all the abilities which are the prerequisites for symbolic thought and action, but could not yet rely on the respective traditions. Just like the hand axe, religion had to be “invented”, and here our ancestors accomplished a tremendous feat.

**Cultural stages of the Palaeolithic**

Lower Palaeolithic	(2.5 mio.–200,000 ybp)
Africa	
Oldowan	(2.5 mio.–1 mio. years)
Acheulean	(1.6 mio.–200,000 ybp)
Europe	
Protoacheulean	(1.2 mio.–500,000 ybp)
Acheulean	(600,000–100,000 ybp)
Middle Palaeolithic	(200,000–40,000 ybp)
Mousterian	
Upper Palaeolithic	(40,000–11,500 ybp)
Aurignacian	(35,000–28,000 ybp)
Gravettian	(27,000–20,000 ybp)
Magdalenian	(20,000–11,500 ybp)

**Territoriality**

In this context, the deciding issue looks for the reasons behind the manipulations of the skulls, which cannot reasonably be understood in a context of a socially acceptable profane or ritual cannibalism, nor in the context of secondary burials. And yet they must have had both sense and value, because the respective indications are spread out too clearly and regularly throughout the distribution area of the Neanderthal and early modern humans to be the coincidental products of a few misguided individuals.

At this point in the discussion, we introduce behavioural biology, or more specifically the insights of territorial behaviour which is characteristic for many animals and ultimately also for humans.

Already poplar aphids fought for territory in the fight for locations best suited for egg deposition.<sup>42</sup> On the leaf, the victor claims the position with the best nutrient supply directly by the stem, while the defeated insect has to make do with the more uninteresting smaller leaf with an inferior nutrient supply. Securing the territory thus aids optimising the chances of rearing the insect's own offspring. The same concept applies to many species of birds who become very territorial during their breeding season; for example, the black stork chases off any possible competitors with the help of aggressive chattering, dancing his wings, or flight acrobatics.<sup>43</sup> Even the pretty kingfisher turns aggressive when he has to defend his territory. First he threatens with flattened feathers and open beak. This behaviour can escalate to a level of veritable threatening duels during which the competitors sit opposite each other, straight backed with wings spread wide, ultimately even leading to a fight. The defeated animal then has to cede the territory, whilst the victor remains. Here as well the reasons for fighting are the natural resources, because only a sufficiently large area or a sufficiently long river segment full of fish can guarantee the successful rearing of the next black stork or kingfisher generation.<sup>44</sup> These and other examples demonstrate that the victors in the fight for ideal living and breeding areas benefit from decisive reproductive advantages; this is a reason why any area once settled is always defended vigorously against invaders. Observations have shown that surprisingly, the incumbent settler almost always wins; either because he is stronger, i.e. has more energy as a result of already owning his territory, or because he has more to lose than the invader. The latter realisation (the payoff asymmetry) hails from game theory.

But not only insects and birds, our close primate relatives also demonstrate a distinct territorial behaviour, for example the De Brazza monkeys (*Cercopithecus neglectus*) in Africa, whose habitat reaches from North-eastern Angola over Cameroon, Equatorial Guinea, and the Gabon to Uganda, Kenya, and Southwest Ethiopia. De Brazza monkeys dwell in light deciduous forests, in the tropical rainforest, in acacia and gallery forests in small groups of up to 10 animals, and they document their territorial claims over a territory reaching up to 10 hectares with various means; these include marking their territory with a secretion from their mammary glands. Territorial ownership claims are also communicated with sounds and visual signals, including loud yelling, staring as a threatening gesture as well as adult males “yawning” and showing their canine teeth. Retracting the lips and showing teeth, grinning or smiling, however, suggests appeasement. A deep grumble indicates an overstepping of the territory's boundaries, especially if unknown adult males attempt to trespass.<sup>45</sup>

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<sup>42</sup>Alcock, John (2005). *Animal behavior: an evolutionary approach*. Sunderland; Massachusetts: Sinauer, pp. 247–248.

<sup>43</sup>Cramp, S. (1977). *Handbook of the Birds of Europe the Middle East and North Africa, the Birds of the Western Palearctic, Volume 1: Ostrich to Ducks*. Oxford: Oxford University Press.

<sup>44</sup>Fry, C. H., Fry, K. & Harris, A. (1999). *Kingfishers, Bee-eaters and Rollers*. London: Christopher Helm.

<sup>45</sup>Stein, J. (2002). *Cercopithecus neglectus*. *Animal Diversity Web*. Retrieved 2012-04-30.



**Fig. 4.5** Chimpanzee with baby (© Maiva Petry with kind permission)

Jane Goodall also reported an expressive territoriality in “her” bonobos in the Gombe Stream National Park, which could escalate all the way to murderous battle situations. Groups of roaming males control the borders of their territory, and are prepared to defend them in extreme situations. During their forays, they destroy the nests of other groups, exhibiting threatening behaviour and gestures. They signal the same behaviour when they encounter unknown neighbours. In these cases, they express loud shouts, rattle branches, drum on tree trunks, and throw stones at the invaders. These in turn are well advised to retreat quickly, lest they wish to become the victims of an aggressive attack. Should a child be separated from its mother in these situations, it faces a gruesome fate: it may well be murdered and eaten (Fig. 4.5).<sup>46</sup>

The boundaries, however, of the territories are by no means set in stone. Behavioural biology describes a zone of scolding where threatening gestures are displayed towards the neighbour and which the defending animals only leave most unwillingly. This established blustering behaviour allows the animals to estimate the strength of their enemies and their defence with the result that the possibly stronger group can extend its territory in the long term at the expense of the weaker group.<sup>47</sup>

Not only our primate relatives are territorial, but so are we, as a quick glance at our daily life will show. The worst disputes arise between neighbours, when they have the feeling that their property boundaries are not respected; be it that neighbouring leaves fall onto one’s lawn, that one’s own driveway is used as turning area

<sup>46</sup>Goodall, J. (1990). *Through a Window. My Thirty Years with the Chimpanzees of Gombe*. Boston: Houghton Mifflin. pp. 98–111.

<sup>47</sup>Alcock, John (2005). *Animal behavior: an evolutionary approach*. Sunderland; Massachusetts: Sinauer, pp. 264–273.



**Fig. 4.6** Territoriality and ranking on the parking lot of a golf club in Lower Saxony. Alleged higher ranking individuals (president, CEO, Secretary) demand their personal parking space—even though there are enough parking spots for everyone!

by the neighbour, or that the neighbour's beloved dog uses one's flower beds as preferred hunting grounds or to relieve himself (Fig. 4.6).

Even acoustic boundary transgressions, in analogue to the monkeys' yelling and shouting, can substantiate a neighbour's territorial demands—the present authors can vividly recollect the extensive aural battles employing as weapons Maria Callas on the one side, and punkrock on the other (Maria Callas won, and punkrock had to cede). Here it may be of interest that acoustic boundary markers are also employed in more serious disputes, for example against Somali pirates of the East-African coast.<sup>48</sup> Accordingly, it does not come as a surprise that ethnologists have noted aggressive territorial behavior also amongst hunters and foragers; this stands in contrast to previous notions inspired by Rousseau's idea of the noble wild, according to which groups of foragers peacefully populated wide areas, carefully used the natural resources as a collective, and avoided any possible conflict of interest.<sup>49</sup>

The actual conditions are, however, different and only further document the ever-present human willingness to settle a dispute with violence. A study analysing

<sup>48</sup>Kreitling, H. (2014). Britney Spears verscheucht Piraten vor Somalia. <http://www.welt.de/121326409>.

<sup>49</sup>Paul, Cäcilia Sonja (1985). *Territorialität bei Jägern & Sammlern*. Tübingen: Verlag S&F.

99 local groups of foragers from 37 cultures dating to the early 1970s showed that two thirds of all groups were at the time in a state of war, others had only recently put an end to their campaigns after being pressured to do so by a central government, and not a single one could look back at a fully peaceful history. Even the Eskimos in Greenland, who live in an extremely sparsely populated part of our world, face mortal danger when they enter into foreign hunting grounds, while the Pygmies, generally considered peaceful, claim forests as hunting grounds and expect their boundaries to be respected. Even the bushmen of the Kalahari defend a tribal area inherited from their ancestors, especially those regions in which edible plants thrive, an important source of food. The discrimination between competing groups of neighbouring zones goes so far that one side considers itself “pure” and “perfect”, but describes the others as “dangerous and murderous”. If members of another group wish or need to set up a short-term camp on foreign territory, they have to formally ask for permission.<sup>50</sup>

## Territoriality Amongst Our Ancestors

Thus, if our close primate relatives are territorial and fight for their territory’s borders, if our own species defends its borders from the Kalahari to neighbour’s garden fence, in short, if territoriality is an essential component of the primate inheritance, it is obvious that the same behaviour can be attributed to the Palaeolithic man.<sup>51</sup> The humans of the Middle Palaeolithic were foragers. A large territory that they roamed during their hunting forays ensured sufficient food and suitable settlements for themselves and their families, under ledges or in cave entrances. Man’s dispersion from his original habitat in Africa to the inhospitable icy (during the Ice Ages) or wet (in the warm intervals) Europe must have occurred under territorial pressure which forced the roaming groups to develop new living spaces over and over again on the borders of their previous habitat. Once such a territory was occupied by a group, the new ownership was clearly communicated and documented. Not all behavioural patterns however can be reconstructed. Whether smaller groups patrolled their borders cannot be proven today. We also know little to nothing about threatening gestures and possible diatribes.<sup>52</sup>

We do, however, know of an impressive custom with which the early *Homo sapiens* and the Neanderthal clearly indicated that they claimed a certain territory with a certain legitimacy: they buried their dead and/or deposited their skulls, as is

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<sup>50</sup>Eibl-Eibesfeldt, Irenäus (1997). *Die Biologie des menschlichen Verhaltens*. Weyarn: Seehamer, 455–471.

<sup>51</sup>The connection of religion and territoriality is discussed in: Nash, George and Dragos Gheorghiu (eds.) (2009). *The Archaeology of People and Territoriality*. Budapest: Archaeolingua.

<sup>52</sup>However, Tattersall interprets the finds of El Sidrón as the gruesome result of an attack following a dispute over territorial claims: Tattersall, Ian (2012). *Masters of the Planet. The Search for Our Human Origins*. New York: Palgrave Macmillan, p. 174.

clearly visible from the burials of La Ferrassie: here, 8 tumuli were found in a cave, burial mounds, under which a toddler was buried. In the immediate vicinity, under a rock shelter, the remains of a roughly three year old child were uncovered, whose skull had been severed and deposited under a stone slab.

The inherent demonstrativeness of these actions, the raising of tumuli and the severing and depositing of the skull makes it clear that there was more at stake than mere deference or the removal of a corpse. A Neanderthal grave in Teshik-Tash in Uzbekistan clearly suggests a conscious interment,<sup>53</sup> and the cave in Skhul in the Carmel Heights, Israel, must have been used repeatedly both as a place of burial and residence over a long period.<sup>54</sup> Finally, the clearly manipulated skulls from the Valley of Neander and from Krapina prove that the Neanderthal and the contemporaneous early modern man used to bury their dead and occasionally visibly deposited their skulls—in places he also used as residence.<sup>55</sup>

These demonstrative actions make sense, if one compares them to the behaviour of contemporary or historical foragers. Thus for example the investigations into the Eipo and Tsembaga of New Guinea by the anthropologist Roy Rappaport have shown that these peoples mark their territory by planting sacred plants and more importantly by depositing skulls.<sup>56</sup> Skulls or their depictions play an important role in the lives of many aborigine peoples living today. In this context, the prominent German ethnologist Karl von den Steinen (1855–1929) describes the tattoos among the Marquesans, whose patterns were considered completely incomprehensible in his time. Through careful examinations and the comparison with various art and utility objects, von den Steinen could prove that the basic patterns were derived from an ancestral figure which was erected on the graves of heads of families, and these in turn were detailed reproductions of skulls.<sup>57</sup> In Africa, skulls of the deceased also played an important part: when the Yao began migrating towards their current habitat to the east of the Nyassa Lake in the 18th century, under pressure from the expanding and aggressive Zulu, they naturally carried the skulls of their ancestors with them.

While this sort of behaviour may seem foreign to us today, in the context of territoriality it makes sense: what else could be as convincing as the reference to a legitimate inheritance when one needs to justify one's claim to land, to hunting

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<sup>53</sup>Krause, J., Orlando, L., Serre, D., Bence, V., Prüfer, K., Richards, M. P., Hublin, J.-J., Hänni, C., Derwajanko, A. & e Pääbo, S. (2007). Neanderthals in central Asia and Siberia. *Nature*, 449/18, pp. 902–904.

<sup>54</sup>Sommer, J. D. (1999). The Shanidar IV 'Flower Burial': a Re-evaluation of Neanderthal Burial Ritual. *Cambridge Archaeological Journal* 9 (1): 127–129.

<sup>55</sup>Psychological research is able to explain why an interment or the deposition of a skull is able to protect a territory against intruders: Morgado, Nicolas, Dominique Muller, Edouard Gentaz, Richard Palluel-Germain (2011). Close to me? The influence of affective closeness on space perception. *Perception* 40, pp. 877–879.

<sup>56</sup>Rappaport, Roy (1968). *Pigs for the Ancestors*. New Haven/London: Yale University Press.

<sup>57</sup>Von den Steinen, Karl (1928). *Die Marquesaner und ihre Kunst, Band I, Tatauierung*. Berlin: Reimer.

grounds, as a reference to the forefathers who had taken control of the land generations ago? If today we refer to an entry in the land register, a contract, or a certificate of inheritance, 90,000 years ago a burial or, even better, the skull of an ancestor served the same purpose. Some peoples, especially in the Australis, have built their entire world view on this basic thought, justifying property through their ancestors. They trace their existence back to a mythical ancestor who claimed the land generations ago and now watches over it.<sup>58</sup> The interpretation of the burials and skulls placements of the Neanderthal as signs of territorial claims becomes even more convincing in the course of early human history: skull deposits can be traced through the entire prehistorical era and we will continue to encounter them in the course of this discussion: ranging from the Swabian Ofnet to Jericho to Catal Höyük in Anatolia, the skulls of deceased are an expression of territorial claims and more and more, in the course of an independent cultural religious evolution, they become an expression of religious ideas.

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<sup>58</sup>Paul, Cécilia Sonja (1985). *Territorialität bei Jägern & Sammlern*. Tübingen: Verlag S&F, pp. 108–121.

Stöhr, Waldemar (1991). Totem, Traumzeit, Tjunrunga. Die australischen Religionen. In: Eliade, M. *Geschichte der religiösen Ideen* 3/2. Freiburg: Herder, 184–207.

Morphy, Howard (1991). *Ancestral Connections. Art and an Aboriginal System of Knowledge*. Chicago, London: The University of Chicago Press.

# Chapter 5

## Existential Fears—And an Excursus in Art History

### Previous Results

The first step towards religion—in the sense of believing in powers or forces which influence the life of man and/or his existence after his physical death—was made in the Middle Palaeolithic. Although we cannot yet speak of a religion at this point in time, nevertheless the act of burying the deceased provides us with initial actions that could be traced through archaeology, actions which originally served to reflect territorial claims. However, taken together with the psychological aspect of offering a possibility to mourn, these actions provided an ideal opportunity to relate to further notions of an existence beyond death.

Thus, first came issues of territoriality. Securing the territory with its lucrative hunting grounds and safe resting places was clearly the most existential problem then and now, the source of crucial existential fears that must be allayed.<sup>1</sup>

### The Importance of Fear

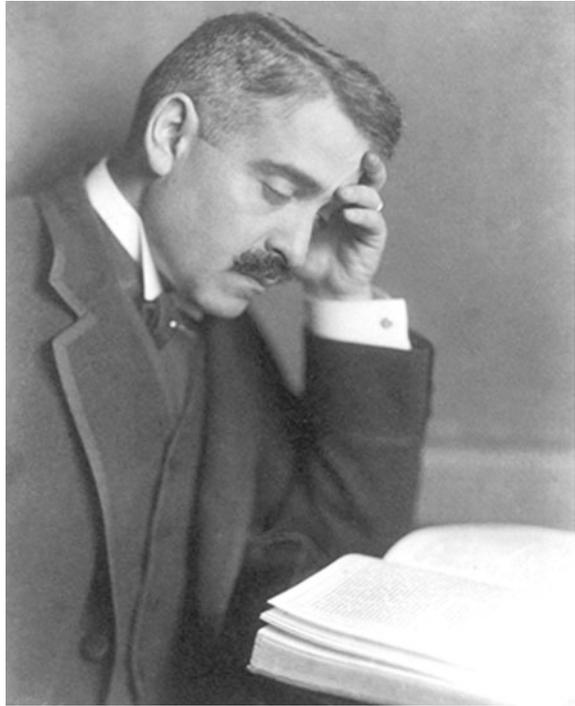
Existential fear is thus the decisive factor, intrinsically and demonstrably connected with the concern of securing a territory with sufficient resources to ensure the survival of the respective group. Aby Warburg (1866–1929), the art historian and founder of cultural sciences, recognised the over-reaching importance of fear as an existential, life-defining emotion and was able to highlight and prove in detail its

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<sup>1</sup>Environmental psychology claims: “More specifically, territoriality involves (a) physical space, (b) possession, (c) defense, (d) exclusiveness of use, (e) markers, (f) personalization and, (g) identity”.

McCunn, Lindsay J. (2013). Environmental Territoriality and Me. “Hey, that’s my spot!”. <https://www.psychologytoday.com/blog/ienvironment/201302/environmental-territoriality-and-me>. Posted Feb 15, 2013.

**Fig. 5.1** Aby Warburg  
 © unknown photographer



importance for human cultural activity and development. Warburg initially came across this topic in the course of interpreting pictorial motives in the works of famous Italian Renaissance artists, which he traced back to their origins with the help of detailed and comprehensive research; thus, he could show that elements imitating ancient art found their way onto the canvasses of artists by means of the literature of the Renaissance and festive pageantry, and therefore did not satisfy the expectations of “edle Einfalt, stille Größe”, which the art historian Johann Joachim Winckelmann (1717–1768) had highlighted as the markers of ancient art.<sup>2</sup> In contrast, the pictorial elements imitating antiquity demonstrated emotions and expressive movements, which Warburg characterised with the term *Pathosformel* (a form evoking pathos). Warburg was able to trace the origins of these expressive gestures back beyond antiquity, and moreover was able to determine the causes standing behind these gestures—which were these existential fears, the knowledge

<sup>2</sup>Orvieto, Paolo (2009). Poliziano e l’ambiente mediceo. Rome: Salerno.

Winckelmann, Johann Joachim (1939). *Geschichte der Kunst des Altertums*. Darmstadt: Wissenschaftliche Buchgesellschaft. English edition: *The history of ancient art (1849–73)* translated by Giles Henry Lodge. Boston: J.R. Osgood.

of life being constantly threatened. These fears, according to Warburg, found their expression in human cultural and artistic creation (Fig. 5.1).<sup>3</sup>

In his famous and only posthumously published lecture *A Serpent Ritual*, Warburg demonstrated both that and how the cultural manner of dealing with these existential fears played an important role outside of the narrow frames of painting. In the lecture, he analyses the results of an expedition to the Pueblo Indians of Arizona from the years 1895–96. These Indians—the Hopi—had at the time of Warburg’s expedition already lived on a craggy elevated plain for centuries, the Mesas, where they had successfully cultivated the land despite the inhospitable climate known for its extreme aridity, and had also established their own unique culture in which their ideological notions played an important role. From this rich treasure trove of tradition, rituals, and religious ideas, Warburg highlighted a pair of motifs according to which he determined the role of existential fear, related to the mythology and the religion as it was being practiced: lightning and the snake. The Hopi understand the cosmos to be a large house with a stair-shaped roof. Pictorial images show side walls underneath this stair-shaped gable crowned with lightning, and underneath depictions of a rainbow straddling tightly packed clouds streaming with rain. Images of these cosmological ideas were omnipresent during Warburg’s expedition: he found them in the decoration on the walls of his luxurious hotel room in Santa Fe, within children’s drawings, and even on the walls of the small Catholic churches in which priests continuously tried to demonize and exterminate these old “pagan” customs of their Indian flock. Originally, the images of the Hopi universe decorated the walls of their underground vestries, the Kivas. Here was also an altar with lightning symbolism and the snake: the snake was and still is the living symbol for lightning in Hopi culture on account of its lightning-fast movements and its lightning-esque zigzag shape; lightning in turn is an indicator for a thunderstorm and therefore life-giving rain. Still during the time of Warburg’s visit, the Hopi performed their sacrifices on this and comparable altars in order to secure rainfall (Fig. 5.2).

But the Hopi did not only try to influence the weather at their altars. Warburg was especially impressed by their famous serpent ritual which takes place in August, during a time of year in which rainfall decides the outcome of the harvest and therefore the basic food resources for the entire year to come. In a ceremony lasting several days, rattle snakes are caught and subsequently bathed and guarded in an underground kiva, to be thrown onto a sand-painting during the climax of the ceremony, on which of course snakes represent the main motives. The snakes are then caught up again, carried around in a dance, and lastly released into the plain as messengers. The background of these actions is the myth of a hero of the Hopi, who in ancient times set out on an underground journey which ultimately led him to a snake-kiva in which the weather was made. The hero returned with two snake girls who bore him children—the mythical ancestors of snake dancers and snakes. In the

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<sup>3</sup>Wunn, Ina (2005). Aby Warburg. In: *The Encyclopedia of Religion*, Second Edition, pp. 9689–9691.



**Fig. 5.2** Cleo Jurino, Hopi cosmos. Depiction with Aby Warburg's comments, from "A Serpent Ritual" (© The Warburg Institute, London, with kind permission)

snake ritual, so goes the ideological reasoning, the descendants of these snake girls grab their siblings and with the help of this rituals send them into the underground kiva in order to make rain. The relationships between ritual practice, religious imagery, the myth, the snake, and the weather are interpreted by Warburg as follows: life on the arid plains is difficult; the main dietary staple and guarantee for survival is corn, whose thriving is dependent on the annual rainfall which begins in the summer. The absence of the summer storms would be life-threatening for the Hopi; this is a knowledge that accompanies them daily during their fragile existence. These existential fears are dealt with by the Hopi in a cultural manner as well as through their religiously motivated visual artistry, thus also actively in a ritual, where these actions help them to capture the existential threats symbolically, thereby allowing them to gain a measure of internal distance—Warburg calls this a "Denkraum der Besonnenheit" (a space for devotion or reflection).<sup>4</sup>

If we follow Warburg (and we can—he was able to offer considerable proof for his theory in his seminal later work, the *Mnemosyne Atlas*), then this struggle for

<sup>4</sup>Warburg, Aby (1939). A Lecture on Serpent Ritual. In: *Journal of the Warburg Institute* Vol. 2, No. 4 (Apr., 1939), pp. 277–292.

the “Denkraum der Besonnenheit” must also be evident in the culture, including art, of the Palaeolithic man—and indeed it is!<sup>5</sup>

## Emotions and Signals

First, however, we look at the kind of symbols and signals—just as Warburg did; focus rests on the question of which signs are part of the human inheritance and thus genetically fixed, i.e. universals, and which are part of the cultural inheritance, i.e. which signs have been transmitted within a social context, which signs may have been distributed through cultural diffusion processes and were thus subject to the faster cultural, or rather, religious evolution as described above in Chap. 2. Expressed more clearly: in our search for the early religious expressions of our ancestors, for the effects of expressive behaviour—and this applies not only to the European Upper Palaeolithic with its abundant art—then we must examine every statue, every pictorial element to see whether any possibly reworked symbols or signs are universals or the result of transmitted and modified expressive behaviour or whether there is a possible overlap. A good example (Fig. 5.3): the Byzantine votive figure from Palestine undoubtedly represents Maria and the Infant Jesus, and therefore stems from a Christian, late-Antique context and continues a tradition which can easily be traced back to older representations of Isis with Horus. Simultaneously, with her hand she makes the characteristic gesture with her breast, a universally prevalent gesture of appeasement. This however is a universal gesture, which we have already seen on Palaeolithic figurines.

These universals, i.e. inherent behaviour with signalling functions, play an instrumental role in the search for the origins of religion. Let us explain the behavioural biology background: advanced expressive behaviour, as it is found in connection with coping methods for existential fears both as part of rituals and in the visual arts and which thus always characterises the typical ideology for the respective culture, is highly complex and a characteristic of man, tied to his capability of symbolic thinking. At a later stage in this argument, it thus becomes necessary to discuss again briefly the question of man’s intellectual capabilities during the transition of Middle and Upper Palaeolithic. On the other hand, the ability to signal one’s own emotions with the help of one’s body and to use this manner of expression as communication is not limited exclusively to humans, but can be found throughout the animal kingdom. For example, we observe the complicated mating rituals (we will also have more to say on rituals, below) of some

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<sup>5</sup>A remark concerning methodology is appropriate: as we are surely dealing with art when discussing the parietal art of the Upper Palaeolithic and mobiliary art, a methodology from the field of art history is relevant for interpretation; the methodology in question can be traced back to Aby Warburg and was ultimately formulated as a comprehensive methodology by Erwin Panofsky. Previous interpretive attempts have, surprisingly, gladly been based on randomly chosen ethnographic comparisons and have completely ignored any art-historical methods.

**Fig. 5.3** Votive figure from Palestine, Byzantine era (330–640 AD); today in the Rockefeller Museum, Jerusalem. Despite being Christian, the representation of Maria with the Infant Jesus displays the archaic display of the breast—just like the female figurines of the Palaeolithic (© Rockefeller Museum, Jerusalem)



bird species, threatening or appeasement gestures among chimpanzees or gorillas, and also among cats and dogs. This inherent behaviour, i.e. acquired by means of biological inheritance, presented a fascinating topic not only for Warburg (who was an avid reader of Darwin's *The Expressions of the Emotions in Man and Animals*), but had already enthralled Charles Darwin in connection with the question of evolution.<sup>6</sup>

As Darwin could conclusively demonstrate, emotions are not a human prerogative. Animals also possess a wide range of emotional impulses which they display in a completely undisguised manner. Which dog owner does not know the guilty expression of his pet, who greets him without the habitual happy bark and only hesitantly wags his tail; a closer examination of the couch will surely uncover the warm spot on which the dog had lain in his owner's absence. But not only pets demonstrate this wide range of emotional expressions. The British primate researcher Jane Goodall spent her life researching the behaviour of chimpanzees in

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<sup>6</sup>Darwin, Charles (1872). *The Expression of the Emotions in Man and Animals*. London: John Murray.

the Tanzanian Gombe Stream National Park and paints a colourful image of her protégées when she describes how a group of female chimpanzees chase a physically far superior baboon from his kill. The chimpanzees make use of numerous tricks: not only do they show their fear-inducing threatening gestures by “yawning”, i.e. putting their fangs on display and pulling their eyes wide open so that one can see the whites of their eyes, but they also break out in a horrific war yell, rattle branches, grab sticks and attack their opponent, also by throwing stones. The baboon, albeit much stronger and able to defend himself, even capable of inflicting life-threatening injuries onto an attacking leopard, gives up and pulls back—from fear and evidently persuaded that chimpanzees are a superior species. Chimpanzees themselves however also show fear and dread when they sense that a heavy storm is brewing or when they are confronted with the specific threat of a predator or hostile fellow chimpanzees. On the other hand, they also demonstrate the whole range of positive emotions such as affection, joy, or triumph in their social interaction, between mother and child, between siblings, or even amongst friends within the group.<sup>7</sup>

Emotions are an integral part of human and animal experiences, as they are on the one hand the preconditions for social relationships, and on the other hand they can warn of imminent dangers and thus contribute decisively to the survival of the individual. They also fulfil a number of important tasks without which social relationships and ultimately the development of culture would not be possible. Thus, emotions play an important part of cognitive processes.<sup>8</sup> Decisions are only rarely made on the basis of only rational deliberations, but instead are made on the basis of emotional impressions: for example, we might spontaneously acquire this cute, cuddly puppy even though we know fully well that he will require daily walks in rain or snow and will lounge on the white sofa while we are away (see above!). Emotions are also responsible for making a decision whether to go skiing in the Alps or to stroll through Venice—where have I gathered better experiences, which destinations will trigger more pleasant memories? Presumably I will take the train rather than fly, because a plane of my preferred airline just crashed and now I have a feeling that is clear but cannot be justified, that air travel is more dangerous. Emotional experiences, as irrational as they may be, are indispensable in the decision-making process. From an adaptive point of view, this means that emotionally-led reactions contribute to the choice of behavioural alternatives which have withstood the test of time, which in fact or presumably will have positive consequences both in terms of our reproduction and our survival.

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<sup>7</sup>Goodall, Jane (1986). *The Chimpanzees of Gombe: Patterns of Behavior*. The Belknap Press of Harvard University Press.

<sup>8</sup>Vaitl, Dieter (2006). Blick ins Gehirn: Wie Emotionen entstehen. *Giessener Universitätsblätter* 39; pp. 17–24.

González-Prendes, A. Antonio, & Stella M. Resko (2011). Cognitive-Behavioral Theory. In: Shoshana Ringel & Jerrold Brandell (eds.) *Trauma: Contemporary Directions in Theory, Practice, and Research*. Thousand Oaks [u.a.]: SAGE Publ. pp. 14–40.

This includes the fact that emotions evoke attention and are remembered—an emotional speech, an emotional image will create more attention and will remain on one's mind for longer than emotionally neutral presentations. Who can remember the statistics mentioned in a presentation on the state of the municipal household, while the image of the dilapidated kindergarten with the sad-looking children seems burnt into memory.

Emotions also strengthen inter-personal relationships; especially amongst socially-minded species living in a community, exclusion from the group means not only social, but also physical death. Man and ape therefore will take care not to demonstrate a behaviour which threatens the group's stability and thus their own individual existence. Actions such as unfounded aggression, deceit, or the stealing of food evoke fear of exclusion and also feelings such as guilt or shame. Latent or active feelings of guilt ultimately led to the abstention of satisfying but possibly hostile activities.<sup>9</sup>

If emotions are so important, this also means that the recognition and interpretation of emotions and resulting signals and behaviours are of decisive importance. The facial expression of one's dialogue partner especially, be it man or animal, offers evidence for one's mood and emotions, and this can be decisive for one's own survival (Fig. 5.4).<sup>10</sup>

Expressing emotions, and the ability for third parties to interpret them, are consequently important elements of nonverbal communications and thusly crucial for understanding one another.<sup>11</sup> In order to find a suitable sexual partner to ensure procreation and to provide for one's offspring, it is important to identify correctly the wishes and needs of one's partner. Hence, not only animals, but also human babies who have yet to learn to speak are able to communicate their needs and demands nonverbally. Crying and facial expressions offer clear information as to their mood.<sup>12</sup> Nonverbal communication of emotions is not only important for the successful raising of one's children, but also in regards to a possible reaction of an adult dialogue partner: people tend to avoid grim-looking people and turn instead to those who smile or somehow indicate that they require affection. In this manner, one can also effectively influence the behaviour of one's opponent: even amongst chimpanzees, a friendly smile or a gesture of submission by a hierarchically lower monkey can protect the animal from many an attack.<sup>13</sup>

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<sup>9</sup>Kappeler, Peter (2009). *Verhaltensbiologie*. 2nd edition. Heidelberg: Springer.

<sup>10</sup>Gazzaniga, Michael S. and Todd F. Heatherton (2006). *Psychological Science*. 2nd Edition. New York and London: W.W. Norton & Company, pp. 492, 635.

<sup>11</sup>Kappeler, Peter (2009). *Verhaltensbiologie*. 2nd edition. Heidelberg: Springer, pp. 529–535.

<sup>12</sup>Gazzaniga, Michael S. and Todd F. Heatherton (2006). *Psychological Science*. 2nd Edition New York and London: W.W. Norton & Company, p. 440.

<sup>13</sup>Eibl-Eibesfeldt, Irenäus (1997). *Die Biologie des menschlichen Verhaltens. Grundriß der Humanethologie*. Weyarn: Seehamer Verlag, p. 191.



**Fig. 5.4** Expressions of sadness and anger in a toddler. From: © Charles Darwin, *Der Ausdruck der Gemütsbewegungen bei dem Menschen und den Thieren*; 1877

Let us summarise. Emotions are important, both for survival as well as for social interaction. Wishes, needs, and fears are communicated and thereby facilitate sexual reproduction and the successful rearing of one's children. This essential communication is independent of the faculty of speech, and instead is led both consciously and subconsciously by gestures and facial expressions. We share this manner of communication with our primate relatives and in parts even with representatives of other animal species—horses for example know of sexual mounting as a gesture of domination; we are thus confronted with homologous behaviour, i.e. a behaviour which can be traced back to a mutual biological lineage.

It is now exactly these kinds of gestures and facial expressions which have found representation in the earliest traceable human creation of visual arts our ancestors felt the desire to share, to communicate, evidently in a fashion which ensured that the inherent messages could be understood beyond their immediate context.

Let us now look to the earliest human artistic creations with the help of the Warburg method, i.e. from the point of view of the history of art, by considering the

existence of existential fears and by including the findings of behavioural biology. But first, we must reassure ourselves that we are still on familiar territory, that the behavioural patterns which we already know from the Middle Palaeolithic do not abruptly break off at the border of the Upper Palaeolithic and are replaced by a completely new behaviour, recognizable by means of a totally new era of visual art; that instead the behavioural patterns continuously developed and logically continued through into the Upper Palaeolithic—**that they evolved.**

## The Upper Palaeolithic in Europe

In order to do so, let us go back briefly to the field of palaeoanthropology. The question of who was the carrier of which Palaeolithic culture during the period of transition between Middle and Upper Palaeolithic is as complex as the issue of the extinction of the Neanderthal and the population of Europe by the anatomically modern man; more precisely, whether we can determine a cultural continuity in Europe over and beyond the extinction of the Neanderthal. Because: a one-sided cultural drift from *Homo sapiens* to *H. neanderthalensis* has in no manner been proven or documented for each individual discovery site; instead, several of the Aurignacian industries belonging to the Upper Palaeolithic (and thus also to *H. sapiens*) have probably developed out of previous local cultures.<sup>14</sup> The late Middle Palaeolithic was thus a time of considerable heterogeneity, and the probably rather naïve notion that with the beginning of the Upper Palaeolithic, simultaneous with the appearance of the anatomically modern man, came a Upper Palaeolithic revolution in the course of which suddenly all positive attributes which modern man so gladly claims for himself as jewel of creation appeared and could be traced, this notion must thus be questioned.<sup>15</sup>

Already the humans of the Middle Palaeolithic had made the decisive discoveries on which the sudden, explosive cultural development could build upon. Ever since at the latest around 70,000 ybp, the faculty of speech and thus the ability to form abstract concepts and thoughts had developed, processes evidently began which benefitted from these new possibilities, just like in the manner of biological radiation which always sets in when a decisive evolutionary step allows for the discovery of a totally new living space.

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<sup>14</sup>Conard, Nicholas (2011). The Demise of the Neanderthal Cultural Niche and the Beginning of the Upper Palaeolithic in Southwestern Germany. In: Conard, Nicholas & J. Richter (eds.) Neanderthal Lifeways, Subsistence, and Technology: One Hundred Fifty Years of Neanderthal Study, Vertebrate Paleobiology and Paleanthropology. Springer Science+Business Media B. V., pp. 223–240.

<sup>15</sup>Zrzavý, Jan, Hynek Burda, David Storch, Sabine Begall & Stanislav Mihulka (2009). Evolution. Ein Lese-Lehrbuch. Heidelberg: Springer-Spektrum, p. 412.

From an intellectual perspective, such new space—in this case, a space for reflection—was evidently discovered in the years between 40,000 and 15,000 before our time and playfully explored. In this process, the intellectual abilities of *Homo sapiens* of the Upper Palaeolithic must have played an important role alongside the economic and ecologic environment in which he moved and which were ideal for further development.

In terms of the climate, we are approaching the final Pleistocene glaciation, which means that the climate in Europe was becoming more and more arid and much colder. Slowly the glaciers originating in Scandinavia extended and travelled towards Central Europe, while simultaneously masses of ice were pushed down from the mountains into the valleys, leaving free during the peak icy period around 20,000 ybp only a narrow corridor free of ice between the modern Weichsel river in the North and the Würm river in the South (these were also the names of the Ice Ages). The vegetation adapted. Not only did numerous warmth-loving plants die out, but the character of the landscape itself changed. Open spaces comparable to the modern tundra spread themselves out extensively and allowed the hunters an easy view of the large, migrating herds. It is thus not surprising that discoveries of the remains of hunting expeditions of the Ice Age make it clear that one could afford to be very generous with the kill after a successful hunt and only used the best pieces of meat. The cold has another advantage which may not be immediately evident: cold is healthy! Anyone who has ever been to the Tropics and has experienced how quickly the smallest wounds such as insect bites can become infected and develop into large-scale infections can comprehend the importance of this climatic condition. In an icy climate, bacteria have very bad outlooks indeed. Infected wounds, the flu, or other infectious diseases or illnesses must have been a much rarer occurrence on account of the cold, but perhaps also of course on account of the low population density. Our ancestors thus were healthy, did probably not to often suffer from food shortages, and had time, all ideal conditions to focus on the finer things in life.<sup>16</sup>

As we have seen, however, the basic preconditions of this new space for reflection had already been established in the Middle Palaeolithic. The repertoire of actions and deeds of territorial hunters and gathers, their daily life, their confrontation with their surroundings, their grasp of abstract concepts, and their habits in connection with the disposal of their dead in its early stages of development had all been developed by the preceding generations and now formed the basis for subsequent cultural accomplishments.

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<sup>16</sup>Henke, Winfried & Rothe, Hartmut (1994). Paläoanthropologie. New York et al.: Springer, p. 532.

## Back to Territoriality: Interments

As often as the transition from Middle to Upper Palaeolithic is evaluated as a decisive point in time, so that occasionally mention is made of a cultural revolution, correspondingly less marked is the hiatus in connection with burials. The Upper Palaeolithic man also buried his dead after cleaning the skeleton of anything that was susceptible for decay. During the Mousterian, in Europe during the time of the Neanderthal, it sufficed to dig shallow graves and to cover the corpse with stones, but now during the Upper Palaeolithic, the grave itself was lined with stone slabs and the burial site itself was possibly covered in red ochre. The latter however is questionable insofar as ochre was frequently used in day-to-day life during the Upper Palaeolithic and thus the ochre could have found its way onto the burial sites for any number of reasons, also because the excavators occasionally misinterpreted red levels of soil formation as ochre distributions.<sup>17</sup> It can however not be denied that now burials were performed with more expenditure. In a grave near Brno, the deceased was covered not only with more than 600 snails (*Helicodonta obvoluta*; the remains of an embroidered hat?), but was additionally decorated with bone disks and large, flat rings.<sup>18</sup> Further, a young Upper Palaeolithic woman was presumably buried in richly embroidered clothes near Saint-Germain-la-Rivière. An especially elaborate and beautiful burial was uncovered by Sungir, around 200 km east of Moscow. The discovery is dated to the Soungirian/Kostenkian and thus hails from a period which can be considered parallel to the Western European Gravettian. Here was uncovered the skeleton of an elaborately decorated adult male, whose skeleton was covered in at least 1500 ivory pearls—these presumably constituted the decoration of precious clothing—together with rich burial gifts such as ivory bracelets and especially finely wrought silex tools. Frequently, these burials are situated in the vicinity of fireplaces, proof that the dead were buried where live was lived, i.e. that these burials were related to territorial claims.<sup>19</sup>

In contrast to the Mousterian, where a grave was meant to underscore the justified claim of ownership of a cave and the surrounding territory, now burials became an occasion to demonstrate prestigious added value (see Chap. 6). Not only did the graves become more complex in terms of their shape and structure, but also

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<sup>17</sup>Wadley, Lyn (2010). Cemented ash as a receptacle or work surface for ochre powder production at Sibudu, South Africa, 58,000 years ago. In: *Journal of Archaeological Science*, Volume 37, Issue 10, October 2010, pp. 2397–2406.

<sup>18</sup>May, Fabienne (1986). *Les sépultures paléolithiques*. Paris: CES, pp. 96–98.

<sup>19</sup>Trinkaus, Erik, Alexandra P. Buzhilova, Maria B. Mednikova & Maria V. Dobrovolskaya (2014). *The People of Sungir. Burials, Bodies, and Behavior in the Earlier Upper Paleolithic*. New York: Oxford University Press, pp. 14–33.

the deceased himself was interred with precious clothes, jewellery, and weapons, precious on account of the time and effort invested in their production. Thus, the deceased's relatives could impressively demonstrate that they could afford the loss of such precious items.<sup>20</sup>

Ethnological or historical parallels to this Palaeolithic custom, the representation of a group's prominence and power by means of waste and destruction of goods on the one hand, and by elaborate burials on the other, are easily found. Especially impressive is the description of a Germanic burial witnessed by the Arab traveller Ibn Battuta, according to which the deceased was laid to rest on a ship which had been fitted out with precious items and then set on fire.<sup>21</sup>

Independent of their burials, the pageantry and impressive festivities of the Indians living at the North-Western coast of the American continent have achieved fame, as they not only generously entertain their guests during the so-called potlatch and give them presents, but they also destroy precious goods by breaking them and throwing them into the sea. Waste in connection with burials therefore serves the self-representation of a group which makes it clear that they claim ownership of a place by means of a burial, and on the other hand also demonstrates that they can afford to do without pretty and precious goods.<sup>22</sup>

If then the territory's borders not only continued to be marked through burials, but these burials now also became more elaborate in order to emphasize the economic capabilities of the group and thus their strength, it should not come as a surprise if another old acquaintance joins us: the depositing of skulls! The marking of territory with the skulls of one's deceased remained a custom whose practice can be traced into the Neolithic and occasionally even into historical times. Thus for example we know of five human skulls deposited near Le Pacard, and further skulls have been found in Isturitz (both in France). Special attention must be awarded to the skull of a young woman from the Magdalenian, found in Mas-d'Azil, which was uncovered in 1961 and whose eyes had been replaced with oval disks made of bone.<sup>23</sup>

Does this suggest a religion in the sense of there being a belief in the afterworld? The answer is by no means easy! Initially, probably not. Still in the Upper Palaeolithic, the emphasis would have lain foremost on the documentation of territorial claims. Mourning the loss of a loved one, and maybe an important person

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<sup>20</sup>Ibid. p. 25.

<sup>21</sup>Dunn, Ross E. (1986). *The Adventures of Ibn Battuta*, University of California Press.

<sup>22</sup>Boas, Franz (1888). *The Indians of British Columbia*. *The Popular Science Monthly*, March 1888 (vol. 32). [https://en.wikisource.org/wiki/Popular\\_Science\\_Monthly/Volume\\_32/March\\_1888/The\\_Indians\\_of\\_British\\_Columbia](https://en.wikisource.org/wiki/Popular_Science_Monthly/Volume_32/March_1888/The_Indians_of_British_Columbia).

<sup>23</sup>Leroi-Gourhan, André (1981). *Die Religionen der Vorgeschichte*. Frankfurt am Main: Suhrkamp, pp. 65–66.

Vallois, H. V. (1961). *La Crane humaine magdalénien du Mas d'Azil*. In: *L'Anthropologie*, Vol 65, pp. 21–45.

within a small group, in connection with the customary burial habits will surely however have led to deliberations concerning death and the subsequent fate of the deceased, who for reasons of respect and rivalry was allowed to keep his property or who was elaborately decked out for his funeral. At some point, the custom of offering burial gifts will have become connected with the feeling of caring for the deceased, and this comforting and calming emotion could help cope with one's own fear of mortality which is heightened through direct confrontation with death. It may well have been the ensuing relief which was ultimately experienced as being a helpful coping mechanism in the process of dealing emotionally with one's own fears. However it may have played out: the custom of burying one's deceased was clearly a successful model, sustainable within the framework of religious evolution, and was thus not only maintained but extended, i.e. performed more elaborately. From here, it is only a small step towards the wish or the notion that the deceased in his subsequent existence would use the burial gifts (such as flint blades, spears, and arrows) as weapons, or bone needles as tools—and here, the first step is made towards an existence after the end of our physical existence.

## Chapter 6

# A Forest of Symbols—The Art of the European Upper Palaeolithic (40,000–12,000 ybp)

### Preliminary Results

Let us take stock of our conclusions so far: existential fears combined with the necessity of securing one's own territory drove the men and women of the Middle and Upper Palaeolithic and found their representation in elaborate, demonstrative burials. While the humans of the Middle Palaeolithic were still content with the funeral itself and the demonstrative placing of the manipulated skulls of the deceased, funerals became more and more elaborate during the Upper Palaeolithic: added value was produced, which demonstrated the economic power of the group—the group could signal meaning.<sup>1</sup> In the Upper Palaeolithic, therefore, we see a behaviour with signalling function which was primarily aimed at communicating territorial claims. Existential fears were the causes for this behaviour: fears of losing one's hunting grounds or safe habitat in a cave.

While young children or our primate relatives demonstrate and signal these and other fears with no inhibitions, both the Neanderthal and the anatomically modern man began to express their fears culturally, roughly 90,000 years ago. Initially, as can be conclusively proven, in connection with burials, and possibly (although we have no archaeological information) with the help of explanatory narratives about heaven and earth,<sup>2</sup> and subsequently, from about 40,000 ybp onwards, with the help of visual arts.

Thus it only makes sense to analyse the art of the Upper Palaeolithic from the viewpoint of the psychology of human expression, in an attempt to uncover signs with signalling functions. This is not only a logical consequence of Aby Warburg's conclusions, but also a consequence of the fact that religions, including their

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<sup>1</sup>Trinkaus, Erik, Alexandra P. Buzhilova, Maria B. Bednikova, Maria V. Dobrovolskaya (2014). *The People of Sungir. Burials, Bodies, and Behavior in the Earlier Upper Paleolithic*. New York: Oxford University Press, pp. 14–33.

<sup>2</sup>Thus, Michael Witzel contends that the origins of the first mythemes can be dated to roughly 100,000 ybp. Witzel, E. J. Michael (2012). *The Origins of the World's Mythologies*. New York: Oxford University Press, pp. 105–130.

possible earlier and proto-forms, evolve—they logically have to have developed from their respective precursors. And the above discussion has demonstrated the form of the respective precursor.

## Cave Art

To date, however, the interpretation of Palaeolithic cave art points into completely different directions. On the one hand, the misinterpretation of an abrupt cultural change from the Middle to the Upper Palaeolithic is responsible for the misunderstanding (also on account of the Neanderthal's bad reputation, see Chap. 4), and on the other hand so is the idea of a rising cultural development of humanity (as described above, Chap. 1). However, the thought that the appearance of the anatomically modern humans should have caused a kind of cultural revolution which catapulted man's thought and actions onto a different, much more advanced stage is easily comprehensible, as in terms of art, the Upper Palaeolithic begins with a bang that could not be more impressive: around 36,000 ybp, we come across the first cave in France with large-scale murals of such technical perfection that we would not have expected for such an early cultural stage. This form of art blossomed for about 20,000 years, only to disappear towards the end of the Upper Palaeolithic and to be replaced by an art form which was much more schematic and far less artistically demanding and sophisticated. This fact is even more surprising because the current art-historical paradigm suggests the idea that the art of painting had over the course of centuries developed from the most simple of beginnings to schematic representations to the heights of naturalism and perspective, which then found its first climax in the art of the Renaissance. The foundation of such mastery was, so the thought goes, intellectuality and the ability to let go of spiritual paternalism, both of which were made possible during the Renaissance thanks to the rediscovery of antiquity and the related, almost enlightened, mentality.<sup>3</sup>

The notion of a rising development of art can originally be traced back to the court painter of the Medici, Giorgio Vasari (1511–1574), who was the first to submit art to a historical, evaluative analysis. Based on Vasari, Winckelmann saw a first climax in the art of Greek antiquity which succeeded in reproducing utmost beauty in sculpture. Winckelmann saw his ideal of „edle Einfalt, stille Größe“ realised in the restrained representation of human emotions of for example the Laocoon group, which also rejects anything loud or overly expressive.

<sup>3</sup>Winckelmann, Johann Joachim (1764). *Geschichte der Kunst des Alterthums*. Dresden: Walther.

Vasari, Giorgio (1550). *Le Vite de' più eccellenti architetti, pittori, et scultori italiani, da Cimabue infino a' tempi nostri: descritte in lingua toscana da Giorgio Vasari, pittore areentino—Con una sua utile et necessaria introduzione a le arti loro*. Firenze: L. Torrentino.



**Fig. 6.1** Horses in the cave of Chauvet. Photo of a copy/painting (© Anthropos Pavilon Brno)

Confronted with such a background based in the philosophy of science, the works of cave art must have been overwhelming. The cave of Chauvet, discovered in the Ardèche, France, in only 1994, boasts over 400 partially large-scale representations of animals and symbols. The age of the paintings, which were produced with much skill with the help of charcoal, chalk, and red ochre, could be dated to 35,000–32,000 ybp. Younger but no less impressive are the artworks in the caves of Cougnac (25,000–16,000 ybp), Pech Merle (20,000–16,000 ybp), Lascaux (about 17,000 ybp), Niaux (about 13,500 ybp), or Altamira (around 15,000 ybp) (Fig. 6.1).<sup>4</sup>

The fully developed technical ability, the artistic quality, and the high aesthetic value of the images could thus only mean one thing: they had to have been the expression of a highly developed mentality, they had to have been the encoded representations of a rich spiritual life which are revealed in these symbolic images!<sup>5</sup>

<sup>4</sup>Lorblanchet, Michel (1997). *Höhlenmalerei. Ein Handbuch*. Sigmaringen: Thorbecke.

<sup>5</sup>An exponent of this thought is Marc Groenen, who concludes that because he could not interpret the artists' motives in the case of the chimeras, they must have a metaphysical meaning. Groenen, Marc (2010). *À l'aube de la métaphysique. Jalons pour une préhistoire de la spiritualité*. Contribution au chantier « Philosophie et soins de l'âme » présenté à l'UNESCO les 17–18 novembre 2010 dans le cadre des 10e rencontres sur les Nouvelles Pratiques Philosophiques.

Approaching the issue from art history, this approach is simply wrong. As the noted art historian Erwin Panofsky (1892–1968) made clear, each pictorial interpretation must follow three basic steps: 1. Identification of the represented object. 2. Include further information such as myth,

These symbols now had to be decoded in order to understand the message which our ancestors had left behind for us. But because any direct access to the images and the spiritual world of these artists, these hunters of the Ice Age, is barred for us, a comparison with foraging peoples must suffice in order to reconstruct their past ideology—an ideology which depending on the viewer oscillates between a period of Australian dreams and South African bushman shamanism!<sup>6</sup>

Such a point of view, as convincing as it may seem initially, falls short in many aspects. First of all, it presupposes occidental views in more than one respect: the images have to mean something! The Occident, influenced so strongly by Christianity, is so accustomed to seeing religious or spiritual content more or less encoded in its imagery that it cannot understand painting as a gratifying game with forms and colours. It is also assumed that the individual motives or pictorial elements must be related to each other in terms of content. However, they frequently hail from different time periods and only superficially do they form an ensemble with the other motives. Furthermore, the extremely high artistic quality of individual animal motives has obscured the fact that by no means all drawings were as successful, large, and impressive; quite the contrary. The majority of images were roughly and quickly drawn onto the walls, painted one on top of each other, tracing older images, they are unidentifiable signs, hand prints, macaroni-shaped lines, or even chimeras which have thrown up endless questions for researchers. Clearly, the beauty of individual images has seduced researchers into overloading the cave images of the Ice Ages with meaning (Fig. 6.2).

The above-mentioned macaroni-type lines could in fact be important in terms of interpreting cave art and situating it within the history of development, as they are in no manner limited to the Ice Ages or to caves, rather the contrary. The main building of the Lower Saxon parliament is connected with the neighbouring building through a rather low underground tunnel—and on its ceiling we find the same finger-drawn lines as were uncovered in the tunnel-like passages of caves over

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(Footnote 5 continued)

ideological background, etc. 3. Iconological level: question, why the artist has chosen to represent the motif in this specific fashion, which statement he wants to make. Panofsky, Erwin (1972). *Studies in Iconology: Humanistic Themes in the Art of the Renaissance*. New York: Harper & Row, pp. 5–9. The knowledge, which object the artists of the Ice Age were depicting is thus a precondition for any further interpretative attempts—this is the correct method for an approach adhering to the history of art, and which is applied in this discussion.

<sup>6</sup>Ucko, Peter J. (1977). *Form in indigenous art. Schematization in the art of Aboriginal Australia and prehistoric Europe*, Australian Institute of Aboriginal Studies, Canberra.

Clottes, Jean and David Lewis-Williams (1998). *The Shamans of Prehistory: Trance and Magic in the Painted Caves*. New York: Harry N. Abrams.

Mithen, Steven (1999). *The Prehistory of the Mind. The cognitive Origins of Art and Science*. New York: Thames and Hudson, p. 176.

Guthrie, Dale (2005). *The Nature of Paleolithic Art*. Chicago and London: The University of Chicago Press, especially the picture on p. 436, comparing rock art from different periods, societies and natural habitats.



**Fig. 6.2** Picture of an aurochs in the cave of Altamira/Spain (picture of a reproduction/painting) (© Anthropos Pavilon Brno)

20,000 years old. The same applies to most representations of humans. They all look surprisingly like children's drawings; this includes even the well-known "moon face" which all parents will at some point receive from their children. In both cases, the "artists" wanted to leave behind visible signs, and on the other hand spontaneously wanted to convert a feeling into action (perhaps the sensation of threat in a tight, dark passageway in the case of the macaroni-like lines?).

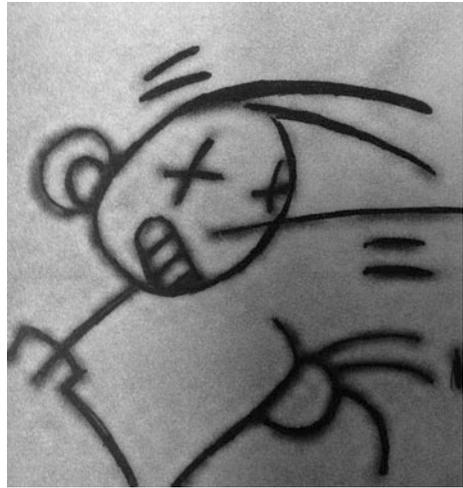
Clearly, a large part of the cave art of the Ice Ages must be considered as a kind of graffiti: a purposeless form of painting which lies on a spectrum reaching from the co-called tag, the abbreviation or trademark of the artist's name all the way to large-scale characters. Interesting in this context is the fact that the latter include the representation both of real and phantasy figures, such as chimeras (Figs. 6.3 and 6.4).

In today's world, graffiti is, to put it mildly, a matter of contention. Homeowners who see the walls of their property decorated in this fashion are rarely amused, instead preferring to categorise such behaviour as vandalism and damage to property. Then however we must ask ourselves why the mainly young, illegal artists are driven to invest both time and money into a behaviour which rarely offers any reward and instead may well end in much trouble. A study asking exactly this question came to the highly impressive result that the thrill of this kind of artistic behaviour lies in the act of painting itself. The artists want to realise their ideas, express emotions, materialise their inner experiences so that it finds a more durable expression in the outside world, they want to reassure themselves of their abilities and compete with others. These latter thoughts of competition and prestige play an important role in graffiti, because also during the satisfying process of an

**Fig. 6.3** Moon face in the cave Les Trois Frères (France). Drawing: Karolina Rupik after Lorblanchet



**Fig. 6.4** So-called gang graffito. Drawing: anonymus after Alex Alonso (1998). Urban Graffiti on the City Landscape. University of Southern California



easy-flowing activity, the artist wants to represent himself with his work, he wants to trump others, and acquire fame.<sup>7</sup>

These results are complemented by the research of psychologist Nicholas Humphrey (\*1943), who compared the motives from the caves of the Ice Age with the drawings of an autistic girl and discovered that the autistic girl's inability to conceptualise led to artistic forms of expression which could be compared to those

<sup>7</sup>...or mark his territory! Alonso, Alex A. (1999). *Territoriality Among African-American Street Gangs in Los Angeles*. Master's Thesis. University of Southern California.

Rheinberg, F. and Manig, Y. (2003). Was macht Spaß am Graffiti-Sprayen? Eine induktive Anreizanalyse. *Report Psychologie*, 4, pp. 222–234.

of the Palaeolithic artist. The perspective depictions in the caves are, according to Humphrey, the expression of strong emotions, momentary impressions which are captured artistically, and thereby aided the process of emphasising commonalities within this mass of impressions, ultimately helping to form the first conceptual units.<sup>8</sup> The cave art paintings demonstrate that sensorimotor experiences are being made which in turn play an important role in the formation of concepts.<sup>9</sup> Painting these pictures leads to new realisations which subsequently and with the help of language go through a process of reflexion, ultimately leading to the formation of new concepts and terms as well as an extended ideology. Both semantics and artistic symbols separate from their original context in this process and develop from the description of the concrete to an abstract content. That as part of this process scripture was able to develop is demonstrated by the abstract pictorial symbols of Egyptian hieroglyphics.

Back to cave art: Despite successful hunting methods, the life of the Upper Palaeolithic hunter must have been insecure; his life depended on the regular appearance of his prey, probably migrating herds, and the lucky outcome of coincidental encounters with superior opponents such as the aurochs, the woolly rhinoceros, or lions. Existential fears would have been the constant companion of these hunters; fears which they expressed culturally with the help of visual arts—sadly we know nothing of possible coping mechanisms using speech. Artistic activities help to capture the existential threats symbolically and thereby offer the Warburgian “Denkraum der Besonnenheit”, a place for reflection.

Perspective depictions, capturing a living creature in motion and thereby capturing a snap shot of reality are not limited only to caves but can also be found in line drawings on slate. Roughly 20,000 years after the appearance of the first cave art, hunters from the Magdalenian period in a camp on the Rhine terraces near the modern Gönnersdorf captured extraordinary events in this manner and have thus allowed us insights into their lives; a life in which the passage of a mammoth herd

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<sup>8</sup>Humphrey, Nicholas (1999). Cave Art, Autism and the Human Mind, in: *Journal of Consciousness Studies* 6/1999, pp. 116–123.

Categories in which nature is divided into are not in nature itself, they emerge exclusively from interaction between nature and humans. Kravchenko, Alexander (2003). *Sign, Meaning, Knowledge. An Essay in the Cognitive Philosophy of Language*. Frankfurt am Main and others: Peter Lang, p. 92.

<sup>9</sup>The importance of non-verbal expressions for the acquisition of speech is indisputable. See, for example, Fuiz-Szammer, Nina and Heidi Samonig (2011). *Die Bedeutung des nonverbalen Ausdrucks für den Spracherwerb*. München: Deutsches Jugendinstitut.

Goodwyn, S. W., L.P. Acredolo and C.A. Brown (2000). Impact of Symbolic Gesturing on Early Language Development. In: *Journal of Nonverbal Behavior*, no. 24, pp. 81–103.

Tomasello, Michael (2010). *Origins of Human Communication*. Cambridge, Mass.: The MIT Press, pp. 143–144, 148–153.

(the last of their kind) was an emotional highlight which they captured artistically on slate potsherds which were fashioned in the immediate vicinity.<sup>10</sup>

## The Biological Background—Communication and Ranking

If graffiti and cave art thus appear largely as pure art for the sake of art and as a satisfying occupation for foragers who were afforded free time for their pursuit of the artistic on account of the successful hunt and long, dark winter nights, then behavioural biology must sadly break down this idyllic notion of the purpose-free early artist, because: ultimately, art serves self-representation and can thus not be without sense nor purpose. If the researchers examining young graffiti artists were still surprised by the fact that for young people who considered their art also as an attack on the ruling social norms, the thought of accomplishment and competition played a crucial role (“I want to be better than my peer/competition/artist”),<sup>11</sup> then behavioural biologists are already well-acquainted with this thought. (Aesthetic) Self-representation is part of the baiting behaviour in the animal kingdom, and what the external appearance cannot offer is made up for with additional resources. Jane Goodall for example describes how a high-ranking chimpanzee with the help of two empty oil drums he had “acquired” from the research station created such tremendous noise and presented such an impressive display that he completely undermined all his branch-rattling and shouting competitors and secured his leading position within the group.<sup>12</sup> The bowerbird on the other hand prefers a more aesthetic behaviour. In order to attract females, he builds a wedding hut from moss which he decorates not only with petals but additionally erects a wall of flowers and

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<sup>10</sup>Bosinski, Gerhard (2011). Les figurations féminines de la fin des temps glaciaires. In: Norbert Aujoulat (ed.): Mille et une femmes de la fin des temps glaciaires. Musée National de Préhistoire—Les Eyzies-de-Tayac, 17 juin–19 septembre, Paris 2011, pp. 49–72.

Baales, Michael (2005). Archäologie des Eiszeitalters. Koblenz: Gesellschaft für Archäologie am Mittelrhein und Mosel 16: Koblenz.

Höck, Christiane (1993). Die Frauenstatuetten des Magdalénien von Gönnersdorf und Andernach. In: Jahrbuch des Römisch-Germanischen Zentralmuseums 40, 1993, pp. 253–316.

<sup>11</sup>Citation: “[There is a lot of] one-upmanship in artistic forms, where one person does his best work, and someone else comes along and does something else over it.” Walker, Benjamin F. (2004) Graffiti Psychology: Why Vandals Strike. <http://www.cleanlink.com/cp/article/Graffiti-Psychology-Why-Vandals-Strike-1131> posted on: 2/1/2004.

The citation explains as well the reason why so often one picture is painted on top of the other in Palaeolithic cave art.

See also: Rheinberg, F. & Manig, Y. (2003). Was macht Spaß am Graffiti-Sprayen? Eine induktive Anreizanalyse. Report Psychologie, 4, pp. 222–234.

<sup>12</sup>Goodall, Jane (1990). Through a Window. My Thirty Years with the Chimpanzees of Gombe. Boston: Houghton Mifflin, p. 44.

fruits, creating a true piece of art.<sup>13</sup> While of course the competition amongst the chimpanzees, with the aim of achieving as high a place as possible in their group's hierarchy, does not necessarily belong to the field of aesthetics or art, it nevertheless follows the same goals, namely optimising their procreation opportunities. Just like a high ranking allows the male chimpanzee sexual access to many females, the artistic ability of the bowerbird demonstrates his proficiency and superiority over his competition, making him a preferred mating partner.

Such a behaviour is not foreign to humans. The human ethologist Irenäus Eibl-Eibesfeldt (\*1928) mentions the Eipo in this context, a people of New Guinea, who fashion nets used amongst other things as payment for blanks of stone axes. They raise the value of these nets by investing time and effort—enlarging the nets, making the stitches smaller, or adding colourful bast-embroidery. Especially lovely nets decorated with feathers are worn as jewellery by the men during dance events or festivities. Amongst the Hin, a related people, the development of the jewellery nets has progressed so far that the nets have mutated to lose all practical functions and are now merely used to beautify its owner. The Yali on the other hand invest time and effort into the production of finely polished and decorated axes which then no longer serve their original purpose but are used instead as payment method, thereby representing wealth.<sup>14</sup>

Self-representation using art, by producing added aesthetic value, thus belongs to the human inheritance. Art objects whose production costs time and effort make statements concerning not only the artist's, but also the group's wealth and are thus helpful in representing the group itself in a positive light and in positioning the group within a competition: art is also posturing!<sup>15</sup>

## Threatening and Calming

Posturing and positive self-representation within a group with the help of imposing works of art demonstrate that the art caves of the Upper Palaeolithic were not only the result of a satisfying occupation which focused on the reflection of strong emotions and moving impressions—such as when a hunter finds himself faced with an aurochs!—but they were also part of a competition with other groups and used to

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<sup>13</sup>Kusmierski, Rab; G. Borgia; A. Uy; R.H. Crozier (1997). Labile evolution of display traits in bowerbirds indicates reduced effects of phylogenetic constraint. *Proceedings of the Royal Society of London B* 264 (1380): 307–313.

Diamond, Jared (1986). *Biology of Birds of Paradise and Bowerbirds*. In: *Annual Review of Ecology and Systematics*, Vol. 17, pp. 17–37.

<sup>14</sup>Eibl-Eibesfeldt, Irenäus (1997). *Die Biologie des menschlichen Verhaltens. Grundriß der Humanethologie*. Weyarn: Seehamer Verlag, pp. 923–932.

<sup>15</sup>We can compare the totem poles of the Northwest American Haida, which were the result of an artistic competition. Stuart, Hilary (1979). *Looking at Indian Art of the Northwest Coast*, Douglas & McIntyre, Vancouver-Toronto: Univ. of Washington Press, pp. 104–106.

**Fig. 6.5** Hand negatives in the Cueva de los manos, Argentina (© Mariano—Own work, CC BY-SA 3.0)



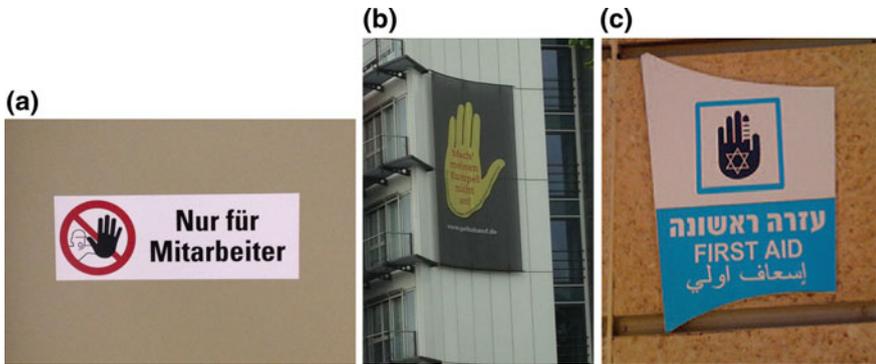
leave behind a clear sign: we were here and we are capable of documenting our achievements. Such a statement supports the demonstration of one's own wealth and strength and helps justify the claim to the cave itself and the surrounding territory.<sup>16</sup> These claims are underscored through clear signs which are known as signs of defence in behavioural biology. In this context, the same motive reappears constantly in cave art, which has thrown up many questions for prehistorical researchers: the hand print (Fig. 6.5).

Whether in El Castillo/Spain, or the French Pech Merle, in Cosquer or Chauvet—everywhere we are confronted with the prints or negatives of human hands, and time and time again the hand depicts the splayed fingers. The age of these prints is interesting: in El Castillo, the prints were dated to an age of roughly 40,000 years, thus dating to the time of the Neanderthal.<sup>17</sup>

Hand symbols belong to those enigmatic motives of prehistorical research, because they hardly seem to fit into the scheme of a highly developed sense of art in which the perspective and realistic animal images are understood to be the expression of a complex mythic spiritual world and the alleged outcome of shamanistic behaviour. The hand symbol is less problematic for the ethologist. The repelling, stretched out, and splayed hand belongs to the well-known gestures of defence which is understood universally, independent of language and culture. The hand gesture which must be understood as gesture of rejection, “stop” and

<sup>16</sup>Alonso, Alex (1998). *Urban Graffiti on the City Landscape*. University of Southern California, 14. February 1998.

<sup>17</sup>Appenzeller, Tim (2013). *El Castillo: Earliest Known Cave Paintings Might Have Been Made By Neanderthals*. Nature news 5/17/2013.



**Fig. 6.6** *Left* A sign on a construction site, prohibiting access to non-authorized people. *Middle* A union protests against the discrimination of colleagues. *Right* Sign advertising the presence of a first aid station on the beach of Tel Aviv (Israel). Here, the original defensive sign has already morphed to an apotropaic symbol

defence is a formalised gesture of brushing aside and possibly developed ontogenetically. Depictions of the defensive hand are in no way limited to Palaeolithic cave art, but can be found worldwide: from Celtic votive figurines to pulpit jewellery (for example in the church of Gropina/Tuscany) to Balinese temple guardian figurines, we find the raised hand (Fig. 6.6).<sup>18</sup>

Of special interest in this context is the image on constructions sites used in Germany to prevent non-authorized person’s access. The hand in this case clearly means “Do not enter”. The hand images in Palaeolithic caves were meant to convey the same signalling functions. The hand on the cave walls symbolised not more and not less than: “access to this space is prohibited for non-authorized persons”, and was thus a clear sign emphasising territorial claims.<sup>19</sup> This interpretation is supported by cave art drawings which enforce the defensive character of the raised hand and reinforce the symbolism through additional threatening gestures. Depictions of ithyphallic males with raised hands to ward of intruders can be found in the caves of Gourdan and La Madeleine, France, or in Hornos de la Peña, Spain (Fig. 6.7).

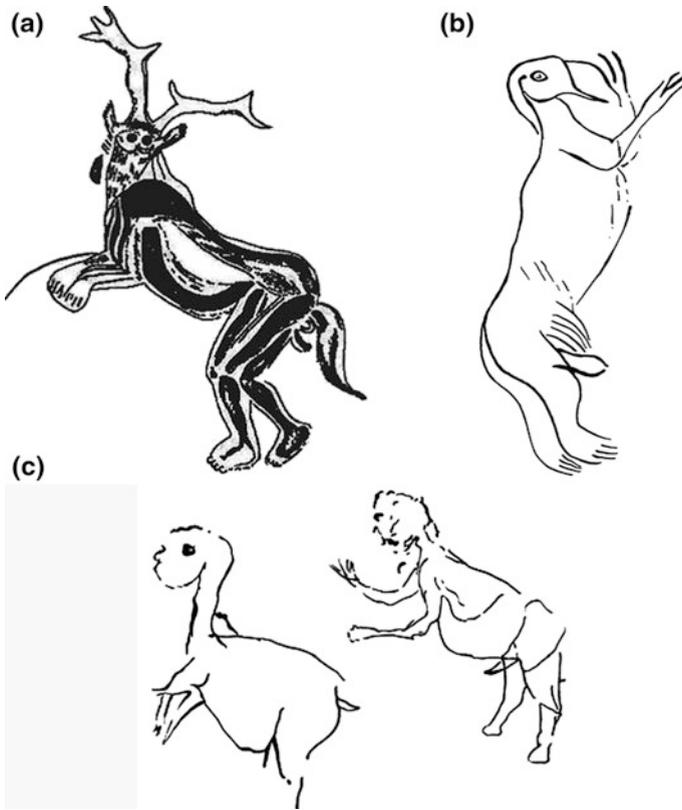
The symbolism of phallic presentation, which is used as an added tool, serves not to emphasise the sexual, but instead is very much an expression of dominance which has its roots in threat display.<sup>20</sup> Phallic threatening is common amongst guenons (long-tailed monkeys) and baboons, especially when an intruder

<sup>18</sup>Eibl-Eibesfeldt, Irenäus (1997). *Die Biologie des menschlichen Verhaltens. Grundriß der Humanethologie*. Weyarn: Seehamer Verlag, pp. 926–928.

<sup>19</sup>Ibid. 455–475.

<sup>20</sup>Immelmann, Klaus and Colin Beer (1992). *A Dictionary of Ethology*. Cambridge (Mass): Harvard University Press, pp. 311–312.

Alcock, John (2005). *Animal Behavior: An Evolutionary Approach*. Sunderland: Sinauer, pp. 307–312.



**Fig. 6.7** Phallic threatening drawings in the caves of Les Trois Frères (France), Altamira (Spain), and a pre-coital scene in Les Combarelles (France) (Drawings by Karolina Rupik following a copy by C. Barriere)

approaches the group—the male adults have an erection, threatening the intruder with rape. On the other hand, inferior or weaker animals answer such threatening behaviour with submissive gestures such as presenting their behind and offering to be mounted, without the sexual act actually happening—the entire display is social communication.<sup>21</sup>

Phallic threats are also wide-spread amongst humans. In New Guinea, the Yale wear a penile gourd which artificially elongates the penis. If unwanted guests cross into their territory, the Yale unfasten the rope holding the gourd, allowing the grotesquely elongated penis to swing up and down.<sup>22</sup> Some peoples go even beyond these threats: if young shepherds in the Atlas Mountains lose any of their

<sup>21</sup>Eibl-Eibesfeldt, Irenäus (1997). *Die Biologie des menschlichen Verhaltens. Grundriß der Humanethologie*. Weyarn: Seehamer Verlag, pp. 122–127.

<sup>22</sup>Ibid. Picture 2.57.

flock, they are raped by their comrades as punishment. We also know of the fate of the British officer and adventurer Lawrence of Arabia, who had to suffer the same experience at the hands of a Turkish governor as punishment for his subversive activities against the Ottoman Empire.<sup>23</sup>

The phallic figures in Palaeolithic cave art, such as for example the famous “magician” from Les Trois Frères, the phallic man in Altamira, or even the mounting scene in Les Combarelles are thus effective threatening and defensive symbols, whose effectiveness is heightened through the combination with horns or animal claws.<sup>24</sup>

Consequently, these human-like depictions, or those phallic or ithyphallic images enhanced with horns or other animalistic attributes signalling dominance, are not, as previously supposed, shamans whose complex ideology surely developed only at a much later point in history<sup>25</sup>; instead, these depictions must be understood as threatening or defensive gestures which, just like the hand gestures, intended to keep away intruders from the cave—clearly a sign of territoriality.

## Female Figurines

From the Gravettian onwards (with the exception of the occasional precursors), this range of art works, whose signalling effects went beyond the mere creative joy or the wish to impress, is enhanced by the appearance of small female figurines who in terms of their protective functions represent an equivalent to the ithyphallic drawings. The ethological background is the frontal female presentation of the vulva, the demonstrative and frequently obscene presentation of the female pubic region as a threatening or even mocking gesture which behavioural biologists have noted amongst children and foragers such as the South African !Ko. The presentation of the rump on the other hand is an invitation to mount, a submissive gesture which does not necessarily invite the actual sexual act but instead is meant to signal conciliation. The presentation of the naked female breast is also meant to induce calm and carry a soothing effect, as the female breast represents a source of well-being, comfort, and happiness for suckling infants, and evokes the respective positive emotions in adulthood.<sup>26</sup>

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<sup>23</sup>Ibid. p. 125.

<sup>24</sup>Lorblanchet, Michel (1997). *Höhlenmalerei. Ein Handbuch*. Sigmaringen: Jan Thorbecke, pp. 61–63.

<sup>25</sup>See here Eibl-Eibesfeldt: „Die Figuren werden in der Literatur gelegentlich als Fruchtbarkeitsdämonen mißdeutet, wohl weil man nicht wußte, wie man sie aufstellt und verwendet.“ Eibl-Eibesfeldt, Irenäus (1997). *Die Biologie des menschlichen Verhaltens. Grundriß der Humanethologie*. Weyarn: Seehamer Verlag, p. 124.

<sup>26</sup>Eibl-Eibesfeldt, Irenäus (1997). *Die Biologie des menschlichen Verhaltens. Grundriß der Humanethologie*. Weyarn: Seehamer Verlag, pp. 670–673.



**Fig. 6.8** Venus figurines from Hohle Fels (40,000 ybp; © Hilde Jensen, University of Tübingen, with kind permission), Laussel (25,000 ybp; © Museum of Bordeaux), and the Venus figure from Willendorf (22,000 ybp; photo of a copy)

The first female figurines were mostly small, barely reaching 10 cm, and relate to exactly these calming and appeasing ethological signals. The so-called Venus figurines typically possess a generous rump and thighs and enormous breasts, such as for example the oldest Venus figurine found to date (35,000–40,000 years old) in the Hohler Fels Cave by Schelklingen (Southern Germany), which also boasts an obscenely displayed labium. Further examples could be listed easily, including also the half relief of the Venus of Laussel (25,000 years old), displaying large breasts and over-large labia (Fig. 6.8).

Despite the impressive artistic craftsmanship and detailing concerning the physical anatomy of the body (i.e. breasts, hips, and pubic regions), all figurines share a distinct lack of facial characteristics. The focus clearly was not on portraying any individual features, instead emphasis was placed clearly on the signalling function of these female figurines. The prominent labia, the broad rump, and the generous breasts are all signs of threat or appeasement, which are combined in a single figure which clearly now has an apotropaic function (warding off danger). The Venus of Laussel originally protected a rock shelter, the Venus from Hohle Fels was worn around the neck as an amulet, and the Venus from Willendorf could

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(Footnote 26 continued)

Females preferred! Even infants prefer females over male faces! Bayet, Laurie, Paul C. Quinn, James W. Tanaka, Kang Lee, Edouard Gentaz and Olivier Pascalis (2015). Face Gender Influences the Looking Preference for Smiling Expressions in 3.5-Month-Old Human Infants. *PLoS ONE* (Impact Factor: 3.23). 06/2015; 10(6):e0129812. DOI: [10.1371/journal.pone.0129812](https://doi.org/10.1371/journal.pone.0129812).

Döppes, Doris & Rabeder, Gernot (1997). *Pliozäne und Pleistozäne Faunen Österreichs. Ein Katalog der wichtigsten Fossilfundstellen und ihrer Faunen. Mitt. Komm. Quartärforsch. Österr. Akad. Wiss.* 10, 1–411. Wien, pp. 68–74.



**Fig. 6.9** Discoveries from Dolní Věstonice (Czech Republic). The figurines have been reduced to the signals of presenting the labia or breasts (© Anthropos Pavilon Brno)

be placed into the ground thanks to her pointed legs—all these figurines, along with their contemporaries, had a clear protective function.

This interpretation becomes even clearer if we consider the stylistic development of the figurines over the course of several centuries: while the Venus from Hohle Fels was still fairly cloddish, the Venus figurines of the Gravettian are more naturalistic, at least those physical regions which the artist wished to represent.

In the course of later developments, naturalism becomes less and less relevant. Instead, those body parts are emphasised from which emanate the desired signalling function, thus only breasts and rump. The development goes so far that the later amulets have been reduced to a representation of breasts only, or a stick with labia or rump—they are barely recognisable as female figurines (Figs. 6.9, 6.10, 6.11, and 6.12).



**Fig. 6.10** Amulets representing breasts from Dolní Věstonice (Czech Republic) (© Anthropos Pavilon Brno, (Czech Republic))

**Fig. 6.11** A figurine reduced to a female rump, from Dolní Věstonice (Czech Republic) (© Anthropos Pavilon Brno, Czech republik)



**Fig. 6.12** A necklace made of protective female breasts, from the Epipalaeolithic period of the Fertile Crescent (20,000–10,000 ybp) (© Rockefeller Museum Jerusalem)



The figurines thus served to protect a shelter, a hideout, or its bearer. The spectrum included threatening and derisive gestures as well as submissive or calming gestures, which sometimes, as in the case of the Venus of Laussel, were paired together in one figurine to strengthen the desired effect.

When we consider the development of cave imagery and craftwork, we cannot deny that changes occurred throughout the 20,000 years or so of artistic and spiritual development, which are important for the question of the origins of religious thought. While the oldest images still served as pure self-presentation and documented a territorial claim, the first figurines perhaps intended to appease possible invaders, and the later female figurines held a clear apotropaic function

directed not against a specific invader but against evil itself. In the above-mentioned space for thought and reflection, we see the development of concepts, where threat and evil could be conceptualised as defined terms, and as the verbal and theoretical manifestation of fear, and could therefore then be governed. Female breasts and stick figures could be used effectively against this fear, a fear caused not by individual people or events, but instead existential fears. In this context, it is interesting to note that the perceived protection in its development from gestures to figure to apotropaic amulet was consistently associated with female attributes; this development continues into the Neolithic, the New Stone Age, and ultimately leads to the notions of Mother Goddesses.

## First Steps Towards Religion

Let us again summarise. Around 40,000 ybp, it was no longer sufficient for the population of Europe to mark their territories' boundaries with the interment of their deceased, nor to threaten possible competitors verbally or through gestures; instead, they artistically converted known and universally readable defensive signs in order to document their claims. The first defensive drawings and painted threatening gestures decorated caves and rock shelters. The success of these images was so immense that the signs were used independently: female figurines were worn, erected, or carried along as amulets. The female figurines here experienced their own characteristic development: while around 40,000 ybp, the first cloddish figurine portrayed her body parts drastically and plainly with threatening (pubic region) and appeasing (breasts) effects, later developments of this kind of apotropaic art show first a naturalistic, then later a more and more abstract and reduced form. Simultaneously, the corresponding concepts spread out further: while the oldest figurines were found in Western and Middle Europe, the idea of protective effects of these amulets arrived in Palestine during the Epipalaeolithic (20,000–10,000 ybp).

However, the focus is no longer only on threat or appeasement, but now includes a sense of competition—with other, possibly competing groups or even within the own group. We are dealing with the thought of ranking. In this context, artists from the Ice Ages compete with each other and create extraordinary images or pieces of portable art. They find their motives in their surroundings, the animal kingdom, and they succeed in coping with the strong emotions of existential fears. The group's self-portrayal through art documents again, as do the contemporary parallels of graffiti, territorial claims. Thus, the art of the Ice Age seamlessly fits into the image of an early foraging culture in which the protection of one's own hunting grounds against other groups was of existential importance—just as 50,000 years earlier, when mere interments achieved the same effect. However, even now in the Upper Palaeolithic, this basic method of protection was not rejected; rather, interments continued, as did the manipulation of skulls and their demonstrative placements. To this however came the innovative feature of demonstrating an added value by

equipping the deceased with precious clothing and tools, thereby emphasising the group's efficiency and capability.<sup>27</sup>

Until now, we have been dealing with facts. Interments and motifs, as well as cave art and the *art mobilier* prove that the hunters of the Palaeolithic secured their hunting grounds against invaders and competing internally for a higher ranking. It is just as clear that the artwork with its signalling functions underwent a development from a signal communicating its intention to other persons to an amulet with apotropaic function, i.e. the effect of the actual sign was transferred to the amulet. This process surely had a decisive influence on our ancestors' ideology, and it is equally evident that the first steps towards religion as a belief in *something* were made at this time. How far or how deep these beliefs went, and how detailed they were, unfortunately must remain speculation.

We do know that the foundations of later religion were laid with this process, because already at this early point in time, no experiments were made in terms of ideology but rather the original path was maintained (interments, defensive symbolism). Both, interments as well as the defensive symbolism, however do change their appearance: they evolve as a visible sign of an early, basic and equally evolving religion!

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<sup>27</sup>Trinkaus, Erik, Alexandra P. Buzhilova, Maria B. Bednikova, Maria V. Dobrovolskaya (2014). *The People of Sungir. Burials, Bodies, and Behavior in the Earlier Upper Paleolithic*. New York: Oxford University Press, pp. 14–33.

# Chapter 7

## The Change of Imagery (The Central European Mesolithic, Approx. 9600–5800 ybp)

### How Do Images and Symbols Change?

As has been demonstrated in the previous chapters, our ancestors' behaviour relevant for our research question had changed in the course of the Middle and Upper Palaeolithic. The changes must be understood as the evolution of a (proto-)religion, as demonstrated by the funerals on the one hand, and by the creation of visual arts on the other (Chap. 6). Whilst Luigi Luca Cavalli-Sforza clearly pronounces communication as the decisive reproductive mechanism of the cultural evolution (Chap. 2),<sup>1</sup> the founder of the so-called cultural ethology, Otto Koenig (1914–1992) described and comprehensively clarified both the dynamics as well as the tendency of change of cultural phenomena. During this process, he defined his subject field as “a special trend of general comparative ethology which concentrates on the material and idealistic products (culture) of man, their development, ecological conditionality, their dependence on inherited behavioural characteristics, and their respective appearances amongst animals in a comparative manner”.<sup>2</sup>

In the course of his numerous analyses focusing on the change of cultural phenomena and their effect on art, Koenig was able to identify clear rules which re-appeared consistently and independently of the original motif. These were:

- A tendency to retain objects whose functions had become redundant and which consequently were diverted to the realm of symbolism or acquired a decorative function;

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<sup>1</sup>Cavalli-Sforza, Luigi Luca (2000). *Genes, Peoples, and Languages*. New York: North Point Press, p. 174.

<sup>2</sup>Literally: ...“eine spezielle Ausrichtung der allgemeinen vergleichenden Verhaltensforschung (Ethologie), die sich mit den materiellen und ideellen Produkten (Kultur)des Menschen, deren Entwicklung, ökologischer Bedingtheit und ihrer Abhängigkeit von angeborenen Verhaltensweisen sowie mit entsprechenden Erscheinungen bei Tieren vergleichend befasst.” Koenig, Otto (1970). *Kultur und Verhaltensforschung. Einführung in die Kulturethologie*. München: DTV, p. 17.

- A tendency towards a so-called luxurisation, which means that simple lines became waves or zigzag patterns or even flowers;
- The disappearance of internal structures when external form was emphasised;
- Or the exact opposite: internal structures are emphasised and the external form dissolves;
- A regular preference towards lateral symmetry, especially concerning ornamental forms, and simultaneously a tendency to neglect less important or imperceptible parts of the object.

An important observation especially in the context of religion is the fact that a halt in change occurs whenever cultural objects or groups of people are displaced from their native into foreign surroundings; this can be explained on the one hand on account of concerns of losing one's identity, and on the other as the attempted retention of a foreign allure.<sup>3</sup>

Otto Koenig offers an impressive example for the change of an originally naturalistic motive into a completely new and initially inexplicable accessory in his comparative analysis of the eye in *Urmotiv Auge*, thus the title of his seminal book with which cultural ethology was founded. Here, Koenig deciphers the pervasive patterns and decorations of the winged eye or the paisley pattern which he calls Miribota, from the spiral<sup>4</sup> all the way to the wings of mythical creatures which ultimately turned out to be stylised reproductions of the eye. The origins of these patterns are the images, well-known in ethology, of the staring eye with its danger-repelling effects (Fig. 7.1).<sup>5</sup>

The threatening stare, which in ethology is understood to have originated from the simple stare, with which a predator fixates on its prey before it attacks and devours it, automatically generates fear and terror for the potential victims (Fig. 7.2).<sup>6</sup> Defensive symbols and amulets have adapted this effect in the shape of the eye, which is meant to deter threatening stares, evil, but also the Evil Eye.

A further characteristic example: the ethnologist Karl von den Steinen garnered much academic attention at the beginning of the 20th century with a remarkable work about his interpretation of the tattoos with which the Marquesan peoples decorate themselves. An analysis of the complex and interwoven patterns showed that the allegedly purely decorative abstract patterns could in fact be traced back to skull-like imagery. The visual dominance of the frequently modified and heraldic skeleton-like skull-patterns were a consequence of the enormous social importance of the elaborate funerary rites within Marquesan society, the subsequent worship of

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<sup>3</sup>Rensch, Bernhard (1965). *Homo sapiens. Vom Tier zum Halbgott*, Göttingen: Vandenhoeck & Ruprecht, pp. 117–128.

<sup>4</sup>The reference to a spiral is of unimaginable value as it allows us to recognise eyes in the spiral-shaped patterns which appear in pairs on Maltese megalith temples—presumably the eyes of a goddess of the Underworld or dema—compare chapter 12.

<sup>5</sup>Koenig, Otto (1975). *Urmotiv Auge*. München: Piper Verlag, p. 312.

<sup>6</sup>Eibl-Eibesfeldt, Irenäus (1974). *Stammesgeschichtliche Anpassungen im menschlichen Verhalten*. In: Grzimeks Tierleben, Sonderband Verhaltensforschung. Zürich: Kindler Verlag, p. 605.



**Fig. 7.1** From the additional apotropaic eye symbol (the eye on the joints) to the wings of mythical creatures (Drawings by Karolina Rupik following Otto Koenig)

**Fig. 7.2** Defensive eye amulet in the Jerusalem Market. As a staring eye, it protects its owner or bearer from the Evil Eye





**Fig. 7.3** A tattooed warrior (from: © Karl von den Steinen, *Die Marquesaner und ihre Kunst* 1925–1928)

the deceased, and the artistic conversion and symbolisation of these important events as part of religious and social life (Fig. 7.3).<sup>7</sup>

As a conclusion, we can note that the artistic visualisation of semantic symbols runs through a consistent developmental cycle which can in addition to the above-mentioned tendencies be characterised with the catch-phrase “from symbol

<sup>7</sup>von den Steinen, Karl (1925). *Die Marquesaner und ihre Kunst: Studien über die Entwicklung primitiver Südseeornamentik nach eigenen Reiseergebnissen und dem Material der Museen*. Vol. 1 Tatauierung: mit einer Geschichte der Inselgruppe und einer vergleichenden Einleitung über den polynesischen Brauch. Berlin: Reimer.

to pattern”: originally naturalistic representations of ethological signals (e.g. the eye or skull) change firstly into symbols over the course of only a few generations and ultimately mutate into pure decorative elements or patterns.<sup>8</sup>

The same development of originally ethological symbols with a communicative purpose into abstract but expressive patterns understood by the original recipient, described by Otto Koenig and Karl von den Steinen half a century earlier, can also be traced in prehistory and thus allows inferences back onto the artist’s ideology!<sup>9</sup>

In the Upper Palaeolithic, isolated signs—including isolated symbols of the vulva found in caves which we have not discussed separately—and female figurines with their appeasing, defensive signals of baring the breasts and offering up the rump served to deter competitors. In the course of the development of this form of ideologically motivated art the less important body parts of the small figurines, i.e. those without any signalling functions, were constantly reduced until ultimately all that remained was the rump or a stick with large breasts, and even here the stick, representing the body, was also eventually discarded (Figs. 6.10, 6.11 and 6.12).

## The Evolution of Religious Behaviour, Using the Example of Cave Art

Let us now try to trace a comparative development for cave art using the tools available to us from the fields of the history of art, human ethology, and cultural ethology. The previous consensus was of the opinion that the development of cave art was characterised by a loss of quality towards the end of the Upper Palaeolithic, at least if one adheres to the opinion prevalent until the Romantic Period that art must be as naturalistic as possible and have as its aim the representation of utmost beauty, and that art in the course of its development had moved continuously towards this goal.<sup>10</sup>

However: The development can be interpreted differently if one does not assume certain viewpoints and evaluative criteria of an understanding of art influenced by

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<sup>8</sup>Uher, Johanna (1994). Die Macht der Augen. In: Max Liedtke (Ed.) *Kulturethologie. Über die Grundlagen kultureller Entwicklung*. München: Realis, pp. 282–298.

<sup>9</sup>Thus, Horst Stöckel could prove in detail how the motive of presenting the vulva/the obscene spreading of the legs developed into patterns on Neolithic ceramics—even in the different Neolithic cultures! Stöckel, Horst (2002). Hatten bandkeramische Gefäßverzierungen eine symbolische Bedeutung im Bereich des Kultes? In: *Varia Neolithica Bd. II*, Weißbach, pp. 63–97.

<sup>10</sup>Winckelmann, Johann Joachim (1764). *Geschichte der Kunst des Alterthums*. Dresden: Walther. Brunner-Traut, Emma (1990). *Frühformen des Erkennens - am Beispiel Altägyptens*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Sandars, Nancy K. (1968). *Prehistoric Art in Europe*. Penguin (Pelican, now Yale, History of Art), pp. 75–98.

Mithen, Steven (2000). Das Mesolithikum. In: Barry Cunliffe, *Illustrierte Vor- und Frühgeschichte Europas*. Frankfurt/New York: Campus, pp. 150–152.

Winckelmann,<sup>11</sup> but instead bases one's analysis on the findings of behavioural biology and cultural ethology. According to these findings, Upper Palaeolithic cave art was on the one hand early graffiti with the aim of self-representation and impressing others, and on the other hand also a platform for projecting ethological signs and signals marking territory and defending against possible competition. This artform of the last Ice Age developed over the course of the following centuries, found for itself a new style, and discovered many new possibilities, namely the representation of stories: art began to tell a tale! Far from only being stiff and ungainly, a matured ability to conceptualise had led to the representation of types rather than individuals,<sup>12</sup> which were then combined into pictorial ensembles with previously unknown statements: in the Cueva de los Caballos in the Spanish Levant, for example, a battue hunt is depicted in which a group of waiting archers faces a herd of red deer. In contrast to the Palaeolithic, artists were now able to depict an event or an incident artistically and thus capture it for potential "readers". For this purpose, the artist chose familiar elements which he arranged so that a clear statement could be made: this is how we hunted deer (Fig. 7.4).

The changes in cave art from the naturalistic graffiti to images using familiar stylistic devices and telling a story can be traced clearly on the Iberian Peninsula. While during the Upper Palaeolithic, naturalistic animal depictions stood in the foreground and the rare depictions of man were rather ungainly and unloving, we see the emergence of more stylised but perfectly proportioned images of moving men during the transition to the Mesolithic. These men were frequently drawn at a run, carrying weapons, and wearing clothes. A man gathering honey is depicted in the Cueva de la Araña as he raids a beehive, while in Les Dogues/Bordeaux, we see a battle between two groups of archers (Fig. 7.5).

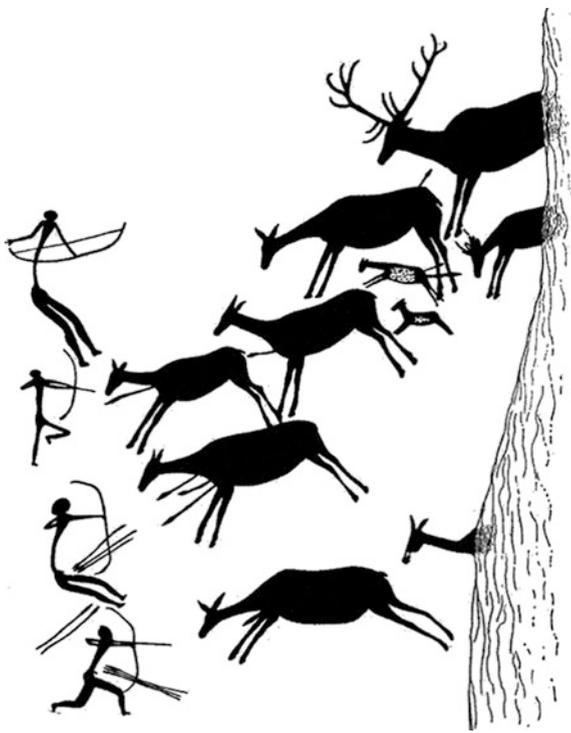
All these witnesses to a cave art that was anything but primitive tell the story of important events from the daily life of a Mesolithic hunter: hunting, gathering of food, social events such as the dancing scene in the Barranco de los Grajos, and lastly also the violent disputes which make it evident that the question of

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<sup>11</sup>Winckelmann, Johann Joachim (1756). *Von der Nachahmung der griechischen Wercke in der Mahlerey und Bildhauer-Kunst*, Zweyte vermehrte Auflage. Dresden und Leipzig: Walther, p. 22.

<sup>12</sup>The process of categorization and its conceptualization is described as follows: "Categorization of entities is connected with the singling out of their characteristics... which are grouped according to the family resemblance principle... They emerge exclusively from interaction between nature and ourselves... Speaking in general terms, categorization is the process of dividing the world (continuum) into discrete entities and clusters of such entities whereby it becomes possible to reduce the infinite diversity of the world to acceptable (from a human point of view) proportions. Directions taken by categorization processes may vary depending on which experimental rubric is chosen for a particular phenomenon, object, process, etc.... One of the results of such classificatory activity is the singling out in human environment of significant and signifying entities which are studied in a general theory of signs (semiotic). In this respect, the sign itself is already a category as an entity distinguished in the continuum according to a certain feature, namely, its ability to be a vehicle for information." Kravchenko, Alexander (2003). *Sign, Meaning, Knowledge. An Essay in the Cognitive Philosophy of Language*. Frankfurt am Main und andere: Peter Lang, pp. 92–93.

**Fig. 7.4** Depiction of a deer hunt in the Cueva de los Caballos (Spain)  
 (From: H. Obermaier, P. Wernert, *La pinturas rupestres del Barranco de Valltorta* 1919)



**Fig. 7.5** The honey gatherer from the Cueva de la Araña (Spain) (© Achillea. Gnu Public Licence)





**Fig. 7.6** Depiction of a battle. Morella la Vella, Castellon (Spain) (Drawing: anonymus, from H. Kühn 1929)

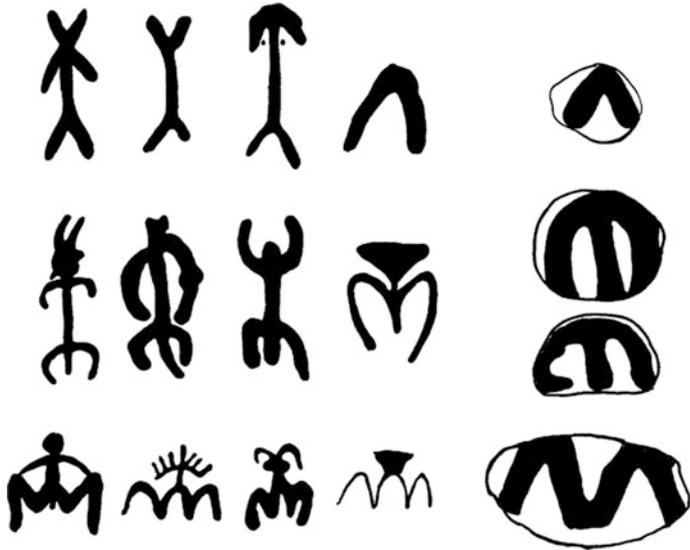
territoriality, the claim to a territory with sufficient natural resources, was paramount to their survival and thus a reason for inimical encounters between rival groups (Fig. 7.6).<sup>13</sup>

But also the tradition of the artistic visualisation of ethological signals is preserved and leads to stylistic images, abstractions, and simplifications—all adhering to the rules discovered by Otto Koenig, above—so that without knowledge of the original motive, a useful allocation and interpretation of the images would be impossible. Depictions of both phallic (threatening) men and (threatening) women presenting their vulva are important in this context; both images occur repeatedly in the Spanish cave art of the post-glacial period as familiar defensive symbols and to highlight territorial claims. In the course of the centuries, both the male and female images become more and more stylised in so far that the less important body parts, i.e. those without any signalling functions, are omitted, until ultimately we see merely an arch representing the legs and a line representing the penis or respectively a zigzag line representing the legs and vulva (Fig. 7.7).

The extremely simplified form of representation of sexual threatening is also found as a motif on pebbles in Mas d'Azil, Southern France, a famous and eponymous discovery site of the late Palaeolithic (Azilian, approx. 12,300–9600 BCE). Similar to the stick-shaped female figurines of the Palaeolithic, these pebbles decorated with defensive symbolism were used as amulets to safeguard their bearers from misfortune.

<sup>13</sup>Mithen, Steven J. (2000). Das Mesolithikum. In: Barry Cunliffe (Ed.) *Illustrierte Vor- und Frühgeschichte Europas*. Frankfurt/New York: Campus, pp. 146–152 (93–154).

Müller-Karpe, Hermann (1998). *Grundzüge früher Menschheitsgeschichte*. Vol. 1: Von den Anfängen bis zum 3. Jahrtausend v. Chr. Darmstadt: Wissenschaftliche Buchgesellschaft, pp. 153–156.



**Fig. 7.7** A range of images from human depictions with signalling functions to the extremely simplified apotropaic symbols. *Left* Human images from Spanish cave art from the post-glacial age. *Right* Symbols on pebbles from Mas d’Azil (France) (Drawings by Karolina Rupik following Johannes Maringer)

## Endangered Worlds: Climate Change and Its Consequences

The living conditions of our ancestors during the transition of the Palaeolithic to the Mesolithic appear to have changed dramatically, and independently of the new cultural achievements and mental capabilities such as the telling of events by using cave art; dramatically in the true sense of the word, as the above-mentioned artistic depictions of armed disputes show. Brute force proliferated, although it had not been an option during the Upper Palaeolithic, whose groups competed via the medium of art. The territorial disputes had arrived at a new, violent stage and quality. The causes for this change can be found in the fast-acting climate change which had set in already towards the end of the Palaeolithic: the weather was warming up. The large inland masses of ice melted, the sea level rose, and in Europe the open tundra and steppes through which large animal herds had roamed receded in the face of thick woods in which elk, red deer, deer, and wild boar now concealed themselves. This climate change had far-reaching consequences for the highly specialised Ice Age hunters (of the Magdalenian Period, approx. 18,000–12,000 ybp) of reindeer or horses, as the hunt for animals in thick woods was and still is both more elaborate and less promising than the hunt on herds roaming through open planes. How dramatic this climate change must have been for the

contemporaneous peoples can be seen on the one hand in the clear decline of population density during the outgoing Magdalenian, and on the other hand in the above-mentioned changes of art into a direction which the modern viewer, influenced by an understanding of art dating back to the Renaissance, is used to interpreting as downfall.

In fact, this period of transition from the highly specialised and successful foragers to settled hoe culturalists and farmers was not stagnant at all. In contrast, we see a dynamic especially in the production of tools which makes it clear that the hunters reacted to the changes in their living conditions with much creativity and had recourse to innovative techniques (e.g. the small retouched blades called microlites, axes and tranchet axes, harpoons, picks and hoes, fish traps, nets, and baskets) in an attempt to obtain access to new food sources in a rapidly changing world, including plants.<sup>14</sup>

It is fair to assume, therefore, that the changes in the living conditions together with a habitat that had been diminished on account of the rising sea levels must have had repercussions also on the interactions between the roaming forager groups.<sup>15</sup> As we know today, and have demonstrated above, territoriality amongst hunters and gathers is a matter of course and can be proven already for the Neanderthal with the help of funerals and the depositing of skulls; in times when we can prove the reality of a population pressured for living space, the securing and defence of one's territory becomes a life-saving necessity. That this fact applies also to the Mesolithic in Europe is demonstrated by the first so-called archaeological cultures: this means that now for the first time we can trace definable distribution areas of certain tool types, which in turn is a strong sign for an enforced recessive mobility caused by the rivalry of competing groups.<sup>16</sup>

The use of tried and tested symbols in order to enforce the rightfulness of territorial claims fits well into this picture—namely funerals.<sup>17</sup> The majority of these funerals however are by no means spectacular and do not differ from the funerals of the Upper Palaeolithic.<sup>18</sup> The deceased were interred by him or herself,

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<sup>14</sup>Mithen, Steven (2000). *Das Mesolithikum*. In: Barry Cunliffe, *Illustrierte Vor- und Frühgeschichte Europas*. Frankfurt/New York: Campus, pp. 152–154.

<sup>15</sup>Donahue, Randolph E. and William A. Lovis (2006). Mesolithic mobility, exchange, and interaction. *Journal of Anthropological Archaeology*. Volume 25, Issue 2, June 2006, pp. 248–258.

<sup>16</sup>Mithen, Steven (1996). *Das Mesolithikum*. In: Barry Cunliffe, *Illustrierte Vor- und Frühgeschichte Europas*. Frankfurt: Campus, pp. 93–154.

<sup>17</sup>“...Mesolithic people might have embraced the concept of territoriality.” Box, L. S. (2008). *Death in the Mesolithic*. From the article: *Archaeology: The lost world*. Published online 9 July 2008 | *Nature* 454, pp. 151–153.

Here as well the deceased were manipulated and conspicuously buried. Orschiedt, Jörg (2002). *Secondary burial in the Magdalenian: The Brillenhöhle (Blaubeuren, Southwest Germany)*. *PALEO* 14, pp. 2–18.

<sup>18</sup>However, in this chapter the Scandinavian and Western French discoveries, which are frequently cited as being characteristic, have not been included on account of the absolute chronology (7000 ybp and younger), as several details, e.g. the burial in grave fields, is reminiscent more of the

frequently on their side, alongside burial gifts which suggest that there already existed a belief in the continued existence of the deceased in an afterlife. Interesting in this context is the fact that apparently no differences were made on account of gender or age: men, women, and children were interred, which in turn suggests that there was no specific notion of preferential treatment of important, leading, or in any other way distinguished men.<sup>19</sup>

The fact that older behavioural patterns dating back to the Palaeolithic survived into the Mesolithic, i.e. were transmitted within the respective social context and to some extent experienced strong regional deviations, highlights a form of burial that nowadays appears strange and foreign, as much more dramatic customs existed around 10,000 ybp in the region of the Nördlinger Ries, Bavaria, Germany. Robert Rudolf Schmidt (1882–1950), from Tübingen, Germany, discovered two nests of human skulls in the so-called Large Ofnet Cave which he had been excavating in 1901, 1905, 1907, and 1908. The richly embellished, mostly female skulls were decorated with drilled stag-teeth and shells. Even more than the elaborate setting, the fact that both the lower jaw and the cervical vertebrae had remained in their anatomical composition, i.e. the deceased had been decapitated prior to their skulls being buried, encouraged the researchers' phantasies and caused them to pronounce statements of sacrificial death and cannibalism.<sup>20</sup>

Subsequent examinations however have confirmed that the site was merely a funeral site whose ideological origins must be sought in the Middle Palaeolithic, and that therefore we are faced with a variation of a custom practised already by the Neanderthal, the custom of offering special treatment to the skulls of the deceased and then possibly depositing them in a prominent location. We also know of Mesolithic funerals from the Hohlenstein-Stadel, Germany. Here, three crania were discovered, skulls with cervical vertebrae still attached, indicating a violent separation from the body. More comparable findings were discovered in the Hexenküche cave, Nördlingen, in the cave of Mannlefelden in the Alsatian region of

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(Footnote 18 continued)

chronologically contemporaneous Neolithic burials of Central Europe. For Mesolithic burials in grave fields, see Wunn, Ina (2005). *Die Religionen in vorgeschichtlicher Zeit*. Stuttgart: Kohlhammer, pp. 184–189.

<sup>19</sup>This is a clear indication for an egalitarian society.

<sup>20</sup>Schmidt, R. R. (1910). *Die spätpaläolithischen Bestattungen der Ofnet*. *Mannus*, 1, (Ergänzungsband), 56–63.

Orschiedt, Jörg (1998). *Manipulationen an menschlichen Skelettresten. Taphonomische Prozesse, Sekundärbestattungen oder Anthropophagie?* Rahden: Verlag Marie Leidorf, pp. 147–173.

In contrast, murder is suspected by:

Frayser, David (1997). *Ofnet: evidence for a Mesolithic massacre*. In D. Martin and D. Freyer (eds.), *Troubled times. Violence and warfare in the past*, London: Routledge, 181–216.

Orschiedt, Jörg (2005). *The head burials from Ofnet cave: an example of warlike conflict in the Mesolithic*. In: Mike Parker Pearson and J.J.N. Thorpe (eds.) *Warfare, Violence, and Slavery in Prehistory. Proceedings of a Prehistoric Society. Conference at Sheffield University*. BAR International

Series 1374, Oxford: Hadrian Books, pp. 67–73.

Oberlarg, and in the French Unikoté, allowing for the conclusion that such a form of skull burial was a widespread custom in the Southwest of Germany and neighbouring regions, and that the skulls indicated territorial claims by following an age-old tradition.<sup>21</sup>

This special treatment of the deceased, who had been decapitated and whose skulls had been carefully deposited, embellished, and laid to rest in a special location in the earth's interior, suggests the existence of notions of death which surely reaches far beyond the mere documentation of territory. The fact that the skulls had been deposited in caves and that burial gifts have been found in the cave entrances prove that the entrances had been understood as the entrances to a distinct world below the world of the living, thus the Underworld in the truest sense of the word, in which the deceased continued their existence and had to be provided for by the living.<sup>22</sup> At this point in history—around 9000–10,000 ybp—for the first time a development in the direction of religion is clearly evident and traceable: the manipulation of skulls, a behavioural pattern dating back to the Palaeolithic, has led to notions that we today would assign to the religious. Thus, specific existential fears for the safety and sustainability of a territory led to demonstrative actions, namely the emphasis on the rightfulness of territorial claims with the help of skulls. These actions were consciously repeated and their effectiveness appraised. The signals were clearly understood by competing groups<sup>23</sup> and the territorial claims more or less respected. In this way, the habit of burying skulls was strengthened, in the manner of instrumental conditioning,<sup>24</sup> so that it was maintained over the centuries. At some point the positive effect of the signal was assigned to the skulls or even to the forces or the spirits of the deceased, and notions of their continued life after death would have become more and more definitive and concrete. As the first, still rather vague ideas of a life after death were associated with positive effects

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<sup>21</sup>Literally, the balanced study by Boulestin et al. states: “For Unikoté I, the specificities of the cutmarks suggest head-skinning and thus allow several possibilities to be raised: cannibalism, which cannot be proved but cannot be set aside either; a funerary practice in which the body could have been cut up but not eaten; or some specific treatment of the head, for instance its preparation to become a trophy or a relic. In Unikoté II the marks on the cranium seem to correspond more to defleshing activity, i.e. a cleaning of the bone, and the trauma matches an overall context of armed violence. It is however impossible to determine either the environment or the mobilization level of this violence, all the more so as all attested perimortem cranial traumata for the Mesolithic period are so far linked to the specific practice of head deposit known in Alsace and Southwestern Germany, which does not seem to be the case here, and as the practice of cutting up corpses is far from being rare for this period, although certainly diversely motivated.” Boulestin B., Henry-Gambier D., Mallye J.-B., Michel P. (2013). Modifications anthropiques sur des restes humains mésolithiques et néolithiques de la grotte d’Unikoté (Iholdy, Pyrénées-Atlantiques), *Bulletin de la Société préhistorique française*, t. 110, no 2, pp. 281–297.

<sup>22</sup>For the issue of caring for the deceased, see Chap. 12, Malta.

<sup>23</sup>Corresponding to the mechanisms described by Kravchenko. Kravchenko, Alexander (2003). *Sign, Meaning, Knowledge. An Essay in the Cognitive Philosophy of Language*. Frankfurt am Main et al.: Peter Lang, pp. 92–93.

<sup>24</sup>Gazzaniga, Michael and Todd F. Heatherton (2006). *Psychological Science*. New York: Norton and Co., p. 621.

(better coping with sadness over the loss, a diminished fear of extinction), they were transmitted and over time became more and more detailed. Over a longer period of time, therefore, the practice of interring skulls developed into a familiar event with a structured content which could be understood by all those involved as a conventionalised carrier of symbols. The active manner of dealing with existential fears in the form of a meanwhile ritualised form of burial helped our ancestors to conceptualise the existential threat symbolically, allowed them to wrest control of the situation through their own actions, and thus allowed them to gain an inner distance to the events in the Warburgian sense.

## **Displaying and the Underworld: The Case Study Lepenski Vir (8500–6500 Vbp)**

Only a few centuries later, the notion of the deceased continuing their existence in a spatially concrete Underworld had prevailed in Central Europe and had become a permanent part of the contemporaneous ideology; an ideology, it must be noted, in which the apotropaic female figure dating back to the Palaeolithic had found a position connecting her to territory on the one hand, and the deceased in the Underworld on the other. The case of the late Mesolithic and early Neolithic Lepenski Vir allows us exemplary insights into the ideology of the late Mesolithic and thus into a decisive, critical phase of the development of religion. More specifically, more than anything else, funerals and the related gradually developing conceptualisation of the Otherworld provided the people of the Mesolithic with a mental place for reflection, thus allowing them the emotional abilities of confronting constructively their physiogeographical surroundings and their competition—they could now become the creators of spiritual and intellectual worlds.

Lepenski Vir (8500–6500 ybp) is located on the banks of the Danube, the Iron Gate between Rumania and Serbia, and was settled in a period of transition from the Mesolithic to the Neolithic. Its inhabitants subsisted on hunting and gathering, despite being sedentary, a lifestyle which was possible on account of the region's rich natural resources.<sup>25</sup> The location achieved its fame on account of its unique architecture: in contrast to the usual square layouts of Neolithic settlements in Europe—we will encounter other layouts in the Neolithic of the Fertile Crescent—the houses of Lepenski Vir had a trapeze-shaped, strictly schematised layout which adhered to exact dimensions. These dimensions are repeated both in the houses

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<sup>25</sup>Radovanović, Ivana/B. Voytek (1997). Hunters, fishers or farmers: sedentism, subsistence and social complexity in the Djerdap Mesolithic. *Analecta Praehist. Leidensia* 29, pp. 19–31.

Clive Bonsall, Ivana Radovanović, Mirjana Roksandic, Gordon Cook, Thomas Higham & Catriona Pickard (2008). Dating burial practices and architecture at Lepenski Vir. In: Clive Bonsall, Vasile Boroneanț, Ivana Radovanović (eds.), *The Iron Gates in Prehistory: New Perspectives*. BAR International Series 1893, pp. 175–204.



**Fig. 7.8** The conserved and covered excavation site of Lepenski Vir (Serbia) (© Philipp Weigell; Creative Commons Attribution-Share Alike 3.0 Unported license)

themselves as well as in the layout of the entire settlement regarding the orientation of all buildings in respect to the Danube. The interior of these tent-like houses displays the same strict sense of regularity: at the centre of the house was a large, square hearth carefully lined with limestone slabs. This hearth was clearly the focal point of the house in every respect, as stones, originally river gravel, had been laid out at its rearward side, which had been worked up to take on different shapes and meanings. In some of these stones, indentations had been made, turning them into cups which could be used to hold food or liquids, while others had been turned into figurines or statues with anthropomorphised or theriomorphic features.<sup>26</sup>

The architecture of both houses and the settlement itself remained a mystery for the contemporaneous excavator Dragoslav Srejovic (1913–1996), even though he was sure that they represented a small world, a microcosmic model of an entire ideology, a “world on a small scale, a microcosmic model of an entire ideology” (Fig. 7.8).<sup>27</sup>

<sup>26</sup>Srejović, Dragoslav (1972). *Lepenski Vir: Menschenbilder einer frühen europäischen Kultur*. Mainz: Zabern.

Radovanović, Ivana (2006). Not just a Good Place for Fishing: Meso-Neolithic Contact at the Site of Lepenski Vir in View of the New AMS and Stable Isotope Evidence. In: N. Tasić/C. Grozdanov (eds.), *Homage to Milutin Garašanin*. Belgrade pp. 69–77.

Radovanović, Ivana (2000). Houses and Burials at Lepenski Vir. *European Journal of Archaeology*, Vol. 3(3). London, Thousand Oaks, CA and New Delhi: Sage Publications pp. 330–349.

<sup>27</sup>Literally: “Eine Welt im kleinen, ein mikrokosmisches Modell eines ganzen Weltbildes.” Srejović, Dragoslav (1973). *Lepenski Vir. Eine vorgeschichtliche Geburtsstätte europäischer Kultur*. Bergisch Gladbach: Gustav Luebbe Verlag, p. 107.

What this ideology could have looked like, however, becomes clear immediately if one sets the architecture next to the funerals of Lepenski Vir. Bodies were interred where people still lived, adhering to the ancient traditions dating back to Neanderthal times. The only difference was the location, now no longer in caves or under rock shelters, but instead the deceased found their final resting place in the immediate proximity of the central hearth under the limestones inside the houses. The physical position of the deceased is important, too, as they were usually buried on their backs with angled and splayed legs so that the body took on the form of a trapeze—which is exactly the shape of the buildings.<sup>28</sup>

The architecture of the buildings thus adhered to the ideal grave design—the deciding factors were not the practical considerations of the living, but the shape of the deceased in his subterranean world, which could be accessed through the hearth, and not through the entrance of a cave as had formerly been the case in Ofnet. Here, at the hearth, the entrance to the Underworld, the reworked stones from the river logically found their place, because the artists had given the stones the features of human skulls. The egg-shaped sculptures of Lepenski Vir fulfilled the same role as the skulls deposited in the caves of South-west Germany, under the rock shelters of Palaeolithic artists or in the dwellings of the Neanderthal: they emphasised the legitimacy of territorial claims. The location of the settlement on a river terrace in a region rich with natural resources would have been an attractive location, whose ownership had to be made unequivocally clear to others.<sup>29</sup>

The egg-shaped stone sculptures made of river gravel surpass the mere imitation of human skulls and combine in themselves their features with semantic signs, of the sort which are already familiar to us from the Venus figurines of the Upper Palaeolithic or cave paintings. In Lepenski Vir, head sculptures have been discovered with huge eyes or empty eye sockets and mouths wide open—portraits of the deceased, which however also display familiar defensive gestures such as the threatening stare, baring of teeth, or sexual threatening by means of presenting a grotesquely enlarged vulva (Fig. 7.9).

The combination of the likeness of a deceased visualised on an object of art, perhaps conceptualised as the temporary seat of the deceased's personality and powers, together with defensive signs indicates that such customs traditionally were used to enforce territorial claims. The ever-present defensive gestures such as staring, baring one's teeth, and sexual threatening are able, just as during the Palaeolithic, to repel invaders, while the reference to ancestors further emphasises the legitimacy of the territorial claims. It is thus surely no coincidence that a society

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<sup>28</sup>Radovanović, Ivana (2000). Houses and Burials at Lepenski Vir. *European Journal of Archaeology*, Vol. 3(3). London, Thousand Oaks, CA and New Delhi: Sage Publications, pp. 330–349.

<sup>29</sup>Additionally, the custom of skull deposition was still common: a disarticulated human cranium was found above the hearth of building 47. Clive Bonsall, Ivana Radovanović, Mirjana Rokсандić, Gordon Cook, Thomas Higham & Catriona Pickard (2008). Dating burial practices and architecture at Lepenski Vir. In: Clive Bonsall, Vasile Boroneanț, Ivana Radovanović (eds.) *The Iron Gates in Prehistory: New Perspectives*. BAR International Series 1893, p. 187, Fig. 13.

**Fig. 7.9** Vulva-displaying sculpture fashioned out of river gravel, from Lepenski Vir (Serbia) (© Mazbln; Creative Commons Attribution-Share Alike 3.0 Unported license)



that had just become sedentary expressively emphasises its claims to the only recently claimed resources with a reference to a justified inheritance on the one hand, but also to higher and unquestionable powers on the other.

However, at this point in time, the interpretations can be pushed further, as a more detailed view of the role of the fireplace as the entrance to the Underworld makes clear.

The domestic hearth had clearly become a holy place, in whose immediate proximity the deceased were buried. It was the place of visualisation and worship, where food sacrifices were made in their honour in the above-mentioned stone cups. Ethnographic parallels from Siberia to the Far East may well illuminate the connections.<sup>30</sup> The Ainu of Sakhalin live as foragers and consider the hearth of each

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<sup>30</sup>...but they of course do not represent proof in a strictly scientific manner for the proposed interpretation of the hearth as entrance to the Underworld. However, the spatial proximity of hearth, deceased, and figurines substantiate our argument and the case study, which are also further strengthened by the later course of the development of religion. Again and again, we are confronted with the hearth as a place of worship of the dead, with sacred fires (Vesta's temple), and with the localisation of the goddess in the nether, i.e. subterranean world, which can be accessed through the hearth as well as through volcanoes, seas, or springs.

house to be the entrance to the Otherworld and the Underworld. The ancestral spirits are consequently referred to as “those living under the hearth”.<sup>31</sup>

A similar meaning may be attributed to the fireplace in Lepenski Vir. Already in the older layers, the care afforded to the fireplaces is exemplary. These structural features went far beyond the construction of a mere fireplace intended for the preparation of food. The funerals of the deceased close to this spot further prove a connection between the fireplace and the world of the dead. Ultimately, the erection of images of the deceased is an indication for the fact that this location was considered a connection between the world of the living and the world of the dead, which in turn means that now we have clear notions of an underworld in which the deceased continued their existence. Only thus would the stone cups of Lepenski Vir and the sacrificial gifts of Ofnet make sense: the deceased continued to exist and had to be cared for. In return, they as members of the Tellurian world were now expected to come to their families’ help. But more on this later.

The reference to temporal continuity through intramural interment, the combination of the ancestral likeness with semantic signs on sculptures, and the extraordinary importance of the hearth including its location directly above the burial grounds make it clear that during the transition from Mesolithic to Neolithic, from a gathering to a producing economic system and a move towards a sedentary lifestyle, ideological notions developed whose focus lay on the emphasis of territoriality, especially the justification of territorial claims, whereby the mere documentation of these claims had long been left behind—whatever may have been considered as effective—if at all—now, we have the deceased, buried in the place where they had lived and now inhabitants of a very real underworld. Their appearance as threatening figures makes it clear that their aggressive potential was still directed against possible aggressors, who would have fought the inhabitants of the houses for their property, but that they also were understood as apotropaic figures who were able to keep evil away from the villagers.

## The Hearth in Folktales and Myths

Myths and fairy tales demonstrate that the notion of the hearth as entrance to the Underworld holds firm even today, for example the fairy tale by the Brothers Grimm, “The Story of the Youth who went forth to learn what Fear was.” In this fairy tale, a youth who desperately wants to know what fear is, is sent to a haunted castle where he is accosted by various fearsome creatures. The story narrates:

When midnight came, an uproar and noise of tumbling about was heard; at first it was low, but it grew louder and louder. Then it was quiet for awhile, and at length with a loud scream, half a man came down the chimney and fell before him. ‘Hollo!’ cried he, ‘another

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<sup>31</sup>Adami, Norbert (1991). *Religion und Schamanismus der Ainu auf Sachalin*. Ein Beitrag zur historischen Völkerkunde Nordostasiens. München: Iudicum, p. 73.

half belongs to this. This is too little!’ Then the uproar began again, there was a roaring and howling, and the other half fell down likewise. ‘Wait,’ said he, ‘I will just blow up the fire a little for thee.’ When he had done that and looked round again, the two pieces were joined together, and a frightful man was sitting in his place. ‘That is no part of our bargain,’ said the youth, ‘the bench is mine.’ The man wanted to push him away; the youth, however, would not allow that, but thrust him off with all his strength, and seated himself again in his own place. Then still more men fell down, one after the other; they brought nine dead men’s legs and two skulls, and set them up and played at nine-pins with them. The youth also wanted to play and said ‘Hark you, can I join you?’—‘Yes, if thou hast any money.’—‘Money enough,’ replied he, ‘but your balls are not quite round.’ Then he took the skulls and put them in the lathe and turned them till they were round. ‘There, now, they will roll better!’ said he. ‘Hurrah! Now it goes merrily!’ He played with them and lost some of his money, but when it struck twelve, everything vanished from his sight. He lay down and quietly fell asleep.<sup>32</sup>

A national custom from the United Kingdom further demonstrates the notion that these visitors from the Otherworld, originally the world of the dead but also of spirits and supernatural creatures, had access to otherworldly powers and desirable goods and also showed themselves generous towards the living: on 6th December every year, Saint Nicolaus comes to bring gifts for children. In the UK, he enters through the traditional path to and from the Otherworld: through the hearth, the domestic, original, sacred fireplace which is nothing else but the entrance to the world of the dead.

## Developments

For the first time, now in the Mesolithic, we see clear developments, i.e. developments in the field of art on the one hand, and development of funerals on the other, which logically bring together the observations and artistic activities of our ancestors along with their initially inexplicable burial practices.

Let us begin with cave art: the psychologist Nicholas Humphrey concluded from the spontaneous artistic drawings of a highly skilled autistic child that the in many respects comparable motives from cave art indicate the individual objects that were being depicted; the people of the Upper Palaeolithic, who presumably stood only at the beginnings of speech development, had not yet developed the degree of conceptualisation that would allow them to see the objects in their surroundings as representatives of an abstract category and to depict them accordingly.<sup>33</sup> This ability thus developed in the course of the Upper Palaeolithic as a consequence of

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<sup>32</sup>Gebrüder Grimm (1850). *Von einem, der auszog, das Fürchten zu lernen*. *Kinder- und Hausmärchen, große Ausgabe, Band 1*, 1850. English Version: “The Story of the Youth Who Went Forth to Learn What Fear Was” or “The Story of a Boy Who Went Forth to Learn Fear”. <http://www.seiyaku.com/lit/grimm/en/004.html>, seen 27.8.2015.

<sup>33</sup>Humphrey, Nicholas (1999). Cave Art, Autism and the Human Mind. In: *Journal of Consciousness Studies* 6/1999, pp. 116–123.

an increasingly successful categorisation, which in turn allowed for the depiction of not only individuals, but of representatives of categories (hunter, deer, enemy) during the Mesolithic, and enabled the people to connect the depicted with a content. Pictures and images now become carriers of meaning and narrate stories!

The ethological symbol however with its repelling or mediating effect remained true to its original intention, despite being represented as artistic object. These objects also experience a characteristic development which has been studied in detail in cultural ethology, by developing from a naturalistic depiction to a sign. This sign also carries with it a certain content; it signals protection which extends to its bearer. These (semantic) signs were clearly universally understood and represented protection from enemies and other evil; possibly they represented a concept no longer traceable to us today, of powerful and potentially locatable powers (the stone with the m-shaped signature refers to the apotropaic female and thus perhaps to a powerful figure from the Underworld).<sup>34</sup>

The case study of Lepenski Vir demonstrates that and how the funeral practices and apotropaic art were connected: skulls, initially deposited in the traditional manner, are depicted artistically and additionally kitted out with the apotropaic signals familiar from the female figurines of the Upper Palaeolithic. Protective female figurines and protective skulls thus merge together into one object, which combines in itself motherly-protective characteristics together with the power of the deceased. The notion of a female figure connected to the Underworld and the dead gathers strength, and as we will see, will become the first successful allpowerful figure whose features can still be found in the Bronze and Iron Ages, in a Demeter/Persephone, an Inanna, or, in South-east Asia, in a Mulua Hainuwele.

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<sup>34</sup>*Persona* employed here following Mauss, Marcel (1989/1950) Eine Kategorie des menschlichen Geistes. Der Begriff der Person und des Ich", in: Mauss, Marcel, Soziologie und Anthropologie 2. Frankfurt: Fischer (Paris 1950), pp. 221–251.

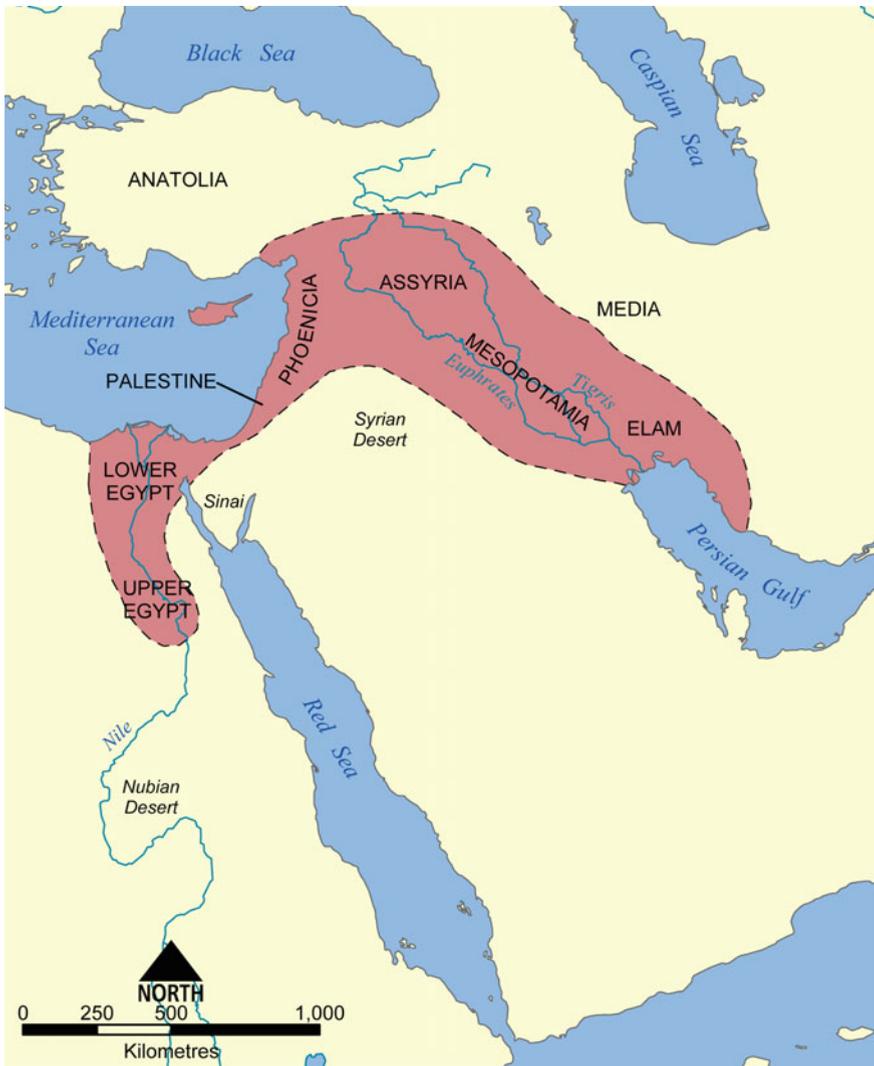
## Chapter 8

# Aedificio Ergo Sum (I Build, Thus I Am). Early Settlers in the Fertile Crescent

### Familiar Signals...

The Near East entered onto the stage of religious history at the outset of the first deca-millennium before our time, at which point Europe had already experienced the first impressive phase of artistic development: the great works of art in caves as well as art mobilier were fashioned during the European Upper Palaeolithic—works of art which mirrored the existential fears of our ancestors and which played an important role as a method of coping with these fears. These works of art also contributed to the emerging ability of conceptualisation and thus helped shaping the first intellectual worlds. Yet when the foragers in Europe changed their hunting and gathering strategies in reaction to climate change, when they discovered new tools and new intellectual horizons—linguistic and ideological—at the same time the living conditions of the Eastern Mediterranean changed as well. In terms of the natural living conditions, initially these were positive changes: the melting glaciers and interior masses of ice set free enormous amounts of water which evaporated into the atmosphere and thus contributed significantly to a more humid climate. This means that in the modern, rather dry and arid strips of land in the Near East and Anatolia the climate conditions were close to ideal.

These favourable conditions especially in terms of the extant faunal biomass, in addition to the constant danger of overexploitation as a consequence of rising population numbers, and a probably consequential collapse of the entire ecosystem may have been responsible for convincing the peoples of the Epipalaeolithic (the region did not have a Mesolithic) to reject a roaming lifestyle and to settle—it was a



**Fig. 8.1** The Fertile Crescent (© NormanEinstein, CC BY-SA 3.0)

time of transition from the Palaeolithic with its foraging-focused economic lifestyle towards the Neolithic and the corresponding producing subsistence strategies.<sup>1</sup>

<sup>1</sup>Zohary, M. (1973). *Geobotanical Foundations of the Middle East*. Stuttgart: Springer  
 Bar-Yosef, Ofer (1998). The Natufian culture in the Levant, threshold to the origins of agriculture; *Evol Anthropol* 6, pp. 159–177.

Whatever may have ultimately been the reasons for the gradual settlement of the region known as the *Fertile Crescent* between 18,000–9000 ybp, fact is that during this period the first settlements were built from Palestine to Anatolia to Iraq and Iran. Their inhabitants initially still survived by hunting and gathering, but possibly as a reaction to further climate changes in the now colder Dryas period (approx. 12,730–11,700 ± 99 ybp), they began to cultivate the grains previously simply gathered and to domesticate the formerly wild animals. In short, they transitioned from hunters and gathers to farmers (Fig. 8.1).<sup>2</sup>

## Climate Phases

Phase	Time ybp	Climate
Bølling-Allerød	13,500–11,000	Warm and humid
Younger Dryas	11,000–10,300	Dry and cold
Early Holocene	10,300–6000	Warm and humid

(Based on Bar-Yosef 1998)

These transitions in terms of art and the philosophy of art along with the related changes in the contemporaneous world views can be minutely traced in Europe with the help of funerals and through art; however, to begin with we have very little similar

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(Footnote 1 continued)

Akkermans, Peter M. M. G. and Glenn M. Schwartz (2009). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge UK: The Cambridge University Press, pp. 14–41.

Gebel, Hans-Georg K. (2014). Territoriality in Early Near Eastern Sedentism. *Neo-Lithics* 2/14, pp. 23–44.

Lewis-Williams, David and D. Pearce (2005). *Inside the Neolithic Mind: Consciousness, Cosmos, and the Realm of Gods*. London: Thames & Hudson.

Bogucki, Peter (2000). *The Origins of Human Society*. Malden, USA and Oxford: Blackwell, pp. 186–191.

<sup>2</sup>Walker, Mike, Sigfus Johnson, Sune Olander Rasmussen, Trevor Popp, Jørgen-Peder Steffensen, Phil Gibbard, Wim Hoek, John Lowe, John Andrews, Svante Björck, Les C. Cwynar, Konrad Hughen, Peter Kershaw, Bernd Kromer, Thomas Litt, David J. Lowe, Takeshi Nakagawa, Rewi Newnham und Jakob Schwander (2008). Formal definition and dating of the GSSP (Global Stratotype Section and Point) for the base of the Holocene using the Greenland NGRIP ice core, and selected auxiliary records. *Journal of Quaternary Science*, 24(1), pp. 3–17

Krause, L. (2001). Galilee's Receding Waters Reveal Stone Age Camp. *National Geographic*. 1–4.

Nadel, D., Weiss, E., Simchoni, O., Tsatskin, A., Danin, A., Kislev, M. (2004). From the Cover: Stone Age Hut in Israel Yields World's Oldest Evidence of Bedding. *The National Academy of Sciences* 101, 6821.

Maher LA, Richter T, Macdonald D, Jones MD, Martin L, and Stock JT. 2012. Twenty Thousand-Year-Old Huts at a Hunter-Gatherer Settlement in Eastern Jordan. *PLoS ONE* 7(2): e31447.

information for the Levant and Anatolia.<sup>3</sup> Where the European hunters of the Ice Ages created their works of art and where they interred their dead with more and more effort, here the Fertile Crescent initially has very little to offer; only in the Natufian, the “turning point in the history of the Near East”,<sup>4</sup> do figural images appear, yet they cannot be compared with the Northern artefacts in terms of artistic quality.

## Epipalaeolithic Timeline

Phase	Date ybp	BC calibrated
Early Epipalaeolithic	14,500–12,800	11,050–10,350
Early Natufian	12,800–11,000	10,350–9050
Late Natufian	11,000–10,200	9050–8250
PPNA	10,200–9200	8250–7250
PPNB	9200–8000	7250–6050

A famous exception however is a small figurine, roughly 10 cm tall (Fig. 8.2), which had been discovered by Bedouins in one of the caves of Ain Sakhri in the Wadi Khareitoun near Bethlehem. The French consul René Neuville discovered the figurine in the museum in 1933. Today, we can date the figurine to the Natufian period, and we know that the discovery site was a former inhabited cave. The figurine clearly depicts two lovers in the midst of sexual intercourse, although neither specific facial features nor the respective gender are determinable. On the other hand, the primary sexual characteristics are clearly visible: on the top we recognize female breasts and on the bottom a vagina is visible, while the profile view uncovers a penis.<sup>5</sup> Altogether, the figurine cleverly depicts those signals which also characterise the older so-called Venus-statues of the European Palaeolithic as apotropaic amulets. This small and clever work of art seems to have fulfilled the same function, and additionally will surely have contributed to the admiration the artist would have received.<sup>6</sup>

<sup>3</sup>Solyman, Toufic (1987). Einleitung. In: Moortgat, Anton. Die Entstehung der sumerischen Hochkultur. Tartous, Syrien: Amani Verlag, pp. XIII–XX.

<sup>4</sup>Bar-Yosef, Ofer (1998). The Natufian culture in the Levant, threshold to the origins of agriculture; *Evol Anthropol* 6, p. 162. For the majority of rather unspectacular burials of the Natufian—mostly primary interments outside of residential dwellings, no elaborate graves, no grave goods, occasional separation of the skull—see *ibid.* p. 164.

<sup>5</sup>Boyd, B. and J. Cook (1993). A reconsideration of the “Ain Sakhri” figurine. *Proceedings of the Prehistoric Society*, 59. pp. 399–405.

<sup>6</sup>Bar-Yosef, Ofer (1998). The Natufian culture in the Levant, threshold to the origins of agriculture; *Evol Anthropol* 6, p. 166.

Boyd, B. and J. Cook (1993). A reconsideration of the “Ain Sakhri” figurine. *Proceedings of the Prehistoric Society*, 59 (1993), pp. 399–405.

**Fig. 8.2** The Ain Sakhri Lovers (© The Trustees of the British Museum with kind permission)



## And Suddenly a Temple? The Story of Göbekli Tepe...

The appearance of figurines with apotropaic function such as the clever Ain Shahkri Lovers or a necklace of protective breasts (Fig. 6.12) is as unsurprising for the reader acquainted with Upper Palaeolithic art as the images of wild and fear-inducing animals with which the people who were just settling in the Fertile Crescent decorated their houses, in the same way the Upper Palaeolithic artists decorated their caves and rock shelters and the reindeer-hunters of Gönnersdorf decorated their potsherds. In both cases, strong and dangerous animals were depicted, symbols for ferocity and unrestrained strength—as a support for dealing with strong emotions but also as additional deterrence in the context of tried and tested defensive signals, and not to forget, as artistic achievement as part of a ranking contest!<sup>7</sup>

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<sup>7</sup>The authors thus base themselves on their assumptions of an ideological continuum—in the sense of an evolution of religion and religions! This stands in contrast to David Lewis-Williams und David Pearce, who speak of a paradigm change at the end of the Palaeolithic: Lewis-Williams, David and David Pearce (2005). *Inside the Neolithic Mind. Consciousness, Cosmos and the Realm of the Gods*. London, Thames and Hudson, p. 84.

We see a similar situation in Göbekli Tepe, this famous settlement in the Şanlıurfa province in the Southeast of Turkey, where the archaeologist Klaus Schmidt during several excavation campaigns unearthed the remains of a settlement which can be dated back to the 10th pre-Christian millennium, and thus impressively documents the origins of a settled lifestyle in South-eastern Anatolia.

The tell, the hill made up of the remains of older settlement layers of Göbekli Tepe, is located on the ridge of a mountain approx. 750 m high in the immediate vicinity of the old town of Şanlıurfa, the ancient Edessa, and overlooks the plain of Harran and the catchment area of the river Balikh, one of the tributaries of the Euphrat. Even though today the region appears dry and inhospitable, numerous wadis and dry valleys suggest that once upon a time, the conditions must have been much more friendly and we must imagine an abundantly green and forested scene in the early Neolithic. Thus, here, in this once fertile and wet, but today arid region, a community and polity grew and matured, at a time when man first began to settle and to erect permanent colonies. This settlement surprised researchers and presented apparently unsolvable puzzles. The beginnings of the settlement, thus goes the tacit assumption, must have included light and simple dwellings—something between a tent, hut, and house which could document the development from life as a roaming forager to a settled farmer. Many proto-Neolithic settlements indeed fulfil these expectations; one need only recall the above-mentioned Lepenski Vir, the simple dwellings in the Anatolian Körük Tepe (which are not discussed here),<sup>8</sup> or the so-called pit-houses of the Natufian culture (also not discussed). However, Göbekli Tepe was different. Here, round outlines and corresponding walls were uncovered, into which massive supporting beams made of hard limestone had been inserted in regular intervals.<sup>9</sup> In the middle of these buildings, two massive support

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(Footnote 7 continued)

Trevor Watkins now also accepts an evolution of the “religious, ritual and symbolic activities”, but bases himself on the theory of memes, a theory that can be traced back to Richard Dawkins and is not only not convincing but also inadequate from a theoretical scientific point of view. Watkins, Trevor (2002). *Memes, Memplexes and the Emergence of Religion in the Neolithic*. In: Gebel, Hans Georg K., Bo Dahl Hermansen, and Charlott Hoffman Jensen (eds.), *Magic Practices and Ritual in the Near Eastern Neolithic. Proceedings of a Workshop held at the 2nd International Congress on the Archaeology of the Ancient Near East (ICAANE) Copenhagen University, May 2000. Studies in Early Near Eastern Production, Subsistence, and Environment 8*. Berlin: Ex Oriente, pp. 41–47.

Blackmore, Susan (1999). *The Meme Machine*. Oxford: Oxford University Press.

For a critical response, see Wunn, Ina (2002). *Die Evolution der Religionen*, Habilitationsschrift, Hanover: UB/TIB, pp. 456–457.

<sup>8</sup>Benz M., Coşkun A., Rössner C., Deckers K., Riehl S., Alt K.W., and Özkaya V. (2012). First evidence of an Epipalaeolithic hunter-fisher-gatherer settlement at Körük Tepe. *Kazı Sonuçları Toplantısı* 34, 1, pp. 65–78.

<sup>9</sup>Such round walls were also found for example in Ain Malaha, whereby here wooden supporting beams had been inserted to hold the roof. Valla, FR (1988) *Aspects du sol de l'abri 131 de Mallaha (Eynan)*. *Paéorient* 14, pp. 283–296.



**Fig. 8.3** Göbekli Tepe, Sanliurfa (© Teomancimit; Creative Commons Attribution-Share Alike 3.0 Unported license)

beams stood exactly opposite each other. But more on these later. First, let us take a closer look at the buildings themselves. Their layout frequently consisted of two concentric walls and rather than being square or rectangular, was round with the occasional massive u-shaped entry area, and automatically invoked associations with the gigantic circular earthwork of the European Neolithic and Bronze Age such as Stonehenge (Fig. 8.3).<sup>10</sup>

Nothing is as tempting as an association which can easily be integrated into the tacit knowledge, the alleged firm background knowledge of a philosopher of

<sup>10</sup>Schmidt, Klaus (2011). Göbekli Tepe: A Neolithic Site in Southeastern Anatolia. In: Steadman, Sharon R. & Gregory McMahon (eds.), *The Oxford Handbook of Ancient Anatolia 10,000–323 B.C.E.* New York: Oxford University Press, pp. 917–933.

Schmidt, Klaus (2000). Zuerst kam der Tempel, dann die Stadt. Bericht zu den Grabungen am Gürcütepe und am Göbekli Tepe 1996–1999. *Istanbul Mitteilungen*, 50, 5–40.

Dietrich, Oliver, Jens Notroff & Klaus Schmidt (†)(2015). Göbekli Tepe. Ein exzeptioneller Fundplatz des frühesten Neolithikums auf dem Weg zum Weltkulturerbe. In: *Anatolien—Brücke der Kulturen. Aktuelle Forschungen und Perspektiven in den deutsch-türkischen Altertumswissenschaften. Tagungsband des Internationalen Symposiums „Anatolien—Brücke der Kulturen“* in Bonn vom 7. bis 9. Juli 2014, pp. 91–110.

Dietrich, Olivier & Jens Notroff (2015). A sanctuary, or so fair a house? In defense of an archaeology of cult at Pre-Pottery Neolithic Göbekli Tepe. In: Laneri, Nicola (ed.), *Defining the Sacred*. Oxford and Havertown: Oxbow Books, pp. 75–89.

science; such an association can easily lead a viewer of a different culture astray.<sup>11</sup> This is exactly what happened here: the round structure must have been a cultic centre, the heavy pillars partly decorated with martial animal figures or imitating larger-than-life men could only mean one thing: the discovery of early temples. Only the power of the religious could have allowed the population to succeed in such a massive undertaking, and the conclusion was: “These abstracted, impersonal, but clearly anthropomorphic, T-shaped beings clearly belong to another, transcendent sphere.”<sup>12</sup>

Despite the round layout and the massive pillars, which according to the excavator had no architectural functions, and despite the careful workmanship and elaborate decoration of these pillars, which must have weighed several tons and whose acquisition must surely have been a stupendous effort, the overall impression of the individual structures is surprisingly dainty: with a diameter of approx. 10 m, many of the round structures could not hold a larger audience. Instead, the measurements represent what one would imagine for a residential building—they also correspond with the measurements of other Neolithic residences. And in fact, closer examination of the facts suggest that these round buildings were intended as residential dwellings, and the central pillars carried the roof (Fig. 8.4).<sup>13</sup>

Once the mental step has been taken, the assumption that Göbekli Tepe was not a cultic centre located in an isolated spot far from any population centres, the following questions become redundant: why were there so many temples? What was the catchment area of such a temple complex? Where did the people stay during the festivities?<sup>14</sup> Göbekli Tepe was indeed an early settlement, whose oldest stratum (the above-mentioned third stratum from 11,600–10,800 ybp) represents one of the oldest human settlements. The architecture of these settlements clearly followed not the numerous light, tent-like huts inhabited by roaming hunters, but instead used as a model the older, weatherproof dwellings in caves and rock shelters—and it is this world of hunters of which the extant works of art remind us (Fig. 8.5).

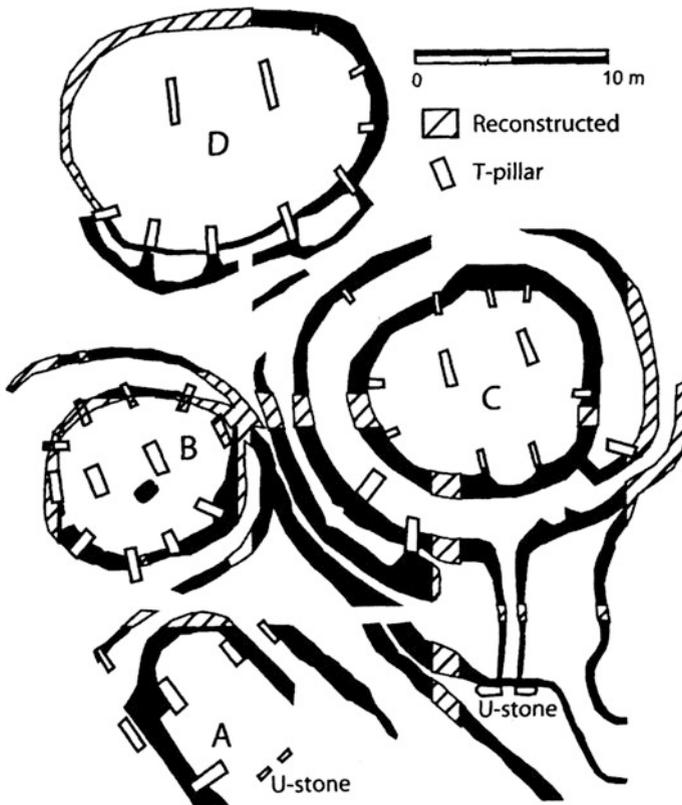
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<sup>11</sup>Chalmers, Alan F. (1999). *What is This Thing Called Science*, 3<sup>rd</sup> Edition, New York e.g. p. 112: “The aspiring scientist will be no more able to give an explicit account of the methods and skills he or she has acquired than a master-carpenter will be able to fully describe what lies behind his or her skills. Much of the normal scientist’s knowledge will be tacit”.

<sup>12</sup>Dietrich, Oliver, Manfred Heun, Jens Notroff, Klaus Schmidt & Martin Zarnkow (2012). The role of cult and feasting in the emergence of Neolithic communities. New evidence from Göbekli Tepe, south-eastern Turkey. *Antiquity* Volume 86/Issue 333/January 2012, p. 679.

<sup>13</sup>Banning, E. B. (2011). So Fair a House. Göbekli Tepe and the Identification of Temples in the Pre-Pottery Neolithic of the Near East, in: *Current Anthropology* 52, No 5, Oktober 2011, pp. 619–660.

<sup>14</sup>*Ibid.*



**Fig. 8.4** Layout of the third excavation stratum of Göbekli Tepe (With kind permission, Prof. Dr. E.B. Banning. In: Banning, E.B. (2011) *So fair a house. Göbekli Tepe and the identification of temples in the pre-pottery neolithic of the near east*. *Curr Anthropol* 52: 619–660)

## Home and Décor

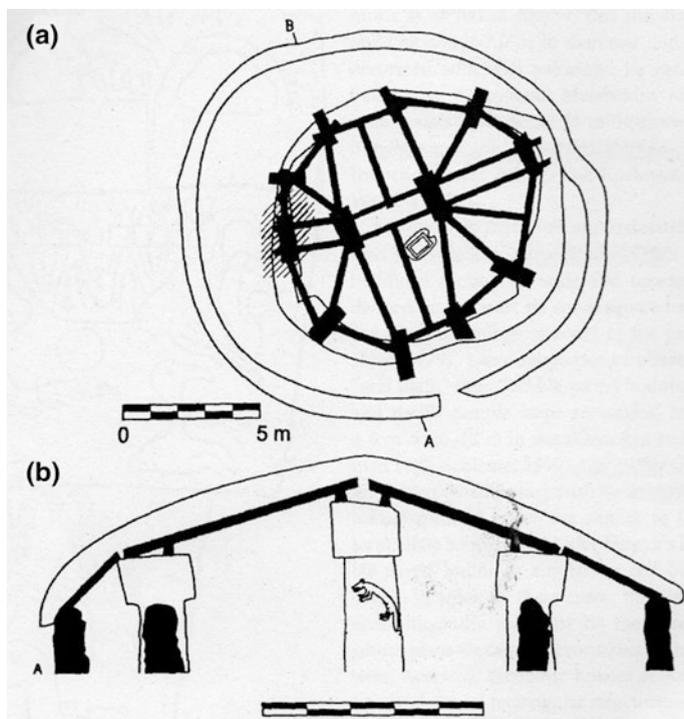
Just like in the Palaeolithic picture caves, early artists from the transition period hunter to farmer allocated time and effort to produce added value: on the one hand, the added value resulted in strong and durable dwellings which signalled territorial claims<sup>15</sup> but also simply offered protection from the weather conditions, and on the

<sup>15</sup>For territoriality, see:

Gebel, Hans-Georg K. (2014). Territoriality in Early Near Eastern Sedentism. *Neo-Lithics* 2/14, pp. 23–44.

Lewis-Williams, David and D. Pearce (2005). *Inside the Neolithic Mind: Consciousness, Cosmos, and the Realm of Gods*. London: Thames & Hudson.

Lyman, S.M. and M.B. Scott (1967). Territoriality: a neglected sociological dimension. *Social Problems* 15: 236–248.



**Fig. 8.5** Layout of a building of the third stratum of Göbekli Tepe. (With kind permission. From: Banning EB (2011) *So fair a house. Göbekli Tepe and the identification of temples in the pre-pottery neolithic of the near east*. *Curr Anthropol* 52: 619–660)

other hand the added value to the dwellings decorated and beautified the buildings. Again, the works of art were meant to express emotions and to represent internal experiences—experiences which mirrored the intellectual confrontation with the environment. This environment gradually took on a different image for men who on the one hand were still dependent on a successful hunt and who had to face encounters with dangerous wild animals but who on the other hand already found themselves in the process of domestication; the environment appeared more and more scary and fear-inducing and took on the character of the dangerous wild as opposed to the familiar and safe domestic regions. In this context it becomes clear

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(Footnote 15 continued)

See also Ofer Bar-Yosef's statement that "Demographic pressure was therefore the outcome when certain groups of foragers became sedentary while others remained mobile." Bar-Yosef, Ofer (1998). *The Natufian culture in the Levant, threshold to the origins of agriculture*; *Evol. Anthropol.* 6, p. 173.

that, speaking of the evolution of religion, the emerging religion had become exposed to a new selective constraint which provoked entirely new developments.<sup>16</sup>

Correspondingly, the pillars in the above-mentioned dwellings again and again depict those animals which were both important prey, be it for sustenance, clothing, or trophies, but also represented power and strength on account of their fear-inducing nature. This must surely have included the aurochs as an important source of food and as a dangerous opponent, but also the leopard or lion, who is repeatedly found on the stele, either by himself or in various different social constellations.<sup>17</sup> A further group of animals must be mentioned in this context which can be found both on the steles of Göbekli Tepe and on the walls of other Neolithic houses: birds and foxes. Both are scavengers who pick at and eat the meat of both animal and human corpses. These animals played an important role in the Neolithic world view, so much is clear from the evidence of Göbekli Tepe; but we can only speculate as to their specific role or function. Ultimately, their association with death, the second large pillar of the Neolithic world view (see esp. the subsequent chapter, below) would be responsible for their relative importance, an association which coincidentally was sustained into Antiquity: in Egypt, it is the jackal-like god and psychopomp Anubis who was the god of death rites which mirror the memory of an older world view,<sup>18</sup> in Europe it was the Germanic deity Wotan, lord of the Wild hunt, on whose shoulders sit the ravens Hugin and Munin (Fig. 8.6).<sup>19</sup>

A further important motive occurring repeatedly was the wild boar, an animal as important for its meat as it was dangerous; but also other predators, snakes, or scorpions play important roles as motives for the stele.

To round off the scenario already familiar to us from the European Upper Palaeolithic, of threatening signs with signalling functions, we find in Göbekli Tepe the erect phallus as well as the threatening woman displaying her vulva. These

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<sup>16</sup>“A major role in these processes was played by the integrative powers of newly emerging symbolic and ritual interaction spheres and the cognitive skills and forces behind them.” Gebel, Hans-Georg K. (2014). *Territoriality in Early Near Eastern Sedentism*. *Neo-Lithics* 2/14, p. 23.

Lewis-Williams, David and D. Pearce (2005). *Inside the Neolithic Mind: Consciousness, Cosmos, and the Realm of Gods*. London: Thames and Hudson.

<sup>17</sup>In this context, the following conclusions from the field of cognitive science are vital: “Recent data show that psychological factors affect visual perception [insofar, as] people feel discomfort when they are near someone they are not affectively close to. [...] This is in line with the ‘economy of action’ account, which assumes that spatial layouts are perceived in relation to the potential to act on the environment and the costs associated with these actions.” Morgado, Nicolas, Dominique Muller, Edouard Gentaz, Richard Palluel-Germain (2011). *Close to me? The influence of affective closeness on space perception*. *Perception* 40, pp. 877 and 879.

<sup>18</sup>During the First Dynasty (c. 3100–c. 2890 BC) in ancient Egypt, Anubis was depicted as a protector of graves in his canine manifestation. Gryglewski, Ryszard W. (2002). *Medical and Religious Aspects of Mummification in Ancient Egypt* (PDF). *Organon* 31, pp. 145–146.

<sup>19</sup>Simek, Rudolf (1996). *Dictionary of Northern Mythology*. Cambridge: Boydell and Brewer.

**Fig. 8.6** Pillar in Göbekli Tepe with the image of an aurochs, a fox, and a bird (© Teomancimit; Creative Commons Attribution-Share Alike 3.0 Unported licence)



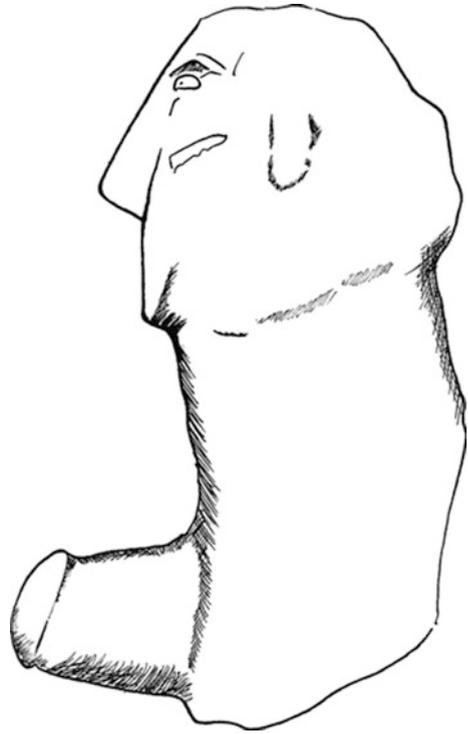
findings suggest that the repertoire of threatening and defensive signs still held on to its importance and relevance and had not yet been discarded (Figs. 8.7 and 8.8).<sup>20</sup>

The depictions of sexually threatening people, familiar already from the field of behavioural biology, suggest that these images were intended first and foremost to threaten and defend. In addition, the comparison with the decorations of a house considerably younger and from a radically different period and culture support these conclusions: the mosaic floor of a Roman house in Antioch. Here, an attack on the Evil Eye is the theme and the threatening features consist of an ithyphallic dwarf, a dog, a feline predator, a snake, and a scorpion, all reliable guardians which as cultural inheritance have found their way from the Stone Ages through Antiquity all the way into Medieval cathedrals (Fig. 8.9).

<sup>20</sup>Varieties of the Venus figurines and their protective functions, familiar from the European Upper Palaeolithic, have also been found in several contemporaneous discovery sites across the Fertile Crescent, such as at Mureybet/Syria and at Netiv Hagdud/West Bank. Bar-Yosef, Ofer, and Gopher, A. (1997). *An Early Neolithic Village in the Jordan Valley. Part I. The Archaeology of Netiv Hagdud*. American School of Prehistoric Research Bulletin 43, Cambridge, MA.

Cauvin, Jacques (1977). *Les fouilles de Mureybet (1971–1974) et leur signification pour les origines de la sédentarisation au Proche-Orient*, *The Annual of the American Schools of Oriental Research* 44, pp. 19–48.

**Fig. 8.7** Ithyphallic protom in Göbekli Tepe (Drawing: Karolina Rupik following Klaus Schmidt)



**Fig. 8.8** Image of a woman displaying her vulva, found in the so-called lion pillar building in Göbekli Tepe (drawing: Karolina Rupik following Klaus Schmidt)





**Fig. 8.9** Roman mosaic from the House of the Evil Eye in Antioch (Archaeological Museum Hatay, Turkey © Roland and Sabrina Michaud/akg-images, with kind permission)

This arch spanning the Neolithic, Roman antiquity, and Medieval Western Europe illustrates a realisation whose importance cannot be overvalued: already during the Stone Ages, specifically the Neolithic, a whole repertoire of images and signs meant to deflect evil developed out of the signals and signs of non-verbal communication such as we have seen in primate behaviour. The effects and effectiveness of these images and signs developed over time and were retained as the images were passed on through the generations. In the Epipalaeolithic, roughly 12,000 years ago, animal-like guardian figures with bared teeth and dangerous horns displayed their unearthly defences just as they would do in medieval times (Fig. 8.10).<sup>21</sup>

A further factor however was also extremely important: not only were the signalling effects of the stone-age motives retained over generations, but the originally apotropaic relieves and figurines eventually developed into independent signifiers:

<sup>21</sup>Eibl-Eibesfeldt, Irenäus and Christa Sütterlin (1992). *Im Banne der Angst. Zur Natur- und Kunstgeschichte menschlicher Abwehrsymbolik*. Munich and Zürich: Pieper, pp. 37, 409–412.



**Fig. 8.10** Dangerous and militant animals as guardians. Bears with an erect phallus as guardians on a fresco in the town hall of Appenzell/Switzerland

the success of the vulva-displaying, obscene, and threatening female as a defensive figure was so profound that the positive effect was traced back not to the actual signal but onto the carrier, the female figurine. At this moment we see the origins of an all-powerful female figure who could influence the well-being of the person she was meant to protect: the so-called primordial mother (*Urmutter/dema*), of whom more will be said in the next chapter. In terms of the history of religion, the notion of such a female has been preserved in ancient mythology in the form of Rhea, mother of the Greek deities; her protective aspects are displayed as the Greek Baubo,<sup>22</sup> and as the unashamedly obscene depiction of the danger-averting “Sheela-na-Gig” her image decorates the outer walls of medieval English and Irish churches.<sup>23</sup>

<sup>22</sup>Fauth, Wolfgang (1979). Baubo in: Der kleine Pauly. Lexikon der Antike [in 5 Bänden] auf der Grundlage von Pauly’s Realencyclopädie der classischen Altertumswissenschaft unter Mitwirkung zahlreicher Fachgelehrter bearbeitet und herausgegeben von Konrat Ziegler und Walther Sontheimer. Munich: Deutscher Taschenbuch Verlag, p. 843

Graves, Robert (1996). The Greek Myths. Volume 1. London: Folio Society. p. 92.

<sup>23</sup>Andersen, Jorgen (1977). The Witch on the Wall. Rosenkilde & Bagger.

Eibl-Eibesfeldt, Irenäus and Christa Sütterlin (1992). Im Banne der Angst. Zur Natur- und Kunstgeschichte menschlicher Abwehrsymbolik. München and Zürich: Pieper, pp. 182-185.

## Çayönü Tepesi—From a Hunter’s Camp to Village

Göbekli Tepe is not the only settlement of the pre-ceramic Neolithic to acquire fame beyond the small archaeological circles, but is one of a series of spectacular finds in Anatolia.<sup>24</sup> Of these discovery sites, Çayönü is one of the most studied and controversially discussed, as on the one hand, an undisturbed stratification allows us to document archaeologically the decisive phase of the transition from forager to a farming society, and on the other hand a careful examination of the site shows that many of the quickly executed and spatially limited rescue excavations of other Neolithic settlements only allowed for small and limited glimpses and thus led to premature conclusions.

Çayönü lies on the outskirts of the Taurus Mountains on a tributary of the River Tigris in the Turkish province of Diyarbakır and following its discovery in 1963 was excavated by an international team in three large campaigns between 1964—1991. New results ranging from building history all the way to archaeozoology are constantly being published and allow for detailed insights into a life over 10,000 years ago.

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Stratigraphy of Cayönü Tepesi (with extrapolations/interpolation from the various articles)

» (12,500–11,000) ybp	Aceramic Neolithic	Round huts
» (11,000–10,500) ybp	PPNA	Grill-planned buildings
» (10,500–10,200) ybp	PPNA/B	Channeled buildings
» (10,200–9500) ybp	PPNB	Cobble-paved buildings
» (9500–9000) ybp	Late PPNB	Cell-planned buildings
after 9000 ybp	PPNC	Large room structures

In terms of the natural environment, the conditions in and around Çayönü were practically ideal. While today the climate is rather arid, during the Neolithic open oak forests covered the landscape; towards the South, grasslands stretched out filled with almond and pistachio trees, with wild lentils and other legumes as well as wild cereal grains such as emmer and einkorn. Numerous springs provided abundant water supplies and reservoirs supplied the material for essential lithic tools. Newer studies show that the region was also teeming with game: boars, cattle, sheep, and goat as well as deer, stags, gazelles, donkeys, and wild horses lived on the plains, while predators included bears, leopards, fox, marten, weasels, and badgers. Beavers, hedgehogs, and various species of bird completed this prehistoric paradise.

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<sup>24</sup>Rosenberg, Michael and Asli Erim Özdoğan (2011). The Neolithic in Southeastern Anatolia. In: Steadman, Sharon R. & Gregory McMahon (eds.) *The Oxford Handbook of Ancient Anatolia 10,000–323 B.C.E.* New York: Oxford University Press, pp. 132–140.

Around 12,500 ybp, foragers settled in this abundant landscape and erected round semi-subterranean huts up to five metres in diameter made of a sort of wattle and daub; the same sort of huts one would have expected to find in Göbekli Tepe. The huts themselves were grouped around round spaces with hearths.<sup>25</sup>

This was followed by a further settlement layer referred to as grillplan-phase on account of the characteristic foundations of their houses (11,000–10,500 ybp), a series of rectangular-oval houses measuring roughly  $5.5 \times 11$  m with a characteristic sub-division: three small cells to the south, a plastered room, presumably living space with a hearth in the building's centre. The houses were rounded off to the north with the characteristic parallel dam wall strips which are reminiscent of a cooking grate. The houses, as interesting as they may be for an archaeologist, remain rather unspectacular from a religio-historical point of view: while the room over these grate-like foundations was obviously used for manual and skilled activities, the free space between houses was used for heavy works and the preparation of killed and gathered food.

This changed only from 10,500 ybp onwards, a time of transition from a foraging to a producing economical system and a time in which the construction of buildings changed once again. First, the originally linear grill-like foundations took on the shapes of meanders and then developed to veritable stable platforms interwoven with canals on which rested the bases for the roof. These more stable constructions now not only housed manual activities but also mirror first attempts of a division of labour insofar as now for the first time we see evidence of specialised ateliers for the production of pearls, flint tools, or the handling of the carnassial teeth (canines). Along with the houses, the layout of the settlement itself had changed. While the living quarters and work stations were now located more on the Western side of the settlement, a 1000 m<sup>2</sup> large space remained open on the Eastern side for communal activities and events. Here, the so-called skull-building arose, a communal burial site in the shape of a mortuary house.

The subsequent phase is characterised by the appearance of the so-called cobble-paved buildings. As the name suggests, they distinguish themselves through floors plastered with little stones or pebbles over which walls of perishable material were erected on lithic bases. Only the next chronological layer of cell-plan buildings show a basement floor with several chambers underlying a network of walls and a clay-bricked upper floor—two-storey buildings. The tools discovered here include sickles with a typical silicate shimmer (a consequence of cutting grasses) and they make it clear that grains and cereals were harvested more and more frequently. Sheep and goats were consumed more frequently now and pig bones all but disappeared.

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<sup>25</sup>Özdoğan, Mehmet (2010). Transition from the round plan to the rectangular—reconsidering the evidence of Çayönü. In: Dragos Gheorghiu (ed.) *Neolithic and Chalcolithic Archaeology in Eurasia: Building Techniques and Spatial Organisation*. BAR International Series 2097, pp. 29–34.

Özdoğan, Mehmet and Aslı Özdoğan (2002). Buildings of Cult and Cult of Buildings. In G. Arsekük, M. Mellink and W. Schirmer (eds.), *Light on Top of the Black Hill—Studies presented to Halet Cambel*. Ege Yayınları. Istanbul, pp. 581–602.

In the final phase of this aceramic period, a time of settlement without the characteristic ceramic vessels, the open-plan buildings made of layered stones were erected. The separate buildings which had until now been conspicuous, and which will be mentioned below, had completely disappeared.<sup>26</sup>

## Çayönü and Death

Not only the transition from hunter and gatherer to farmers domesticating farm stock and grain, or the development from early semi-subterranean round huts of twigs and branches over oval huts to claybrick walls on carefully assembled foundations made a sensation out of the discovery of Çayönü, but also the population's manner of dealing with death, and here as well we are able to trace a characteristic development.

During the round-hut period, funerals remained fairly unremarkable. The deceased were interred without burial gifts in graves in open spaces or within the houses. However, a uniform north-south positioning of the deceased, with a view towards the West, already shows a conscious appreciation of death with potential notions and ideas of a world of the dead.

Funerals did not change much during the subsequent grill-plan phase: the deceased were interred either in graves outside of houses on the settlement in a face-down, crouching position or they found their final resting place under the floors of the residential buildings. Burial gifts now included pieces of ochre or lithic tools; occasionally necklaces were discovered which had obviously not been removed from the deceased's body. However, these funerals must not have been mandatory: evidently, the skulls had occasionally been displayed within the house in the areas reserved for manual workmanship before they were finally interred in the open spaces between houses.<sup>27</sup>

But not all of the deceased were interred in or between the houses. Rather, death held an important meaning in Çayönü which found expression in collective burial activities; now we have reached the point which makes Çayönü so extraordinary: in one of the first permanent settlements of humankind, the inhabitants had built large communal buildings which clearly did not serve any profane causes. This includes a separate building on the outskirts of a 1000 m<sup>2</sup> large open plain, the so-called "flagstone-building" in the East of a settlement. The building was a large room

<sup>26</sup>Özdoğan, M. and Özdoğan, A. (1989). Çayönü, a conspectus of recent work. *Paléorient* 15, pp. 65–74.

<sup>27</sup>Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (16,000–300 B.C.)*. New York: Cambridge University Press, p. 92.

Özdoğan, Asli, Çayönü, in Özdoğan, Mehmet and Neziha Başgelen (1999). *Neolithic in Turkey. The Cradle of Civilization. Ancient Anatolian Civilisations Series, Vol. 3*. Istanbul: Arkeoloji ve sanat Yayınları, p. 47.



**Fig. 8.11** The skull building, a place for collective burials (© Krähenstein; Creative Commons Attribution-Share Alike 3.0 Unported license.)

covered in limestone slabs and in its centre two such slabs had been erected in the form of stele (Fig. 8.11).

Here, on the outskirts of the open plain, a further building had been erected, the so-called “skull-building”; three basement-like hollow spaces had been preserved underneath a carefully laid-out floor, to be used for burials. In these hollows or collective graves, the remains of primary burials were uncovered; this means that the deceased had been interred immediately after their demise with no special treatment, while another grave contained mainly skulls, i.e. the remains of secondary burials. In this context, the excavators state on account of the evidence that the skulls had initially been displayed in shelves within the building. An altar-like stone slab has been uncovered in the building,<sup>28</sup> while menhir-like stones

<sup>28</sup> ... on which perhaps the deceased were prepared for their burial and on which maybe animals were sacrificed during the proceedings? The discovery site is described as follows: “The so-called ‘Skull Building’ contained the crania of many dozens of individuals. The building, about 10 m wide and at least 8 m long, originally consisted of one large room with three subterranean, cellar-like rooms in the back, each covered with skeletal remains, neatly stacked up to the ceiling. Subsequently, three small, interconnected rooms were constructed above the cellars and likewise used for the massive storage of skulls, seventy-one in total, including both men and women, adults and children. The remaining large room with its plaster floor and red-painted walls had low benches along the wall, and a large flat and carefully polished stone slab on the floor, perhaps serving as a table. On its surface

encompassed the open spaces bordering on the building. Having outlived its usefulness, the building was not simply abandoned, but carefully filled in; in effect, the building itself was buried.<sup>29</sup>

This burial of buildings always followed a set pattern, as can be seen also in the cases of other Neolithic settlements: first, the building was cleaned and destroyed as much as possible, erect stones were knocked over and their tips chipped off, doors were blocked; then, the remains were filled up with clean, sieved earth or ashes. Should another of these specialised buildings be erected on the prepared grounds, then its layout is slightly shifted in comparison with its predecessor.

But traditions developed not only in regards to the demolition of the buildings, which can be compared to proper burials. These special buildings themselves resembled each other over and beyond the boundaries of individual places and regions. Thus for example in Çayönü, Beidha (Jordan), Quermes Dere, und Nemrik 9 (both Iraq). These buildings have as characteristics their carefully planned floors laid out over the traditional semi-subterranean floor plan, the walls supported by pillars, monumental menhir-like stones set in the interior, and shallow basins. It does thus not come as a surprise that the above-mentioned site of Göbekli Tepe was originally referred to as cultic site, before the character of the individual buildings was noticed or noted.

But back to Çayönü: during the phase of the cobble-paved-buildings (a late phase of development, during which the settlement could already look back on century-old traditions), an open space was laid bare on the Eastern side of the settlement which served daily activities or maybe occasionally also special occasions—we know this because it was carefully plastered. The space was surrounded by these above-mentioned special buildings: to the South-east, a skull building and a connecting building with one room only; to the South-west, a building surrounded by benches.

To the North-west of this piazza-like space, a building that was found in the vicinity of the dwellings stands out on account of its artistically laid out terrazzo floors. Red and white limestones had been glued together with chalk mortar and then given a polished finish, so that the result was a paved floor with the character of Italian terrazzo floors; white strips on the borders added additional accents. Towards the North-eastern corner of the building, a moon-shaped hearth was

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(Footnote 28 continued)

were traces of both human and animal blood, preserved in the form of hemoglobin crystals.” Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (16,000–300 B.C.)*. New York: Cambridge University Press, p. 92.

<sup>29</sup>Schirmer, W. (1983). *Drei Bauten des Çayönü Tepesi*. In: R. M. Boehmer and H. Hauptmann (eds.), *Beiträge zur Alttertumskunde Kleinasien: Festschrift für Kurt Bittel*. Mainz: Philipp von Zabern, pp. 463–476.

Özdoğan, Mehmet and Aslı Özdoğan (2002). *Buildings of Cult and Cult of Buildings*. In G. Arsekük, M. Mellink and W. Schirmer (eds.), *Light on Top of the Black Hill—Studies presented to Halet Cambel*. Ege Yayınları. Istanbul, p. 559.

uncovered, while elsewhere an altar-like stone slab displays a nearly man-size human face as a high relief.

During this phase, interments continued, mainly in the skull-building which itself experienced several building and renovation phases and at the end would have acquired a quite monumental character; the building itself however also mirrors several different funerary rites. During the first phase, long bones (*ossa longa*) were carefully arranged on one side of a subterranean chamber and skulls on the other, while a further chamber contained a female skeleton minus its skull that had been interred alongside a newborn and a toddler. Secondary funerals were discovered in a further stratum, and skulls were discovered in one of the final strata. This building served as a house of and for the dead in all these different archaeological strata, a building where the deceased could find their final resting place. The alter-like stone slab obviously was one of the utensils necessary to prepare the deceased for their secondary funeral. Final mention must be made of the skull of an aurochs which had been hung onto the wall—its horns are primarily a sign of strength and the ability to defend; possibly, however, the aurochs played a further role as part of the cult, which will be demonstrated further below in the case of Catal Hüyük.

However the specific details may have been arranged: if the excavators assume that the skull building had been a place of impressive ritual, they could hardly have been wrong in their conclusions.<sup>30</sup>

## Settledness and Its Consequences for Ideology

The period between 12,000 and 10,000 ybp had clearly been a time of change and transition, not only from an economical, but also from an ideological point of view which in terms of its far-reaching consequences cannot be overestimated. Possibly, climate warming initially restricted the mobility of competing groups and ultimately caused the first hunter and gatherer groups to settle (but this is a question for archaeological research); we do know, however, that this restricted mobility was responsible for the retention and development of transmitted practices aimed at securing one's territory and fragile existence. In Europe, the tried and tested defensive symbols served this purpose well, be it the breast or rump amulets of Central Europe which had been reduced to mere symbols or the symbol of the mutated, originally apotropaic ithyphallic or vulva-displaying human depictions of Western European cave art. It thus does not surprise us when the exact same, familiar pictures and ethological signals re-appear in the Fertile Crescent in situations where sought-after hunting grounds were claimed for one's own group, such

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<sup>30</sup>For the identification of cultic buildings, see Lichter, Clemens (2014). Temples in the Neolithic and Copper Age in Southeast Europe. 119 Documenta Praehistorica XLI, pp. 119–136; concerning Çayönü: p. 122.

as in Göbekli Tepe.<sup>31</sup> Sexual threats, but also fear-inducing wild animals were meant to transmit a deterrent effect in order to ward off competitors. Simultaneously, the sheer mass of the buildings signalled the group's efficiency and capabilities in the sense of the costly signalling theory—we will see similar developments on the island of Malta. At the same time, the massive central beams of the buildings in Göbekli Tepe are also a characteristic architectural element for the region.<sup>32</sup> Presumably, the humanesque shape of these pillars were intended at the time to signal merely “occupied” from the perspective of cognitive psychology, or to strengthen the threatening effect emanating from the animal figures.<sup>33</sup> However, we cannot conclusively exclude the possibility that forefathers were being referred to, in an attempt to justify property claims, especially if we examine more closely a further important pillar of the evolving religion during the transition from Palaeolithic to Neolithic: funerals.

In Europe, funerals themselves were considered proof for the legitimacy of property claims, and manipulated and deposited skulls even more so, and from here we can trace the following two developments. First, the notion of a world below, i.e. the Underworld in which the deceased continue to exist, and second, notions of their potency. For Europe, the Underworld eventually was no longer only the earth in which the dead were buried, but a world beneath the world of the living, and caves (Ofnet) or later also the fire in hearths (Lepenski Vir), or even springs or wells constituted its entrances.

The situation in the Fertile Crescent was different. Here as well, funerals helped to highlight justified territorial claims, and here as well skulls played an influential role, as the above example of Çayönü demonstrates. However, Çayönü holds more information: again, similar to Upper Palaeolithic and Mesolithic Europe, it is the group which claims a certain area and marks its territorial claims with funerals. However, with the first settlements, interments occurred no longer in caves or rock shelters, but instead they were adapted to suit the new living conditions, i.e. funerals in buildings. This could suggest that occasionally, funerals were held within residential buildings. The constellation of the community of predominately hunters and gatherers who only slowly transition from gathering to producing economical systems however suggests a communal funeral. It is thus the group which collectively cares for the deceased, builds them a house, and lays them to rest, visible to all—in this manner, the group lays a collective claim to a territory, to hunting grounds. And while we at first see only primary funerals in this communal *House of the Dead*, slowly the custom develops of preparing the corpse prior to his final

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<sup>31</sup>See here Gebel: “The principles of resident (or confined) territoriality dominated all spheres of life, including metaphysical territories.” Gebel, Hans-Georg K. (2014). *Territoriality in Early Near Eastern Sedentism. Neo-Lithics 2/14*, pp. 30.

<sup>32</sup>Lichter, Clemens (2014). *Temples in the Neolithic and Copper Age in Southeast Europe*. 119 *Documenta Praehistorica XLI*, p. 123.

<sup>33</sup>Morgado, Nicolas, Dominique Muller, Edouard Gentaz, Richard Palluel-Germain (2011). Close to me? The influence of affective closeness on space perception. *Perception 40*, pp. 877 and 879 (877–879).

burial. This practice is already familiar, dating back to the Palaeolithic. But now, over the course of subsequent centuries, this custom expands considerably, so that the excavators of Çayönü can speak of veritable secondary interments. This however implies that death was no longer a unique experience, but was instead considered as a transformative and transitional stage—a transition into another world which went through several phases and, in order to be successful, had to be accompanied by rituals.<sup>34</sup>

## Simultaneously in the Levant...

It was not only in Anatolia that the deceased were afforded special attention. At the same time as the foragers of Anatolia changed their hunting and gathering strategies, discovered new techniques of ensuring their existence, and created new spiritual worlds in which their dead played an important role ensuring their continued existence, at the same time now the living conditions of the Fertile Crescent's Southwestern flank changed, leading to the first permanent settlements, even before the Neolithic techniques of farming and pottery had been "invented".

Two excavation sites near Jericho are considered some of the earliest permanent settlements, whose origins can be dated back into the 10th pre-Christian millennium and have of course, on account of their proximity to the biblical reports of Joshua's conquest of Jericho, achieved fame beyond the field of archaeologists. To make a long story short: the excavations sites surely do not represent the biblical Jericho, whose conquest—for which incidentally no archaeological proof has been uncovered—would have taken place many millennia later.

Let us begin with Tell es-Sultan, the place which between 1952 and 1958 had been excavated by the British archaeologist and daughter of a biblical scientist Dame Kathleen Mary Kenyon (1906–1978)—she originally identified the site with the biblical Jericho.<sup>35</sup> Surprisingly, for excavators of the period, the settlement displayed typical Neolithic characteristics, but lacked the otherwise pervasive potsherds of the Neolithic. Kenyon had uncovered something entirely new, a stratum known today as **Pre-Pottery-Neolithic**, which can be further separated into PPN A and PPN B and which had in addition been preceded by several older phases of settlements (Fig. 8.12).<sup>36</sup>

<sup>34</sup>Hertz, Robert (1907). Contribution à une Etude sur la Représentation Collective de la Mort. In: *L'Année Sociologique* 10, Paris, pp. 48–137.

Gennep, Arnold van (1960). *The Rites of Passage*, Chicago: The University of Chicago Press.

<sup>35</sup>Kenyon, Kathleen M. (1957). *Digging up Jericho*. London: Ernest Benn.

<sup>36</sup>Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (16,000–300 B.C.)*. New York: Cambridge University Press, p. 45.

**Fig. 8.12** Dame Kathleen Kenyon (standing), who had discovered the Neolithic Jericho (© Vassilios Tzaferis; Creative Commons Attribution-Share Alike 3.0 Unported licence)



In Tell es-Sultan, Kenyon uncovered mighty walls and a tower to which a set of stairs led; architectural elements which caused her prematurely to identify the site as the biblical Jericho. In fact, the meaning of these structures is still heavily discussed today, even more so because the findings, so important for our present discussion (the burials of 12 individuals at the foot of these stairs) do not align with the notion of a defensive structure.<sup>37</sup> The skeletons were not the only discovery of the sort: altogether, the remains of 491 people were uncovered, of which 200 skeletons are intact (Fig. 8.13).

More surprising than the fact that during this period, funerals were carried out inside houses and possibly funerals of a selective group of predominately young people, was the fact that the skulls of the deceased frequently were not found in

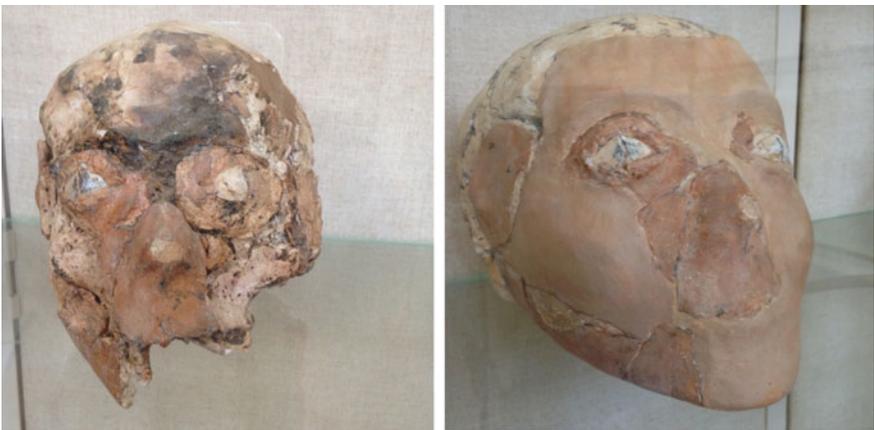
<sup>37</sup>Ofer BarYosef is of the opinion “that the walls were erected mainly on the western side of the site to protect the settlement against mud flows and flash floods.” Bar-Yosef, Ofer (1998). *The Natufian culture in the Levant, threshold to the origins of agriculture*; *Evol. Anthropol.* 6, p. 170.

The tower of Jericho was presumably the base of a communal building, of the sort found throughout Southeastern Turkey dating to the early Neolithic. Aurenche, Oliver (2007). *Das „Goldene Dreieck“ und die Anfänge des Neolithikums im Vorderen Orient*. In: *Badisches Landesmuseum Karlsruhe* (ed.), *Vor 12.000 Jahren in Anatolien. Die ältesten Monumente der Menschheit*. Stuttgart: Konrad Theiss Verlag, pp. 50–65.



**Fig. 8.13** Excavation site Tell es-Sultan near Jericho. The old wall structures can be seen in the foreground (© Berthold Werner)

their original anatomical compositions. They had been severed from the skeleton and placed beside it—however, only after they had been given special treatment. The facial features had been traced with a mixture of clay and plaster cast in a possible attempt at realistic reconstruction and the eyes had been reconstructed with the insertion of kauri snails (Fig. 8.14).



**Fig. 8.14** Remodelled skulls of “Jericho” (© Rockefeller Museum, Jerusalem)

The custom of a separate funeral of remodelled skulls was not limited to Tell es-Sultan. Similar discoveries have been made in the neighbouring settlement of 'Ain Ghazal.<sup>38</sup> 'Ain Ghazal had originally developed out of rather modest origins during the PPN B and over the course of the subsequent centuries expanded into a rather important settlement which must have housed about 200–300 inhabitants during its peak period.<sup>39</sup> People lived in plastered clay-brick houses with a rectangular layout, consisting of a square-shaped main room and a more narrow vestibule; the lime floor was clearly renewed every few years. People already lived of farming and stock breeding. Crop plants included early forms of wheat, legumes, and barley. Goats were already domesticated, although the hunt on wild animals would still have been an important resource. The decline of the settlement sets in around 8500 ybp, presumably because the fields had lost their fertility as a consequence of intensive usage.<sup>40</sup>

Just like the population of Tell es-Sultan, the people of 'Ain Ghazal preferred to bury their dead underneath the floors of their houses, and if ever any deceased should have been buried outside of the house, their skulls were later removed and buried separately—inside the house.<sup>41</sup> However, not every deceased was afforded this treatment. Many skeletons were found together with the usual rubbish in rubbish pits where they had been interred; a habit which proves that the depositing of skulls, as in the Palaeolithic, held a special signalling character, whereby these practices became more and more specialised, probably because the notions of an Underworld became more and more sophisticated with the progressing treatments of the deceased.<sup>42</sup>

A number of full-body statues were found in two pits near buildings which probably held a specialised function—12 in one and 11 in the other—alongside a number of busts. The statues were about 80–90 cm tall, thus roughly half the size of a full-grown adult, and their faces were realistic models of human faces, enhanced

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<sup>38</sup>The custom of severing the heads of the deceased and giving them special treatment seems to have been common throughout the southern Levante. Similar and comparable discoveries have been made in Beisamoun and Nahal Hemar. Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (16,000–300 B.C.)*. New York: Cambridge University Press, pp. 91–92.

<sup>39</sup>... thus far Akkermans' most recent calculations: Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (16,000–300 B.C.)*. New York: Cambridge University Press, p. 45.

<sup>40</sup>Banning, Edward Bruce (2010). *Houses, Households, and Changing Society in the Late Neolithic and Chalcolithic of the Southern Levant*. *Paléorient* Vol. 36.1, pp. 54–55.

<sup>41</sup>The custom of manipulating the skull of the deceased, specifically in this case to remodel the facial features using a chalk/clay mixture and subsequently to bury it separately from the body, was widespread throughout the Natufian. Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge U.K., Cambridge University Press, pp. 91–92.

<sup>42</sup>For the changes in conceptions of death, compare Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (16,000–300 B.C.)*. New York: Cambridge University Press, p. 90.

**Fig. 8.15** Statues of 'Ain Ghazal (© Rockefeller Museum, Jerusalem)



by the use of kauri snails and bitumen. These must surely be the artistic representation of the dead as part of a ritual. 'Ain Ghazal and Tell es-Sultan are not the only settlements from this period of transition between Palaeolithic and Neolithic, in which remodelled skulls and larger statues were uncovered; rather, we know of a whole series of discovery sites in the region of the Jordan Valley and the plains of Damascus in which respective rituals in connection with the disposal of the dead were practiced (Fig. 8.15).<sup>43</sup>

<sup>43</sup>Ibid., pp. 90–91.

Santana, Jonathan, Juan José Ibáñez, Javier Velasco and Frank Braemer (2012). *Crania With Mutilated Facial Skeletons: A New Ritual Treatment in an Early Pre-Pottery Neolithic B Cranial Cache at Tell Quarassa North (South Syria)*. *American Journal of Physical Anthropology*, October 2012, pp. 205–214.

The reasons behind these actions are as follows, according to the archaeologists Glenn Schwartz and Peter Akkermans:

They were symbols of order and meaning, constantly reproduced and reinterpreted... A strong sense of place and past can be inferred from the burials, which were not individual affairs, but involved the family... and the community at large, not only at the time of interment itself but also during the elaborate rites and treatment that often followed. The dead were kept within the settlements with their long histories, thus emphasizing the permanency of the bonds between the living and the deceased.<sup>44</sup>

As a consequence of permanent settlements and the transition to a producing economic model, a change in world view occurred which can be visibly traced in the manner of dealing with death. The reference to justified territorial claims is in no manner a success of Neolithic thought, and the fact that one's deceased were an effective method of sustaining such claims is an age-old inheritance, as is the tradition of manipulating skulls. However, it is clear that the dimensions have transformed completely from the Palaeolithic. While during the Palaeolithic, it was sufficient to bury the dead or to deposit the skull, the funerals in the Anatolian pre-ceramic Neolithic and even more so in the Levant show a totally different characteristic: focus was no longer only the burial of the dead and their skulls and the resulting deterrence of competition, but now the focus of these actions had moved onto the process of burial itself and onto the subsequent fate of the deceased who was now no longer merely interred but with his remodelled facial features practically enters into a new form of being—and thus remains a member of the family. Such a funeral in several steps requires a special format to ensure a successful transition into a new existence—the ritual. And this will be discussed in the next chapter.

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<sup>44</sup>Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (16,000–300 B.C.)*. New York: Cambridge University Press, p. 98.

# Chapter 9

## The Village, the Ritual, and Death

### What Is a Ritual?

At the beginning of the 20th century, the British biologist and humanist Julian Huxley (1887–1975) created a storm of protest when he not only analysed the formation of a strictly systematic motion sequence related to the behaviour—especially the mating behaviour—of birds, but also identified this behaviour as ritualization, in conscious analogy to the rituals of church worship. As *enfant terrible*, he constituted a fearful figure for the devout public and duly followed in the footsteps of his grandfather Thomas Huxley, who two generations earlier had famously exposed Bishop Wilberforce over Darwin’s *Origin of Species*.<sup>1</sup>

Discussing the formalised interactions between birds of the same species, which rested on inherited behavioural dispositions (especially during the mating season), Huxley had in mind the solemn actions and interactions of church worship which followed strict rules, between priest and congregation, the repetitive movements and body positions, the prayers and songs—in short, a fixed series of actions and word sequences with a high symbolic value serving and enabling communication both amongst the congregation itself as well as between congregation and deity. With these deliberations, Huxley had laid down the foundations for an independent biological discipline—behavioural sciences. Scientists such as Nikolaas Tinbergen (1907–1988) or Konrad Lorenz (1903–1989) based their own research on Huxley’s analyses, although the latter’s name remains controversial on account of his proximity to National Socialism.<sup>2</sup> Tinbergen and Lorenz, during the 1940s and

<sup>1</sup>Lucas, J. R. (1979). Wilberforce and Huxley: a legendary encounter. *The Historical Journal* 22 (2): pp. 313–330.

<sup>2</sup>Jahn, I. and U. Sucker (1998). Die Herausbildung der Verhaltensbiologie. In: Jahn, I. (ed.) *Geschichte der Biologie*. Jena: Nikol, pp. 581–600.

Burkhardt, Richard W. (2005). *Patterns of Behavior: Konrad Lorenz, Niko Tinbergen, and the Founding of Ethology*. Chicago and London: The University of Chicago Press.

Bartley, Mary M. (1995). Courtship and Continued Progress: Julian Huxley’s Studies on Bird Behavior. *Journal of the History of Biology* Vol. 28, No. 1, pp. 91–108.

1950s, focussed on examining the animalistic instinctive behaviour within the animal's natural habitat and the importance of this behaviour under the point of view of evolution as well as its physiological and genetic causes. The foundation of this research was the assumption that the same behavioural patterns function as social signals, as quasi-automatic catalysts for assimilated behaviour both within the animal species but also amongst humans; the latter being the reason why today ethological methods are used for the exploration of not only biological, but also psychological, social, and religious phenomena.<sup>3</sup> The zoologist Irenäus Eibl-Eibesfeldt devoted himself to the intensive study of expressive behaviour with signalling function and was able to make out a series of inherent behavioural patterns which are imbedded in complex human sequences of action—exactly the rituals mentioned by Huxley: a sequence of actions following predetermined rules, formal and often ceremonial, with referencing characteristics which can thus be found not only in a religious context but also in the more profane daily life. This includes for example state visits, graduations, or even simple greetings.<sup>4</sup>

Such ritualised behavioural patterns are partially genetically fixed, while other elements can be acquired culturally, and further elements individually, whereby the criterion of homology is to be applied both to the genetically and culturally inherited behavioural patterns.<sup>5</sup>

Expressive behaviour, together with linguistic and performative symbols such as gestures or signs, which are the smallest units with the frame of a ritual, and the ritual itself ultimately serve communication. Here, originally goal-focussed actions can transform into pure symbolic acts, so that the ritual finally carries only the function of social bonding, thus is meant to ensure the cohesion of the group.<sup>6</sup>

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<sup>3</sup>Compare here the relevant deliberations of Hinde, Robert A. (1982). *Ethology*. New York: Fontana.

Hinde, Robert A. (1999). *Why Gods Persist. A Scientific Approach to Religion*. London and New York: Routledge.

<sup>4</sup>Ritualization in biology is “the evolutionary transformation of nondisplay behavior into display behavior; evolutionary change in the direction of enhancement of signal function; the process effecting such change.... Enhancement of signal function involves some principles common to all [modalities of communication]—the specifications for efficacy in a communication system. Hence the evolutionary changes typically are those that increase the probability of signal detection and reduce ambiguity.” Immelmann, Klaus and Colin Beer (1992). *A dictionary of ethology*. Cambridge/Mass. and London: Harvard University Press, p. 255.

<sup>5</sup>Mayr, Ernst (1997). *Das ist Leben - die Wissenschaft vom Leben*. Heidelberg: Springer Spektrum, p. 189.

See, aswell: Hinde, Robert A. (1982). *Ethology*. New York: Fontana, pp. 122–127.

<sup>6</sup>Hinde, Robert A. (1999). *Why Gods Persist. A Scientific Approach to Religion*. London and New York: Routledge, p. 127.

Rothenbuhler, Eric W. (1998). *Ritual Communication. From Everyday Conversation to Mediated Ceremony*. Thousand Oaks, London, and New Delhi: Sage Publications, pp. 31–32.

## Structures of the Ritual

Rituals are omnipresent not only in the animal kingdom, but can be found in human interactions as well. Thus, meetings between people are ritualised—have to be ritualised—in order to redirect the potential danger of an encounter into safer pathways: you approach each other, stop at a certain distance, make eye contact, smile (a ritualised and in terms of its meaning inverted threat of biting), offer the hand, bend forwards slightly (making yourself smaller as a humbling gesture), state a familiar greeting formula which might include reference to a deity (the German “*Griß Gott*“), and only then can the actual conversation begin. This entire greeting ritual is meant to signal to one’s counterpart that there are no hostile intentions, the encounter thus is free of any danger and will take an uncomplicated course.<sup>7</sup> In contrast, consider the situation in an elevator, where total strangers are confined to a small space for a short period of time and depart without any social contact. In these situations, greetings are avoided, there is no eye contact—people act as if the other did not exist despite a very evident physical proximity (Fig. 9.1).<sup>8</sup>

Even before these small daily rituals intended as methods of safe communication in day to day life became research objects of human ethology and related fields, the larger rituals of African and Southeast Asian peoples, often lasting for several months, had become a focus of social anthropologists.<sup>9</sup>

While initially the exotic or the allegedly so barbaric was the prime focus of interest, the Belgian social anthropologist Arnold van Gennep focused instead on the construction of these rituals and discovered something astonishing: a certain ritual type accompanied those transitions in human life which can be interpreted as dangerous or at the very least as unsettling. Such transitions could affect the life cycle and are thus connected to events such as birth (e.g. the Jewish Brith Milah or the Christian baptism), puberty and maturity (Bar Mizvah or confirmation), wedding, or death (funerals). Festivities however also accompany the transitions throughout the year, such as for example the equinox or solstice celebrations—today Christmas/Channukkah, Easter/Passover, Midsummer, and Thanksgiving. Other transitions are connected to changes in status, such as the entry into a religious order, university graduations, or retirement—these events are all accompanied by celebrations. But that is not enough: also spatial transitions are celebrated,

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<sup>7</sup>Ibid., p. 10.

<sup>8</sup>Kremer, William (9 October 2012). Why do we behave so oddly in lifts? BBC World Service, <http://www.bbc.com/news/magazine-19846214>; viewed on 6th October 2015.

<sup>9</sup>Spencer, Baldwin and Francis J. Gillen (1899). *The Native Tribes of Central Australia*. London: Macmillan.

Frazer, James George (1894). *The Golden Bough. A study in comparative religion*. London: Macmillan.

Smith, W. Robertson (1894). *Lectures on the religion of the Semites*. London: A. & C. Black.



**Fig. 9.1** People in an elevator avoiding eye contact—the others do not exist from a social perspective (© anonymous)

such as when a friend or family member departs on a long journey and is solemnly seen off and welcomed back.<sup>10</sup>

Van Gennep not only highlighted these transition rituals, the *rites de passage*, but also discovered that they all share a certain structure. Rituals accompanying these transitions in life which are considered threatening all have a three-part structure, according to van Gennep. The phase of *separation* (separation) marks the separation from the previous status. The *marge* (liminality), the actual phase of transition, marks the one to be initiated as socially dead. He now leads a sort of

<sup>10</sup>Van Gennep, Arnold (1909). *Les rites de passage: étude systématique des rites de la porte et du seuil, de l'hospitalité, de l'adoption, de la grossesse et de l'accouchement, de la naissance, de l'enfance, de la puberté, de l'initiation, de l'ordination, du couronnement, des fiançailles et du mariage, des funérailles, des saisons, etc.*, Paris: Nourry.

intermediary existence outside of the regular social habitat, and also outside of conventional norms. Only in the final phase understood as rebirth, the phase of *integration* (incorporation), can the initiand experience a rehabilitation on a higher level which refers him to his new place in society.<sup>11</sup> The entire process is frequently accompanied by a sumptuous ceremony and external changes can also signify the transition. Thus for example during the initiation into a religious order, the new member receives new clothes and a new name—the old self is shed completely and a new person arises out of the ritual.

### **An Example: The Initiation of Boys Amongst the Makonde**

Just like many Bantu peoples, the Makonde, a people of hoe cultivators on the border of Tanzania and Mozambique, have cultivated the custom of initiating young boys in their final stages of puberty; specifically, they are being released from their childhood and their mother's environment and introduced into the community of young men capable of hunting and going to war. Whenever a number of boys in a village have reached the relevant age, the preparations for the festivities begin, invitations are sent out to neighbouring villages, a space for the festivities is cleared, and a sufficient amount of food and millet beer is gathered together.

The actual festivities begin with a festive meal and night-time dances mainly by the women, until on the next morning the boys are led by their mentors to a secret location in the woods. The mothers usually break out in laments at the time of separation and occasionally even attack the mentors.

Now the liminal phase begins for the boys, a several month-long sojourn in the woods, during which they are considered as dead for the village community. In this period, the boys live in strict seclusion under the supervision of their mentors and are initiated into the customs, religious traditions, but also social responsibilities of an adult male Makonde. After the first night, which the boys must spend without protection in the potentially dangerous bushes, they begin building their huts; here, they will spend the first days recuperating after a painful circumcision. The location of the initiands remains a secret and is considered taboo; no-one who is not a mentor or circumciser is allowed to enter the hut and observe the secret actions. The boys' status as socially non-existent and dead is emphasised by the layer of ashes covering them, which will only be washed off just prior to their first official reappearance.

The boys and their mentors appear only during the *Mapiko*, a masked dance (Fig. 1.5), if they know the steps. During festivities in their village, they emerge from figurative graves (bushes and shrubs) and can be identified by their masks and corresponding clothing as women-stealing ancestral spirits. Within the context of

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<sup>11</sup>Turner, Victor (1967). *Betwixt and between: the liminal period in rites de passage*. A Forest of symbols: aspects of the Ndembu ritual. Ithaca: Cornell University Press, pp. 23–59.

Bourdieu, Pierre (1982). *Les rites comme actes d'institution*. In: *Actes de la recherche en sciences sociales*. Vol. 43. Rites et fêtes. pp. 58–63.



**Fig. 9.2** The phase of incorporation during the Unyago amongst the Makonde. The initiands wear new *white* clothing—they are considered to be new-borns (© Karl Ulrich Petry; with kind permission)

ritual acts of war, they are put to flight by the male adults of the village. The context of this ritual is as follows: the boys are socially dead and thus exist only in the world of the deceased and spirits. From this world they emerge briefly to visit their village before returning as men a few weeks later, i.e. as socially reborn. It must be noted that while they return to the village, they do not return to their mother's house (Fig. 9.2). The social reasons for the Mapiko dance can be found in the economic power of the women, who are responsible for farming and who alone are allowed to decide over its crops—this affords them an economic advantage over the men, who during the masked dance at least can display their strength and abilities to defend against the spirit world.

The final phase of incorporation begins with the shaving of the boys' heads and a communal bath during which the ashes are removed. Then, they all receive new clothes. The newly born young warriors enter into their village, where they receive an enthusiastic welcome. This holiday ends with a dance and a festive meal. The initiands who had ritually passed away religiously and socially months ago during the separation ritual and who had lived in the spirit world in the interim are now reborn. A child had left the world of the living in favour of the ancestral spirits, and a man returns to his village to take on the responsibilities of an adult.

This ritual, briefly presented here, is impressive in its manner of dealing with possible social conflicts. Through initiation and the corresponding secrecy rule, the men form a tight ritual community that proves to be an effective counterpart to the matriarchal family and economic structure amongst the Makonde—they are matrilineal and matrilocal. That means that children and inheritances belong to

women, and husbands move into the villages of their wives. From an interpersonal psychological point of view, the ritual strengthens the relationship between father and son: the boy, raised in a world dominated by women, separates himself mentally from his female relatives, symbolically loses everything feminine about himself through the circumcision, and becomes part of the male community in which the father as skilled hunter and warrior occupies a respected place.<sup>12</sup>

## Ritual and Conflict

This short presentation of the initiation ritual of the Makonde has not only illustrated how a ritual is structured and which role the individual phases recognised by van Gennep play, but also makes it clear that such a ritual has a certain task within the respective community, especially if the community has no hierarchies or other conflict-solving institutions such as the church or tribunals.<sup>13</sup>

Whenever conflicts arise within a group of foragers—although most foragers adhere to very sophisticated strategies of conflict prevention—they can, if necessary, simply part ways. The group splits up. Sedentary peoples do not have that option. The investment in ensuring the arability of fields and in building permanent housing is too high to simply give up and move on. As a consequence, effective methods of conflict solutions had to be sought. This goal is achieved either through the creation of the appropriate hierarchies or institutions, i.e. authorities, and institutionalised dispensation of justice. Should however a society not be based on the division of labour, or as many African people still do today, reject any authoritative power structures, rituals can offer more appropriate conflict-solving strategies by carving out the social roles of potentially conflicting groups and by emphasising their respective value. Rituals can thus lead to a consensus by referring to higher powers not to be questioned. In the case of the Makonde, the economic and social imbalance between men and women can potentially create a conflict, and it is this imbalance which is negated in the course of a ritual calling upon their

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<sup>12</sup>Dias, Jorge, Margot Dias, and Manuel Viegas Guerreiro (1963–1970). *Os macondes de Moçambique*. Lisboa: Junta de investigações do Ultramar, Centro de estudos de antropologia cultural.

A much more simple, but also more superficial (evidently written without any knowledge of the seminal works by Dias et al.) and occasionally and unfortunately also wrong presentation (for example the individual phases of the ritual had not been understood correctly) can be found here: Halley, Meghan (2012). *Negotiating sexuality. Adolescent initiation rituals and cultural change in rural southern Tanzania*. Inaugural Dissertation; Case Western Reserve University.

<sup>13</sup>Turner, Victor Witter (1972). *Schism and Continuity in an African Society: A Study of Ndembu Village Life*. Manchester University Press.

From a psychological viewpoint: Gazzaniga, Michael S. and Todd F. Heatherton (2006). *Psychological Science*. New York/London: W. W. Norton, p. 655. keyword: “People want to belong and are motivated to avoid conflicts!”.

ancestors, through the creation of an alliance amongst the adult males, and also by referring to the respective value of both sexes.

Science owes the recognition of the value of rituals amongst people with social systems in which there exists neither a division of labour nor hierarchies to Victor Witter Turner. He enriched van Gennep's conclusions concerning the structure of rituals by a subtle analysis of the decisive liminal phase and further examined the elements, the images, action, and word sequences of the rituals in great detail, concluding that the smallest unit of the ritual is the symbol. This symbol can be either an image, an object, a gesture (expression, signal, see Chap. 6), or a sequence of words (e.g. a mantra) which refers to a higher-level content.<sup>14</sup> This referencing character of symbols which are conflated to repetitive sequences in a ritual is decisive, as common values are evoked which sustain the respective society or community and hold them together in the face of possible conflicts of interests; should this however no longer be possible, they can ensure a socially acceptable temporary or final separation.<sup>15</sup>

It is thus not surprising if rituals arise in the course of sedentariness which have as their focus this conflict-solving responsibility and which make use of effective signs and symbols and which also refer to familiar, higher (and thus non-questionable) powers and authorities—these are on the one hand the deceased, who have for generations appeared as powerful markers of securing territory, and on the other hand the *Urmutter* (primordial mother-goddess/*dema*), this displaying woman whose protective function has proven effective ever since the Palaeolithic and who leads a life of her own as almighty figure, as the example of Çatal Höyük demonstrates.<sup>16</sup>

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<sup>14</sup>Turner, Victor W. (1967). *The Forest of Symbols. Aspects of Ndembu Ritual*. Ithaca and London: Cornell University Press, pp. 280–298.

<sup>15</sup>Turner, Victor Witter (1972). *Schism and Continuity in an African Society: A Study of Ndembu Village Life*. Manchester University Press.

Turner, Victor Witter (1974). *Social Dramas and Ritual Metaphors*. In: Turner, V.W.: *Dramas, Fields, and Metaphors. Symbolic Action in Human Society*. Ithaca and London: Cornell University Press, pp. 23–59.

<sup>16</sup>**It is of the utmost importance at this point to distinguish clearly between mere ritualized behaviour, as it occurs for example in daily communication, and a ritual in a strict religio-scientific sense.** The latter, which the present authors stipulate appeared for the first time with the beginning of settledness, is a repetitive expressive behaviour with a reference to the highest values in order to solve conflicts and/or to help deal with existential fears. In this context, the religious ritual repeats mythical religious primeval events in order to maintain the cosmic order inaugurated by these primeval events themselves.

For everyday-communication, see Rothenbuhler, Eric W. (1998). *Ritual Communication. From Everyday Conversation to Mediated Ceremony*. Thousand Oaks, London, and New Delhi: Sage Publications, p. 4.

Hinde, Robert (1982). *Ethology*. New York: Fontana, pp. 212–220.

For conflict solution (with a reference to ultimate values), see: Turner, Victor Witter (1972). *Schism and Continuity in an African Society: A Study of Ndembu Village Life*. Manchester University Press.

## Çatal Höyük

It was the early Neolithic Anatolian settlement of Çatal Höyük, excavated by the British-Dutch archaeologist James Mellaart in the years 1961–1963, which not only allowed for intimate glimpses into the ideology of the first farmers, but which also carried the key to understanding the iconography both of the Neolithic in the Near East and in Europe.<sup>17</sup> Today, further excavations have followed Mellaart's seminal discoveries, so that his original statements and assumptions can be modified and further defined.<sup>18</sup>

Çatal Höyük lies in the Konya Plain on a high plateau that remains fertile even today, in southern Central Turkey and thus on the North-western borders of the Fertile Crescent. First traces of settlements can be dated back to the 8th millennium BCE and even further; the height of the settlement however lay between 9400–8000

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(Footnote 16 continued)

For the connection between society, religion, and ritual, see: Bellah, Robert N. (1964). *Religious Evolution*, in: *American Sociological Review*, Vol. 29, No. 3, pp. 358–374; also see Lewis-Williams, David and D. Pearce (2005). *Inside the Neolithic Mind: Consciousness, Cosmos, and the Realm of Gods*. London: Thames & Hudson, p. 28.

Jensen, Adolf Ellegard (1948). *Das religiöse Weltbild einer frühen Kultur*, Stuttgart: August Schröder Verlag.

For the extraordinary importance of distinguishing between ritualised behaviour, religious rituals, and cult, see Wunn, Ina (2016). *The Crux of a Darwinian Approach on Evolution: What is Evolution, and what did evolve? A comment on Matt Rossano's "The ritual origins of humanity"*. In: Hartung, Gerald and Matthias Herrgen (eds.), *Interdisziplinäre Anthropologie. Jahrbuch 03/2015*. Heidelberg: Springer, pp. 83–98.

These important distinctions, especially relevant for the reconstruction of the origins of religion, are not made clear for example by Bell, Catherine (1997). *Ritual. Perspectives and Dimensions*, New York and Oxford, and

Rossano, Matt J. (2010). *Supernatural selection: How religion evolved*. New York: Oxford University Press.

For the sake of completeness, mention must be made of an attempted "archaeology of ritual" by Verhoeven, Marc (2002). *Ritual and its Investigation in Prehistory*. In: Gebel, Hans Georg K., Bo Dahl Hermansen, and Charlott Hoffman Jensen (eds.), *Magic Practices and Ritual in the Near Eastern Neolithic. Proceedings of a Workshop held at the 2nd International Congress on the Archaeology of the Ancient Near East (ICAANE) Copenhagen University, May 2000. Studies in Early Near Eastern Production, Subsistence, and Environment 8*. Berlin: Ex Oriente, pp. 5–40.

<sup>17</sup>Hodder, Ian (2011). *Çatalhöyük: A Prehistoric Settlement on the Konya Plain*. In: Steadman, Sharon R. & Gregory McMahon (eds.) *The Oxford Handbook of Ancient Anatolia 10,000–323 B.C.E.* New York: Oxford University Press, pp. 934–949.

<sup>18</sup>Mellaart, James (1967). *Çatalhöyük. A Neolithic Town in Anatolia*. London.

Meskel, Lynn (1998). *Twin Peaks. The Archaeology of Çatalhöyük*. In: Tringham, Ruth and Margaret Conkey (eds.), *Ancient Goddesses*. London: British Museum Press, pp. 46–62.

Hodder, Ian (2005). *New finds and new interpretations at Çatalhöyük. Çatalhöyük 2005 Archive Report*. Catalhöyük Research Project, Institute of Archaeology.

Hodder, Ian (2010). *Probing Religion at Çatalhöyük: An interdisciplinary experiment*. In: Hodder, Ian (ed.), *Religion in the emergence of Civilization. Çatalhöyük as a Case Study*. New York: Cambridge University Press, pp. 1–31.

ybp.<sup>19</sup> Mellaart's excavations covered the thirteen successive settlement strata (today we know of 15 such strata), of which Mellaart systematically reconstructed layers II-VII.<sup>20</sup>

In the Neolithic Çatal Höyük, the rectangular, door-less houses constructed of clay bricks with an additional supporting wooden structure set against the walls were built one against the other and formed a stable, fortress-like unity. The respective living units could only be accessed through a hatch in the roof, from where a ladder led into the house itself. This entrance, so to speak, was located on the south wall of each building, where we also find the hearth set back into the wall, as well as an alcove for fuel. The layout of the living rooms included integrated platforms covered with mats and presumably also pillows or padding; these were used as quiet zones and furthermore, the deceased were buried underneath these platforms. In addition to their functions as living quarters and burial ground, the houses stand out on account of their partially elaborate, detailed, and varied artistic designs, so that the excavator initially identified the most refined houses as holy places, just as in Göbekli Tepe; this assumption however did not prove tenable.<sup>21</sup> We must thus start from the assumption that the inhabitants of Çatal Höyük, just like their direct chronological ancestors in Göbekli Tepe and their long-forgotten "cousins" in Gönnersdorf, placed a high value on beautifying their surroundings and houses, thereby also depicting their spiritual world; a world whose constituent elements can seamlessly be traced back (as demonstrated in the previous chapters) to precursors which are all too familiar for readers acquainted with the art of the Palaeolithic, the Mesolithic, and the PPN.

This includes first and foremost depictions of the sexual, just as we have come to know as tried and tested apotropaic signs, beginning with the picture caves of France, then the female figurines of the Gravettian (the Venus of Willendorf), all the way to the carvings and ithyphallic protomen of Göbekli Tepe. Not only were numerous phallus sculptures of various qualities uncovered in Çatal Höyük, but the male principle dominates especially the animal images and encourages the

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<sup>19</sup>Cessford, C., M.W., Newton., P.I., Kuniholm, S.W., Manning et al. (2006). Absolute dating at Çatalhöyük. In: *Changing Materialities at Çatalhöyük: Reports from the 1995–99 Seasons*, ed. I. Hodder. (McDonald Institute Monographs/BIAA mono-graph 39.) Cambridge: McDonald Institute for Archaeological Research/London: British Institute at Ankara, pp. 65–99.

<sup>20</sup>Mellaart, James (1967). *Çatalhöyük. A Neolithic Town in Anatolia*. London: Thames & Hudson.

<sup>21</sup>However, Hodder also noted that the "narrative character of the wall paintings remains un-paralleled in Anatolia and the Near East at this date. And the sheer amount of the art—its concentration in so many houses in one site—remains particular. Indeed, the main mystery of Çatalhöyük remains the question of why all this art and symbolism, this flowering of imagery, should occur in this place at this time". Hodder, Ian (2006). *The Leopard's Tale: Revealing the Mysteries of Çatalhöyük*. London: Thames & Hudson, p. 16.

Hodder, Ian and Peter Pels (2010). *History houses. A new interpretation of architectural elaboration at Çatalhöyük*. In: Hodder, Ian (ed.), *Religion in the emergence of Civilization. Çatalhöyük as a Case Study*. New York: Cambridge University Press, pp. 163–186.

impression of a threatening bestiality.<sup>22</sup> Simultaneously, a schematic female figure modelled out of plaster, with arms and legs standing out at a right angle (the typical threatening gesture)<sup>23</sup> regularly decorates the wall as a massive, room-dominating relief; the figure can easily be identified as a displaying woman, even though the obscene depiction of the genitals (e.g. in Lepenski vir) has been omitted.<sup>24</sup> However, a different feature is identical to Lepenski Vir: the spatial and therefore also the contextual proximity of the displaying to death. While the familiar female figurine is displayed on the hearth above the graves of the deceased in Lepenski Vir, in Çatal Höyük we find the displaying woman as a dominant relief over the platforms which cover up the intramural burials and were used as sleeping platforms—in Çatal Höyük, the deceased were interred within the buildings.<sup>25</sup> The displaying female figurine with an originally merely apotropaic function has now finally developed to an almighty figure who as heraldic woman/*Urmutter* relates to death and thus to the cycle of life and death and possibly even to an existence in the Underworld—whereby the Underworld in this case in fact is the world underneath, a world underneath the dwelling of the living. How close the relationship between the female attributes, dying, and death really is, is made clear by the numerous half-reliefs in the building's interior; re-modelled skulls of vultures, foxes, and weasels were set into the walls, the same animals which were responsible for the

<sup>22</sup>Meskel, Lynn (2007). Refiguring the Corpus at Çatalhöyük. In Renfrew, C. and Morley, I. *Material Beginnings: A Global Prehistory of Figurative Representation*. Cambridge: McDonald Institute for Archaeological Research, p. 144 (143–156).

<sup>23</sup>For sexual threatening, the typical bodily posture with legs spread out and angled as well as triumphantly raised and angled arms, as well as the simplification of imagery all the way to the rune-like signs, compare Eibl-Eibesfeldt, Irenäus und Christa Sütterlin (1992). *Im Banne der Angst. Zur Natur- und Kunstgeschichte menschlicher Abwehrsymbolik*. München and Zürich: Piper, pp. 120, Fig. 44, 123, Fig. 47.

<sup>24</sup>A discussion of the female relief can be found here: Patton, Kimberley P. and Lori D. Hager (2014). “Motherbaby”: A Death in Childbirth at Çatalhöyük. In: Ian Hodder (ed.), *Religion at Work in a Neolithic Society. Vital Matters*. New York: Cambridge University Press, pp. 225–258. Behavioural-biological analyses contradict the assumption that the wall reliefs represent bears (the combination of displaying the vulva together with other defensive symbols, such as animal claws, predator jaws or horns are common!) as does the development of depicting the so-called “shameless woman”. Compare here also Eibl-Eibesfeldt, Irenäus, and Christa Sütterlin (1992). *Im Banne der Angst. Zur Natur- und Kunstgeschichte menschlicher Abwehrsymbolik*. München and Zürich: Piper, pp. 181–255.

In this context, Douglas Fraser makes it clear that the so-called “shameless woman” is today not only a widespread motive in the world of art and represents a primordial mother-figure, but also that corresponding motives have their origins in the Near East and have step by step spread out via Asia all the way to the Pacific. Fraser, Douglas (1962). *Primitive Art*. New York: Doubleday & Company, pp. 138–143.

Fraser, Douglas (1966). *The Heraldic Woman. A Study in Diffusion*. In: Fraser, Douglas (ed.), *The Many Faces of Primitive Art. A Critical Anthology*. Englewood Cliffs: Prentice Hall, pp. 36–99.

<sup>25</sup>Wason, Paul (2010). *The Neolithic cosmos of Çatalhöyük*. In: Hodder, Ian (ed.), *Religion in the emergence of Civilization. Çatalhöyük as a Case Study*. New York: Cambridge University Press, p. 278.

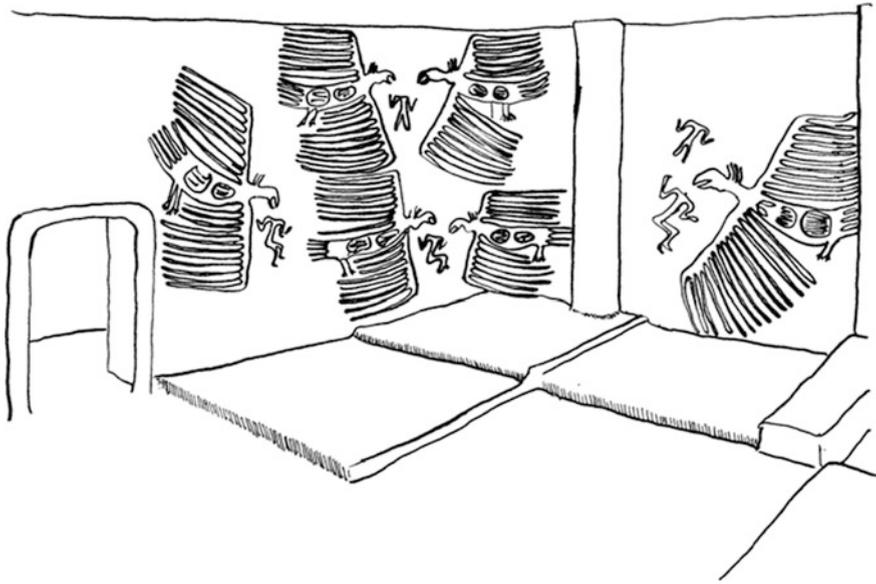


**Fig. 9.3** The interior of a house in Çatal Höyük (© Stipich Béla, CC BY 2.5)

maceration of the dead prior to burying their bones underneath the platforms (Fig. 9.3).<sup>26</sup>

Not only the interments inside the dwellings, i.e. amongst the living, but only in the Underworld, highlight the social importance of death, but the elaborate and artistic wall decorations also frequently focus on the issue. Thus, a wall painting

<sup>26</sup>A detailed interpretation of Çatal Höyük, its decorative elements, and artistic artefacts from a religio-scientific perspective can be found by Wunn, Ina (2005). *Die Religionen in vorgeschichtlicher Zeit*. Stuttgart: Kohlhammer, pp. 204–234.



**Fig. 9.4** Wall paintings in house VII 8, Çatal Höyük (drawing by Karolina Rupik following a reconstruction by James Mellaart)

(from the excavating layer VI B) depicts a number of human skulls and bones in the immediate vicinity of a building's front area in which the remains of human bodies had been uncovered. Evidently, an ossuary is referred to, in which the corpses of the deceased are laid out or given their primary burial. How the primary burial phase could have looked like is demonstrated by other wall paintings, whose contents can appear gruesome and abhorrent for 21st century tastes, for example when giant vultures of almost life-like proportions with a wing-span of 150 cm attack tiny human bodies. Evidently, the inhabitants of Çatal Höyük had no qualms when depicting the end of man's physical existence with all its consequences. On the contrary, the notion of man being at the mercy of death is emphasised through the vulture to man proportions (Fig. 9.4).

However, not all wall paintings dealt with death, but some had as their theme the world of the living, for example when the city itself is depicted with the Hasan Dağ volcano in the background, or when a hunting scene is narrated in real-life detail. Men clad in leopard-skin loincloths, bearing bows and clubs, merrily approaching a herd of deer—wall paintings are now telling stories!

At the same time, however, it seems that traditional animal depictions such as we have seen in Göbekli Tepe, the depiction of beastly strength and ferocity, were not neglected, although the depicted wild cats such as lionesses or leopards already presented themselves in heraldic doubles, and thereby were already pursuing the development described by cultural ethology.

The depictions of cattle belong to the most impressive animal paintings, be it the hunted aurochs, be it the only recently domesticated cattle—the life of Çatal Höyük's inhabitants evolved around this animal. This is made evident by the decoration on the houses' interior walls—bucrania were found both on the walls and on the edges of the platforms, giving the houses a dramatic appearance.

Bucrania however also appear consistently in the spatial context of the vulva-displaying female, the figure who had in the meantime grown over and beyond her purely apotropaic function and who now stood in a clear relationship with death (Fig. 9.3). Despite the dominance of death, we should not forget that horns were also attributed with a protective and defensive function. This is made clear especially in the European-Christian cultural area, where both the devil as well as masks (for example the masks in Alemannic Carnival) frequently bear horns. Horns are signals within the framework of threatening and posing behaviour which have been taken on in a cultural context as a tool for self-presentation. The addition of horns leads to an enhanced effect of other defensive symbols and enhances the efficacy of idols or amulets. But also as an isolated picture, sign, or hand-held object, the horn unfolds its protective efficacy. The omnipresent horns in Çatal Höyük, especially their face-on depiction on wall reliefs, seamlessly fit into the defensive and protective symbolism and are meant to ward off threatening evil from houses and the town, on account of the potent depiction of militant defensive qualities.<sup>27</sup>

The discovery of human skulls fits well to the above-painted picture. Some were found on plinths underneath a relief of the displaying woman, some were found in a basket underneath a remodelled bull's head, some had been erected by the pictures of the vultures, and others in immediate proximity to the hearth.

And something else was also uncovered by the hearth<sup>28</sup>: (mostly) female figurines, small figurines occasionally depicting men, but more frequently women, some of whom copied the appearance of the displaying woman. One figurine must be noted, depicting a mature female on a seat flanked by leopards; the association with a throne comes to mind. Clearly, this figurine combines in itself the apotropaic function of naked femininity together with the attributes of ferocity and strength to produce an effective unity which from this moment on would be characteristic for powerful female figures—three to four millennia later, Cybele (Asia Minor) would have her wagon pulled by lions, and the Sumerian Inanna was accompanied by wild cats.<sup>29</sup> At the present moment, however, the female and occasional male figurines,

<sup>27</sup>Eibl-Eibesfeldt, Irenäus, and Christa Sütterlin (1992). *Im Banne der Angst. Zur Natur- und Kunstgeschichte menschlicher Abwehrsymbolik*. München and Zürich: Piper, pp. 187, 422.

<sup>28</sup>In this context, it must be noted that the residential hearth was and remained the place for domestic cultic actions into the Bronze Ages and beyond: Maran, Joseph (2012). *Ceremonial feasting equipment, social space and interculturality in Post-Palatial Tiryns*. In: Joseph Maran and Philipp W. Stockhammer (eds.), *Materiality and Social Practice. Transformative Capacities of Intercultural Encounters*. Oxford and Oakville: Oxbow books, pp. 121–136.

<sup>29</sup>For the historical imprinting „im gebärdensprachlichen Ausdruck“ (in sign language expressions) and in their immense persistence, see Warburg, Aby M. (2010). *Manet's Déjeuner sur*

and those from Çatal Höyük with a finish much less careful and meticulous than the above-mentioned example, alluded to something completely different: the cultural descendant of the deposited and occasionally (for example in Jericho) re-modelled skulls!

## Secondary Interments

Death as one of the momentous transitions within the cycle of life, as concluded by Arnold van Gennep, is accompanied by rituals in order to absorb the hole left in the social structure after the loss of an important person, in order to alleviate the pain, but also in order to redirect any rejection, occasioned by death, within the community into socially manageable pathways. What such a ritual could have looked like has been described briefly in Chap. 4, using an example from the field of social anthropology: dying, death, and funeral amongst the Toraja on Celebes.<sup>30</sup>

Let us briefly reiterate the most salient points: as for most traditional cultures, amongst the Toraja the occurrence of physical death does not entail the end of individual existence. Instead, death is a transition into a new form of existence, which requires a certain amount of time, and if it was to be successful, it requires care, attention, and adherence to a set of rules.<sup>31</sup> This includes the gradual interment, which from a physical perspective is documented by the decomposition of the corpse, but from an ideological point of view documents the deceased's journey into the Underworld.

As mentioned above, upon death, the Toraja are first afforded a primary burial: the body is wrapped into lengths of cloth, and the resulting roll, including drainage channels, is laid out for a period of at least one, but usually several years. During this period, the preparations for the secondary burial are made, which include the

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(Footnote 29 continued)

L'Herbe. Die vorprägende Funktion heidnischer Elementargottheiten für die Entwicklung modernen Naturgefühls. In: Werke in einem Band. Berlin: Suhrkamp, p. 655.

Fraser, Douglas (1966). The Heraldic Woman. A Study in Diffusion. In: Fraser, Douglas (Ed.) The Many Faces of Primitive Art. A Critical Anthology. Englewood Cliffs: Prentice Hall, pp. 36–99.

<sup>30</sup>However, the Toraja are no longer egalitarian, as their society has been divided into castes—possibly the result of the influence of Hinduism, widespread throughout Indonesia (especially prior to its Islamisation). Goudswaard, A. (1865). Sivadienst in Zuid Celebes. Mededeelingen Nederlandsch Zendeling-genootschap, 25, pp. 75–100.

Their religious behavior, however, is still typical for the religious stage of *primitive religion* sensu Bellah. Stöhr, Waldemar (1965). Die Religionen der Altvölker Indonesiens und der Philippinen. In: Stöhr, Waldemar, and Piet Zoetmulder: Die Religionen Indonesiens. Stuttgart: Kohlhammer, p. 99.

<sup>31</sup>Ibid., pp. 191–192.

preparation of a megalith to be erected in connection with the funerary celebrations on the fairground; the preparations also include a carving of the deceased, the so-called Tau-Tau, in which the deceased's liminal spirit can find safe haven. Once the big day has arrived, the festivities include a march-past of mourners and the slaughter of several water buffalo, killed with a single blow from the machete. Their blood is understood to replace the life-energy of the deceased. Their meat is subsequently divided amongst the guests, following a set pattern.

Equipped with new energy, the deceased can continue to exist in the afterworld, while another aspect of his spirit, the individual aspect of his personality, takes up residence in the Tau-Tau figure. This figure will then be placed on the burial ground by the family while the non-decomposed remains of the corpse will find their last resting place in a sealable recess.

One day a year is dedicated to the deceased: their images are bathed, dressed, crowned with flowers, given food, because the deceased continue to exist and are a part of the Toraja cosmos, even if in a different form of existence.<sup>32</sup>

In order to portray the closeness and inner logic of such an ideology of the societies of hoe-cultivators (without a division of labour), it must be noted that the Torajan ship-like house built on stilts perfectly represents their cosmos: underneath the house, between the stilts, buffalo are kept, the animals which must sacrifice their lives during a funeral. In the centre, in the actual living space, live the humans, while underneath the high ceiling shaped like a ship's bow, spirits dwell in the lofty heights. The roof here represents the overworld, the living space represents the human world, and the region between the stilts the Underworld.

The two-phase burial thus logically represents man's transition from the world of the living into a different world—the world of the deceased, whose continued existence is accepted, albeit in a different form. As spirits, they live with their families, but underneath the roof, having been given the necessary energy by the water buffalo. As ancestors, they continue to exist in the Tau-Tau, where they continue to be an object of continued care. The two-phase burial which extends over a considerable period of time shows that death is a process, a veritable transition in van Gennep's definition. The deceased is separated from his social surroundings during the first burial, the phase of *separation*. He then finds himself in the highly sensitive *liminal* phase, the actual change from a member of the world of the living to becoming a member of the world of the dead, until he is ultimately received in his new social environment (the world of the dead) during a final large festivity. From a social perspective, such an elaborate funerary ritual serves redistribution: within the framework of large-scale celebrations, goods are gathered together and consumed together or redistributed as gifts; only a small part remains

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<sup>32</sup>Berger, Peter (1999). *Die lange Reise der Toten: zwei Studien zu Ideologie und Praxis des Todes in Süd- und Südostasien*. Hamburg: Kovač.

For the importance of secondary burials from a religious, social, and psychological perspective, see Metcalf, Peter and Richard Huntington (1991). *Celebrations of Death. The Anthropology of Mortuary Ritual*. New York: Cambridge University Press, pp. 99–100.

with the deceased's family. Thus, any social imbalance is avoided, a precondition for a successful community in a society without any hierarchies. The communal rituals with their repetitive references to higher powers also strengthen the bond of the community, the hole created by the death of a member is closed, possible disruptions are healed.

A secondary burial as described here is not the exception, neither in ethnological record nor in the course of human history—on the contrary.<sup>33</sup> Even a Christian burial includes the custom of laying out and a wake, traces of ancient traditions.

## The Big Transition

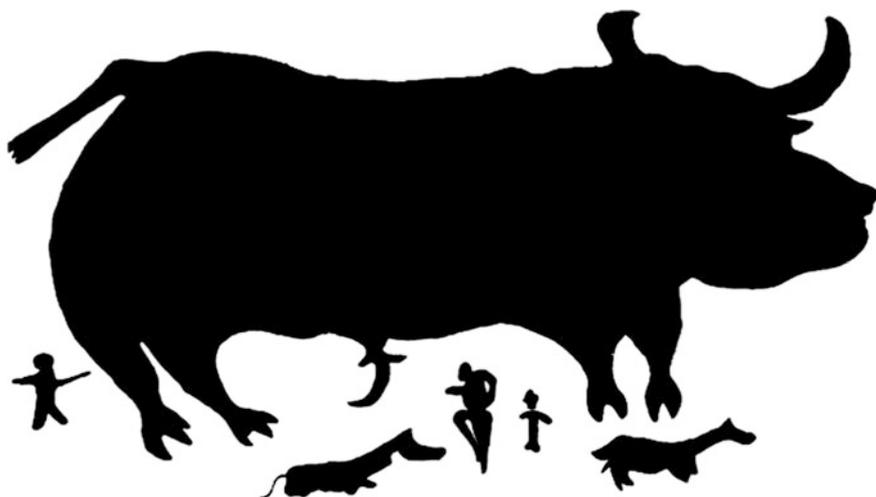
Approaching the question from the point of view of these transition rituals, we see how the individual elements of the Neolithic ideology, originating with the beginning of a sedentary lifestyle and farming, come together to form a whole.

As a consequence of settling, an egalitarian society arose, formed initially of hunters, but later of hoe cultivators, amongst whom strategies of conflict solution were of existential importance. In this context, rituals developed out of tried and tested behaviour protecting territory and warding off danger; possible points of conflict are thematised in these rituals and worked out by referring to common values and unquestionable powers. The displaying woman, initially serving only an apotropaic function, had evidently developed into such a power, and she eventually took on the characteristics of the primordial mother who was connected especially with death.

Death itself was extremely important in Çatal Höyük, everything from symbolism to interior design was focused on the topic. When in this early community of farmers an important member passed away, the corpse was buried initially, either at home or in an ossuary, as depicted on a wall painting. The deceased would remain there until the vultures, foxes, or weasels had removed all the meat from the bones, until they had macerated the deceased. Only then would the deceased be irrevocably interred, possibly within the framework of a large celebration during which many cattle would have had to sacrifice their lives. Whether in this instance their blood was also meant to replace the vital force/energy of the deceased remains to be seen. We know for certain, however, that the cattle slaughtered in the course of the celebrations were eaten at a common meal and their skulls including the horns

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<sup>33</sup>Webb Keane lists an additional example in the context of Çatal Höyük: the slaughter of buffalo in the framework of a ritual on the Indonesian island Sumba, and correctly interprets the application of buffalo horns on the houses of the Sumba as part of their self-presentation in the sense of a social ranking: Keane, Webb (2010). *Marked, absent, habitual: Approaches to Neolithic Religion at Çatalhöyük*. In: Hodder, Ian (ed.) *Religion in the emergence of Civilization. Çatalhöyük as a Case Study*. New York: Cambridge University Press, pp. 187–219.



**Fig. 9.5** Killing bulls in Çatal Höyük during a solemn death ritual (drawing by Karolina Rupik)

eventually wound up in the mourners' houses as wall decoration or on the edges of the sleep- and funeral platforms. Consequently, we know that the family of the deceased must have been able to host such an elaborate funeral—we are again confronted with self-presentation and ranking!<sup>34</sup>

The deceased himself was interred only once more. His final resting place was underneath the platform on which he had slept in his lifetime. He thus stayed at home, within the community of his family, but in the lower world, the Netherworld. His skull, however, in which his powers or his spirit as a member of the powerful telluric world presumably rested, was placed inside the house until eventually the custom arose of creating small figurines as ancestral figurines and placing them near the hearth—perhaps an entrance to the Underworld, as seen in Lepenski Vir? The skulls, doused with clay, and the almost life-size figures from Neolithic Jericho show clearly the transition between skulls and ancestral image! Just as in Lepenski Vir, the figurines occasionally were given the features of the primordial mother, evidence, that this mighty figure was connected to death (Fig. 9.5).

The event of the burial was subsequently documented: on the one hand through the respective paintings in the house, and then eventually by hanging the remodelled bulls' skulls on the walls, or using the skulls of the fox or weasel, over which breasts would be modelled, etc. The house was eventually renovated, the wall

<sup>34</sup>E.B. Banning also concludes: "At least one of their meanings is as memorials of feasts." Banning, Edward Bruce (2011). Comment on Ian Hodder and Lynn Meskell: A "Curious and Sometimes a Trifle Macabre Artistry". *Some Aspects of Symbolism in Neolithic Turkey*. In: *Current Anthropology*, Vol. 52, No. 2 (April 2011), pp. 235–263. Comment on pp. 252–253.

paintings disappeared under plain plaster, until the next large event required new changes.

The example of Çatal Höyük allows us to make the following interim conclusions: now, between the 10th and 7th pre-Christian millennium, there exists a veritable religion. A cosmos of the world of the living and the world of the dead (we do not yet know of a world in heaven), in which the life of man was celebrated and ritualised transitions from one stadium in life into the next found structure and dimension. The most important transition is the transition from the world of the living into the world of the dead; this process is documented by a two-phase burial process, to which corresponds on a spiritual level the deceased's journey into the world of the dead. Spatially, the deceased remains with his family, albeit in the Underworld, while his skull, and later the ancestral figurine, becomes the seat of his powers or spirit: the custom of depositing skulls ensuring territorial claims has thus developed into a religion which focusses on death and dealing with death.<sup>35</sup> In the same manner, an apotropaic gesture, displaying the vulva and breasts, has developed into an all-powerful figure which stands in close contact with death, and possibly also with life, and which can be addressed as primordial mother (see here also the following chapter). An early religion in the Levante or the upper regions of the Tigris must have been structured in a similar manner, because here as well we find rudimentary secondary burials, although in the case of Nevali Cori (Turkey), they were collective burials, while Çatal Höyük marks the beginnings for a house cult which was to become characteristic especially for the South-eastern European Neolithic and traces of which can still be found in historic times in the Roman worship of the Lares and Penates (Fig. 9.6).

We also stand on more familiar grounds with the primordial mother, as we know her, albeit in a weaker form, from mythology. In Babylon, we meet Tiamat, mother of the gods, who is disempowered after a battle, but whose flesh provides the matter for Earth; we also know of Gaia, the Greek mother goddess, the ancestor of the Titans and other deities. Especially the stories of her disempowerment make it clear

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<sup>35</sup>Akkermans and Schwartz similarly interpret this form of burial, which they discuss in much detail, focusing on Syria: Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 B.C.)*. Cambridge: Cambridge University Press, p. 96.

Goring-Morris and Belfer-Cohen state that “Near Eastern phenomena such as those most spectacularly demonstrated at Göbekli Tepe should thus most likely be viewed as the culmination of final Palaeolithic developments”, but without making clear which specific developments are meant or even discussing the respective scientific-theoretical background of such assumptions. Goring-Morris, A. Nigel, and Anna Belfer-Cohen (2002). *Symbolic Behaviour from the Epipaleolithic and Early Neolithic of the Near East: Preliminary Observations on Continuity and Change*. In: Gebel, Hans Georg K., Bo Dahl Hermansen, and Charlott Hoffman Jensen (eds.), *Magic Practices and Ritual in the Near Eastern Neolithic. Proceedings of a Workshop held at the 2nd International Congress on the Archaeology of the Ancient Near East (ICAANE) Copenhagen University, May 2000. Studies in Early Near Eastern Production, Subsistence, and Environment 8*. Berlin: Ex Oriente, pp. 67–79.



**Fig. 9.6** The expression of sign language in the Neolithic: a seated woman on a lion throne is (from *left to right*) the primordial mother found in Catal Höyük, a “terracotta grotesque figurine of a seated woman, 300 B.C.”, the goddess Rhea, and the goddess Cybele (© from *left to right* Roweromaniak, CC BY-SA 2.5, Archaeological Museum Athens, Conversationslexikon, and Marshall Astor, CC Attribution-Share Alike 2.0 Generic Licence)

that we are dealing with the remnants of ancient religious notions which had been overlaid with newer thoughts and then integrated into a new ideology—but more on this later!

## Chapter 10

# Ex Oriente Lux: Neolithic Ideology Becomes Popular

### The Successful Model “Neolithic” on the Rise

The question, already discussed in Chap. 8, of what made up the success of the so-called Neolithic revolution must be posed again, as the life of a farmer is no more secure or easier than that of a hunter: just as the hunter and gatherer must follow the wild beasts, i.e., extend his hunting radius during bad years, or change his diet, the farmer is tied to his land and must survive periods of drought, floods, or hail. Careful examination of the seasons with their characteristic weather events is a logical and necessary consequence! In addition, life as a farmer does not mean less work, nor did farming make life easier; on the contrary. Studies have shown that foragers only had to spend a fraction of their time to ensure their livelihood compared to the farmer. Nevertheless, the Neolithic lifestyle inescapably spread out towards the West, and we know today that immigrants from the Fertile Crescent introduced the Neolithic lifestyle first to Western Anatolia and then to the Balkan. This new life cannot have been wholly convincing, as it was only accepted by the indigenous people slowly over a period of several millennia. It is however clear that the habitat for foragers must have been shrinking rapidly in the face of the farmer's

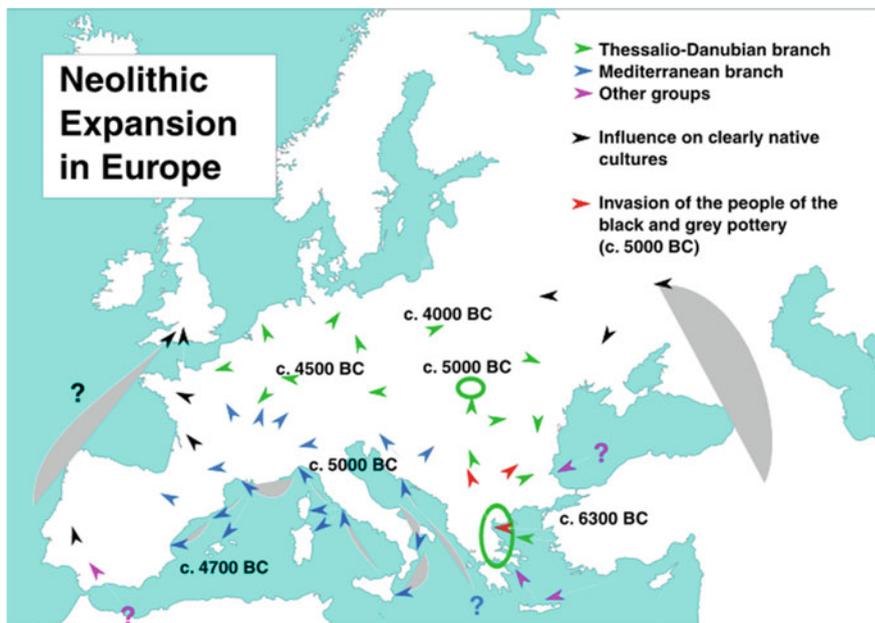


Fig. 10.1 The expansion of Neolithic cultures. © Cthuljew, Public Domain

competing economic model. Ultimately, they bowed to the pressure and would have had to join and participate in this new strategy of survival (Fig. 10.1).<sup>1</sup>

The arguably highly complex causes of the transition from roaming forager societies to settled farmers are summarized as follows by the archaeologists Peter Akkermans and Glenn Schwartz:

<sup>1</sup>Özdoğan, Mehmet (2005). The Expansion of the Neolithic Way of Life: What We Know and What We Do Not Know. In: Lichter, C. (ed.), *How Did Farming Reach Europe? Anatolian-European Relations from the Second Half of the 7th Through the First Half of the 6th Millennium Cal. BC*. BYZAS 2. İstanbul: Ege Yayınları, pp. 13–27.

Özdoğan, Mehmet (2010). Westward Expansion of the Neolithic Way of Life: Sorting the Neolithic Package into Distinct Packages. In: Matthiae, P., F. Pinnock, L. Nigro & N. Marchetti (eds.), *Near Eastern Archaeology in the Past, Present and Future. Heritage and Identity. Vol. 1. Proceedings of the 6th International Congress on the Archaeology of the Ancient Near East, May, 5th–10th 2008, Sapienza—Università di Roma*. Wiesbaden: Harrassowitz Verlag, pp. 883–97.

Özdoğan, Mehmet (2011). Archaeological Evidence on the Westward Expansion of Farming Communities from Eastern Anatolia to the Aegean and the Balkans. *Current Anthropology*, 52 (Suppl. 4):415–30.

Rollefson, G. and Rollefson, K. (1989). The collapse of early Neolithic settlements in the southern Levant. In: Hershkovitz, I. (ed.), *People and Culture in Change*. Oxford: BAR 508, pp. 73–89.

Bocquet-Appel, J., P. and Bar-Yosef, Ofer (eds.), (2009). *The Neolithic Demographic Transition and its Consequences*. New York: Springer.

“The complexity of the rise and spread of agriculture is increasingly acknowledged, with developmental patterns peculiar to each region ever more apparent. It is important to realize that farming was neither the production of food according to an economic rationale or an inevitability imposed to early Neolithic communities by large-scale events beyond their control. Instead, the adoption of agriculture was part of the profound transformation of the entire forager society and an adjustment to a wholly different set of societal values and meanings. Recent approaches—favoured here—bring the social dimensions in the transition to agriculture to the fore and suggest that it was the product of a shift in thinking which involved new types of settlement, burial, subsistence, and material culture.”<sup>2</sup>

It remains a fact that Neolithic technologies including pottery, animal husbandry, and agriculture prevailed and experienced a triumph on their journey westwards. As a consequence, permanent villages were erected, which necessarily entailed the development of an early architecture and a new form of social communities, and thus the ideology and attitude towards life turned Neolithic.<sup>3</sup>

Specifically, this means that the Neolithic ideology with the heraldic female and its rituals and worship of the dead formed the cosmos of these early farmers, and was adapted corresponding to the local requirements. Or, expressed in biological terms: the Neolithic worldview which had developed from precursors in the Levant and Eastern Anatolia (biological behavioural dispositions) adapted to different habitats and thus manifested itself in different localised mutations.<sup>4</sup>

## ***Urmutter and Death***

One of the dominating figures of the Neolithic worldview is undoubtedly the heraldic woman, originating from an idol that unified effective defensive signals, who is repeatedly connected with death, and who has here frequently been referred to as primordial mother. Her appearance is unambiguous: a representation of a voluptuous and expressively feminine woman, shown from the front. The original threatening gestures, such as the obscene spreading of her legs and the ensuing presentation of the vagina, are frequently, but not always evident. The effect is

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<sup>2</sup>Akkermans, Peter M.M.G., and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000–300 BC)*. Fifth edition. Cambridge, New York, Madrid, Cape Town, Singapore, Sao Paulo, Delhi, Dubai, Tokyo, Mexico City: Cambridge University Press, pp. 69–70.

<sup>3</sup>Đuru, Refik (2008). *From 8000 BC to 2000 BC. Six thousand years of the Burdur-Antalya region*. Suna-İnan Kırac Akdeniz Medeniyetleri Araştırma Enstitüsü, Antalya.

Müller, Johannes (2015). *Movement of Plants, Animals, Ideas, and People in South-East Europe*. In: Fowler, Chris/Jan Harding/Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 63–80.

<sup>4</sup>Lewis-Williams, David and David Pearce (2005). *Inside the Neolithic Mind. Consciousness, Cosmos and the Realm of the Gods*. London: Thames and Hudson, pp. 20–23.

strengthened by the presence of dangerous animals which flank her in a heraldic manner. While the motive of this heraldic female is nowhere else as dominant as in the wall reliefs of Çatal Höyük, she remains a firm part of the ideologically motivated artistic production, suggesting the continued relevance of this primordial mother-figure who after all, as the previous chapter has demonstrated, represents the connection to the first religions transmitted in writing.<sup>5</sup>

The connection between the female and death, which is especially clear in Çatal Höyük and Lepenski Vir, may initially irritate, as today we associate the female much more strongly with the process of birth as the beginning of life—an association which initially superimposed onto the heraldic female the symbol of fertility, or rather gave her the status of mother goddess.<sup>6</sup> However, in his works on the *Mutterarchetyp* (mother archetype), the founder of analytic psychology, Carl Gustav Jung (1875–1961), has observed that female figures had in mythology been repeatedly brought into connection with death. According to Jung, archetypes are fundamental conceptual patterns which as a form of imprint are inherent in all humans as part of a collective unconscious and which structure our life experiences in the shape of archetypical events (e.g., birth, initiation, marriage, death), archetypical motives (e.g., creation or apocalypse), and archetypical figures (e.g., mother, father, child, hero, shadow, wise old man or woman). It is important to point out that according to Jung, it is merely the forms of the archetypes which belong to the predetermined psychic disposition of men. Their specific content-related configuration is dependent on the respective cultural context, and they are only accessible to us in culturally fixed forms in myths, fables, stories, or through art.<sup>7</sup>

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<sup>5</sup>Wunn, Ina (2014). Die Entstehung anthropomorpher Gottesvorstellungen. In: Andreas Wagner (ed.), *Göttliche Körper—Göttliche Gefühle. Was leisten anthropomorphe und anthropopathische Götterkonzepte im Alten Orient und Alten Testament?* Göttingen: Vandenhoeck & Ruprecht.

Fraser, Douglas (1966). *The Heraldic Woman. A Study in Diffusion.* In: Fraser, Douglas (ed.), *The Many Faces of Primitive Art. A Critical Anthology.* Englewood Cliffs: Prentice Hall, pp. 36–99.

<sup>6</sup>Gimbutas, Marija (1991). *The Civilization of the Goddess: The World of Old Europe.* San Francisco: Harper.

Mellaart, James (1967). *Çatalhöyük, A Neolithic Town in Anatolia.* London: Thames and Hudson.

Goring-Morris, A. Nigel, and Anna Belfer-Cohen (2002). Symbolic Behaviour from the Epipaleolithic and Early Neolithic of the Near East: Preliminary Observations on Continuity and Change. In: Gebel, Hans Georg K., Bo Dahl Hermansen, and Charlott Hoffman Jensen (Eds.) *Magic Practices and Ritual in the Near Eastern Neolithic. Proceedings of a Workshop held at the 2nd International Congress on the Archaeology of the Ancient Near East (ICAANE) Copenhagen University, May 2000. Studies in Early Near Eastern Production, Subsistence, and Environment 8.* Berlin: Ex Oriente, pp. 67–79.

Burkert, Walter (1985). *Greek Religion: archaic and classical.* Oxford: Blackwell, p. 12.

<sup>7</sup>Jung, Carl Gustav (1995). *Gesammelte Werke, Vol. 11.* Düsseldorf: Walter, p. 368.

Neumann, E. (2003/1957). *Die Große Mutter. Die weiblichen Gestaltungen des Unterbewußten.* 11th edition. Mannheim: Patmos.

Beth, M. (2000/1935). Article Mutter. In: *Handwörterbuch des deutschen Aberglaubens Vol. 6,* Berlin/New York: de Gruyter, pp. 694–699.

The archetype of the mother, according to Jung, appears in the immediate experiences of mother figures such as mother, grandmother, nurse, but also in the form of more mysterious female figures such as wise old woman or witch, as divine mother figures such as Isis, Cybele, Demeter, or Maria, or even as mythical progenitrix Tiamat or Eva. Furthermore, landscapes, caves (womb), standing waters, wells, and oceans (fertility, amniotic fluid) can symbolize the mother. Already amongst some of these examples, alongside the caring, life-sustaining aspects of the motherly, we see the more dangerous sides of the mother archetype which in turn is marked by a destructive, all-consuming facet. According to Jung, on the one hand this represents a threat on account of the taboo of incest, but on the other is merely the exuberant, jealous, oppressive, and all-consuming motherly love. Viewed from this angle, monster and dragons can also be a symbol of the mother (e.g. Tiamat). Many creation myths include the motive of a primordial monster being killed by a hero in order to prepare mother earth for the world to be created. An impressive example is the above-mentioned Babylonian Tiamat, who in the form of a dragon is conquered by the god Marduk, and from her body the world is formed. Here we see a clear relationship between the mother archetype and death.

Aside from the destructive aspect of the mother archetype, the notion of a symmetry between life and death plays a role in the relationship between mother and death, which manifests itself especially in the notion of fertility. In a symmetrical fashion, the mother thus represents not only existence (birth), but also decay (death), which is necessary in order to create new life (compare here for example the Hainuwele myth below). Birth and death are both represented through the mother archetype: the deceased returns to the womb of Mother Earth. In the face of these associations between mother and death, it is not surprising that in historic religions, the Underworld is also represented by a female deity. For example, we know of the goddess Hel, who reigns over the Germanic Underworld; in later times, Hel transformed to hell, the designation for the Christian Underworld.<sup>8</sup>

Jung's theory of archetypes in the collective unconscious has at times been sharply criticized (not only in the field of psychology) for being too speculative. However, one does not have to be a supporter of the theory in order to recognise that there are continuous repetitive motives throughout various cultures and religions. These mirror the foundational experiences which men have made at all times.<sup>9</sup>

Within the framework of the present discussion, it remains to note that we come across the change of the apotropaic female to primordial mother as a symbol of life

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<sup>8</sup>Kinsley, David (1989). *The Goddesses' Mirror: Visions of the Divine from East to West*. State University of New York Press.

<sup>9</sup>Morgenthaler, Christoph (1997). Carl Gustav Jung (1875–1961) In: Michaels, Axel (ed.), *Klassiker der Religionswissenschaft. Von Friedrich Schleiermacher bis Mircea Eliade*. München: Beck, pp. 244–245 (234–245).

and death at precisely the time of transition to an agricultural economic system, and thus at a period during which we trace a rise in the relative importance of the natural interplay of becoming and dying.<sup>10</sup>

## Ritual and Myth

With the change of the apotropaic, sexually threatening female into an almighty figure with a relation to death, we have arrived at the religious spheres of the Neolithic, a time of early agriculture and a sedentary lifestyle, which are vaguely accessible to readers familiar with the history of religions. We say vague because the oldest familiar cosmogonies of the Enûma Eliš, the Pelasgian, or the Homeric creation myths (which all include the conquest of a primordial mother) clearly indicate ancient religious layers.<sup>11</sup> However, these were only recorded in a time in which new divine dynasties had already superseded the primordial holy figures and a new, now stratified society had different demands of its ideology.<sup>12</sup> The militant hero, mythical conqueror of the primordial mother, only became a feature in a world in which early city states led by kings were at war with each other and fought for supremacy. More than 2000 years of historical development, however, separate the first farmers from heroes such as Marduk, Gilgamesh, or Hercules, until this early egalitarian community of barely settled famers developed into a stratified society whose elite—and their fate—were somehow connected to the gods, which in turn carried with it various privileges.

This stratified society with its heroes, however, still lay far ahead in the future and the Neolithic had no need for veritable gods. Thus, the role of the primordial mother, at least in the first half of the Neolithic, remains to be defined in more detail, over and beyond the basic lines drawn by C.G. Jung with the help of later religio-historical material. The noted ethnologist Adolf Ellegard Jensen (1899–1965)—who had actually studied physics—introduced the term *dema* into

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<sup>10</sup>The authors would like to thank Constantin Klein from the University of Bielefeld, Co-author of the German version of this book, for the interpretation of the primordial mother from a psychological perspective.

<sup>11</sup>Witzel, E. J. Michael (2012). *The Origin of the World's Mythologies*. New York: Oxford University Press, p. 149.

<sup>12</sup>Batto, Bernard Frank (1992). *Slaying the dragon: mythmaking in the biblical tradition*, Westminster: John Knox Press.

Lambert, Wilfred G. (2013). *Babylonian creation myths* [Online-edition].—Winona Lake, Indiana: Eisenbrauns.

Lambert, W. C. and S. B. Parker (1966). *Enûma Eliš. The Babylonian Epic of Creation*, Oxford: Oxford University Press.

William Ewart Gladstone (1858). *Studies on Homer and the Homeric Age* (3 vols). London: Oxford University Press.

William Ewart Gladstone (1870). *Juventus Mundi—The gods and men of 'the heroic' age* (2nd edition, revised). London: Macmillan and Co.

ethnology as a result of intensive study in the South Pacific. The dema, according to Jensen's studies, is a supernatural creature which walked on Earth at the beginning of (the respectively socially relevant) time, made wonderful things happen in its vicinity, was consequently murdered and hacked into pieces but then ruled the world of the dead as a deity of death. The more important crops were created out of its corpse. Events connected with this primordial death are the foundation of social order and the maintenance of this social order requires their repetition within the framework of a ritual in regular intervals. As a consequence of Jensen's studies during an expedition in 1937 to the Maluku Island of Ceram (today Seram), the Hainuwele myth has acquired much fame, as it was used as Jensen's case study for *Das religiöse Weltbild einer frühen Kultur* (published 1948).

The myth narrates that at the beginning of time, when primeval beings lived on Earth who knew neither death nor fleshly love, a man named Ameta went hunting with his dog and came across a wild boar which fled into a pond and drowned. Ameta pulled the boar out of the water, and a coconut had caught on its tusks: coconuts however were unknown at that time. Ameta went home with the coconut and put it on a stand. During the night, he dreamt that a man ordered him to plant the coconut. He followed this voice and after 3 days, a palm tree had grown out of the nut, which after another 3 days already carried fruit. Ameta wanted to cut off the flowering branches to make palm wine when he cut his finger and blood dropped onto the plant. A small girl emerged from the mixture of blood and palm juice, which he took home and bundled into a *sarong patola* (a sarong with a snake pattern), and he named her Hainuwele—coconut branch. After 3 days, the girl had developed into a young woman of marriageable age, a Mulua, who possessed the most wonderful characteristics, as whenever she defecated, out came valuable objects which made her father a rich man. This however caused much jealousy to arise. After some time, a large Maro-dance took place, during which the women would sit in the centre of the dancers and hand out betel nuts. Hainuwele, however, offered precious objects and was murdered—during the dance, she was pushed towards a pit, fell inside, and was covered with earth. Ameta waited for his daughter in vain and knew she had been murdered. With the help of the leaf veins of the coconut tree, he found his daughter's corpse, unburied her, hacked her body into pieces, and buried the individual pieces on the fringes of the dance ground. From these pieces of Hainuwele's corpse, then, developed the tubers which formed the staple food of the locals. Ameta however did not bury her arms, but took them to Mulua Satene, who herself had developed out of an unripe banana and ruled over the people. Satene consequently grew angry because the people had committed murder. She ordered them to line up at a large gate and separated them into those creatures who live on earth today. Satene herself left earth to live and rule in the realm of the dead. Only after their death and a difficult journey can one reach Mulua Satene again. And from this time, the world knew death and fleshly love.<sup>13</sup>

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<sup>13</sup>Jensen, Adolf Ellegard (1948). *Das religiöse Weltbild einer frühen Kultur*. Stuttgart: August Schröder, pp. 33–43.



**Fig. 10.2** The Marind-Anim, festively attired for a festival, described by the ethnologist Adolf Ellegard Jensen. South coast of the former Dutch New-Guinea. A postcard from the 1920s

As Jensen goes on to explain, this is a characteristic narrative form which existed in a similar fashion amongst all neighbouring peoples during the time of his expedition, and also amongst the Marind Anim (see Fig. 10.2): after a dramatic event, man's primeval times came to an end (the world of foragers?) and their life experienced a radical change. The most important agricultural crops appeared in the context of this primordial event, but also the concepts of love and death, social structures, and the basic forms of a ritual were introduced—in this case the Maro dance. The myth in a strictly religio-scientific understanding, a meaningful creation narrative, thus interprets the world from a metaphysical aspect. The myth in no manner wants to explain the world from a scientific point of view, but goes deeper, where scientific explanations must fail: focus is on man's basic questions, love and death, the conditions of being human, and social order.

The order, explained by the myth and considered to be just and correct, remains but fragile. Just like Mulua Hainuwele and Mulua Satene ordered the world, it must be reordered from time to time so that it does not sink back into chaos. The events surrounding Hainuwele must therefore be repeated in regular intervals—with the help of a ritual! In this context especially, with its social importance for conflict resolution, the ritual from a theological perspective represents the production or reproduction of a good and purposeful order and also includes existential questions of death and love.<sup>14</sup>

<sup>14</sup>Ibid., pp. 152–156.

See, as well, Witzel, E.J. Michael (2012). *The Origins of the World's Mythologies*. Oxford: Oxford University Press, pp. 404–405.

With his sensitive analysis, Jensen led the contemporaneous theories of the alleged primitiveness of the religions of the so-called primitive people (Condorcet or Comte, see Chap. 1) ad absurdum, who wanted to see only superstition and hopeless backwardness in the rites and actions of these traditional peoples. Jensen also offered an explanation for the previously inexplicable elements of the cultic actions and myths of classical antiquity: here as well it was possible to reconstruct a temporal horizon which rests on notions much older than the ancient pantheon and reflects the mental-spiritual experiences of an earlier culture—the Neolithic.<sup>15</sup>

What does the primordial mother then mean in this context? She is clearly a powerful female figure in the vein of Mulua Hainuwele or Satene, who is powerful but not immortal, and who leaves the world after a dramatic series of events to become ruler of the Netherworld. In this context, not only death, but fleshly love and thus also birth became part of the human existence, and simultaneously agricultural crops developed—consequently, the primordial mother or female *dema* is brought into connection with both birth and death as well as with fertility of the fields. In this case it must be the interchange of becoming and decaying which contributed substantially to the development of the heraldic woman into a primordial mother with her relationship to death. Even if the original myth surrounding the displaying female, the Anatolian primordial mother, cannot be reconstructed, the basic pattern of a powerful female figure with a protective function and clear relations to death on the one hand, and social order on the other must be a reasonable assumption and close to reality. The same could be said for the ritual which repeats primeval events, based on metaphysical reasoning, in order to maintain social order and to highlight common values.

The fact that the mythical *dema* or primordial mother is in fact identical with the heraldic woman of the Neolithic, and that this originally Neolithic figure including an accompanying myth could spread out from Anatolia to Asia and ultimately the South Pacific is made clear by the art historian and archaeologist Douglas Fraser (died 1982) in an extraordinary study, although he was not aware of Jensen's study and thus could not draw the relevant conclusions:

“In legend, the woman [*Urmutter*/primordial mother; supplemented by the authors] travelled up one of the tributaries of the Sepik, where she gave birth to this bird and, at the same time, to a large lizard (or a great snake). The latter wriggled toward the sea, gourging out the present sinous course of the Sepik River. This divided the country into two halves and created the division into two phratries. Linked to these myths is the story of the male prankster Betman-Gambi, who also traveled widely. Upon his death, Shotkaman-Agwi [the *Urmutter*] spread herself out on his body, hoping to revive him. The lizard glided into the corpse and she was able thereby to awaken life in the deceased. This legend was illustrated by means of carvings and pantomime in which an image of the male with a large opening in

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<sup>15</sup>Jensen, Adolf Ellegard (1948). *Das religiöse Weltbild einer frühen Kultur*. Stuttgart: August Schröder, pp. 66–68.

Burkert, Walter (1990). *Wilder Ursprung. Opferritual und Mythos bei den Griechen*. Berlin: Wagenbach.

his body is transfixed by another sculpture representing the woman, the lizard... This ritual mimics copulation, though here is the female that brings life to the male through the lizard offspring of her womb... The whole episode is probably an attempt mythically to explain the origin of human culture and the relationship between the sexes."<sup>16</sup>

## Hacılar

The resounding success of the primordial mother-model can be seen not only in the above-mentioned Neolithic excavation sites where the displaying woman repeatedly appears—especially impressive in Lepenski Vir and of course in Çatal Höyük—but also over the course of the subsequent millennia first in Western Anatolia and finally in the Balkan, where we frequently come across this early supernatural figure or *dema* who slowly experiences the most varied mutations in terms of both her appearance as well as her importance. How little of the figure's image—the iconography—was fixed, how strongly it varied from an artistic perspective, and how difficult it often is to recognise her, is demonstrated by the example of Hacılar.<sup>17</sup>

Hacılar, or Hacılar Höyük, a Neolithic settlement excavated by James Mellaart between 1957–1960, is located in the immediate proximity of the town of Burdur in the South-west of the Anatolian Plateau. Here, in a fertile valley with a mild climate and good water supply, Neolithic farmers settled for the first time around 8700 ybp, cultivated goat and perhaps already cattle, and grew the first crops such as emmer and einkorn. After several early phases of rise and fall, roughly 1000 years later a village developed which was burnt down. What for the local inhabitants must have been a tragic fate turned out to be a stroke of luck for archaeologists, because organic material is much more resistant against decay if it is charred! We thus know that this village, Hacılar VI, consisted of a row of two-storey, square houses with a floor area of roughly 30–50 sqm which grouped around yards with covered hearths. The houses could be entered through a wide portal with double-winged doors. The interior was not elaborate, boasting only fire places and shelf-like recesses in the walls for storage.<sup>18</sup>

Hacılar VI also remains unexciting in regards to its settlement situation, as do the subsequent, younger levels of this location. Hacılar became famous on account of its outstanding ceramic as well as its fascinating female figurines. The latter are 7–24 cm large (or small!), usually red and crème painted clay figurines which were

<sup>16</sup>Fraser, Douglas (1966). The Heraldic Woman. A Study in Diffusion. In: Fraser, Douglas (Ed.) The Many Faces of Primitive Art. A Critical Anthology. Englewood Cliffs: Prentice Hall, pp. 48.

<sup>17</sup>Mellaart, James (1961). Hacılar: A Neolithic Village Site. Scientific American 205, pp. 86–98.

<sup>18</sup>Mellaart, James (1970). Excavations at Hacılar. British Institute of Archaeology, Ankara. Occasional publications, Nr. 9.

Schoop, Ulf-Dietrich (2011). The Chalcolithic on the Plateau. In: Steadman, Sharaon R. & Gregory McMahon (eds.) The Oxford Handbook of Ancient Anatolia 10,000-323 B.C.E. New York: Oxford University Press, pp. 153–154 (150–173).

**Fig. 10.3** Female figure from Hacılar (Turkey) with apotropaic gesture of presenting her breasts



predominately found close to the domestic fireplaces. Despite several characteristic stylistic elements such as round arms and thighs, small hands and feet, and emphasised breasts, the figurines portray individual features especially in terms of age and hairstyles—thus, rather than a type, these figurines represented individuals. To this must be added several attributes which are familiar to us from Çatal Höyük, such as the leopard, in this case in the arms of a young woman. The soothing and threatening gestures of the heraldic woman with her splayed legs and breast-offering gestures can also be found again (Fig. 10.3).

The discovery location however tells us little about the use of these figurines. Although they were commonly found, as mentioned above, near the fire place, they were never uncovered together with other kitchen utensils, and parallels with Catal Hüyük and Lepenski Vir suggest that we are dealing with ancestral figurines in the context of a death ritual. Clear references to death and burial customs are missing.<sup>19</sup>

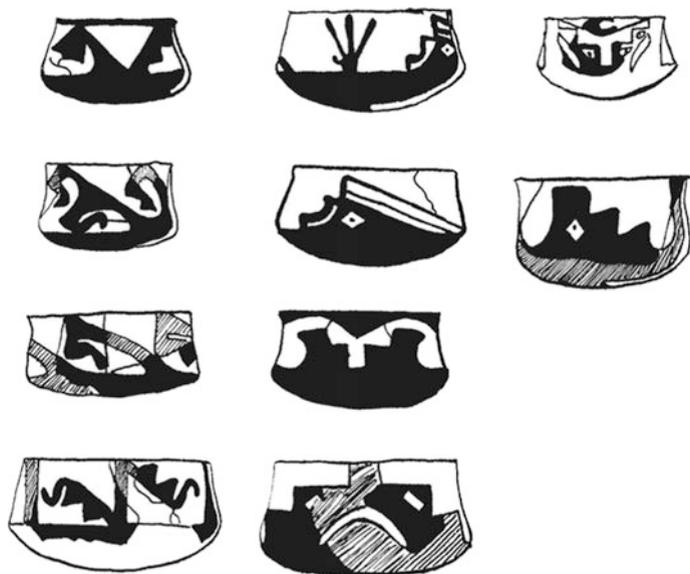
However, the motives themselves which in Çatal Höyük were death's constant companions, are in fact present in Hacılar—the primordial mother and the bull—although not in the form of a life-size relief or bucrania. Instead, they appear as impressive motives on the ceramics: their images were found in various constellations on cups and bowls (Fig. 10.4).<sup>20</sup>

Even though the motives often experienced a change or mutation following the regularities recognised in cultural ethology (see Chap. 7), the original motives are nevertheless recognisable, even more so for those familiar with their line of development; these include the heraldic female (female dema deity, Fig. 10.5), the threatening eye (Fig. 10.4), or the bucranium mutated into a pattern (Fig. 10.6).

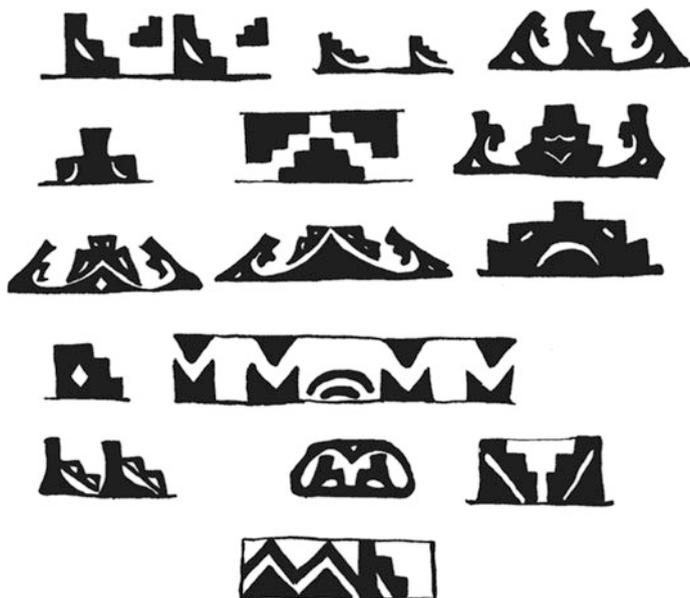
We see here the female figure seated on a throne from Çatal Höyük, both from a frontal view and from the side; the motive is simplified as a step pyramid or as a set

<sup>19</sup>Duru, Refik (1999). The Neolithic of the Lake District, in: Özdoğan, Mehmet und Neziha Başgelen, Neolithic in Turkey. The Cradle of Civilization, Istanbul, pp. 178–179.

<sup>20</sup>Mellaart, James (1970). Excavations at Hacılar. Plates and figures. British Institute of Archaeology, Ankara. Occasional publications, Nr. 10.



**Fig. 10.4** Ceramics from the excavation layer IIB in Hacilar (Drawing: Karolina Rupik following Mellaart)



**Fig. 10.5** The ceramic motive of the heraldic female (Drawing: Karolina Rupik following Mellaart)



**Fig. 10.6** Bucranium motives on ceramic (Drawing: Karolina Rupik following Mellaart)

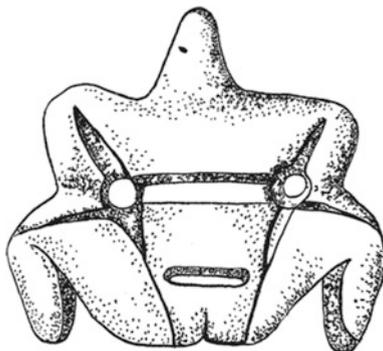
of steps, both frequently flanked by flourishes which, albeit only if the original motive is familiar, can be identified as cattle horns.

The heraldic woman, the dema, is thus omnipresent also in Hacılar, along with the bucranium, and the fact that they have been skeletonised, dismantled into their individual elements, put together anew, subject to the rules of simplification, doubling, and luxuriating etc., makes it clear that this figure had become a natural element of the Anatolian cosmos.<sup>21</sup>

**Ancestral Cult: The Development of House Shrines**

But back to the figurines which we came across for the first time in Lepenski Vir, Çatal Höyük, and Hacılar and which, at least in the first two of these locations, stand in close context with funerals. These artistic objects, usually no larger than the palm of our hands, popped up throughout South-east and Eastern Europe during

<sup>21</sup>Koenig, Otto (1975). *Urmotiv Auge*. Munich: Piper Verlag.



**Fig. 10.7** Achilleion: the heraldic female as an amulet (Drawing: Karolina Rupik following Gimbutas)

the spread of the Neolithic, in such a large number that they can be considered a veritable characteristic feature of this era.<sup>22</sup>

Another settlement to be mentioned is the early Neolithic Achilleion (8400–7600 ybp) in Thessaly, part of the so-called Sesklo culture, in which female figurines with the already familiar ethological signs of presenting the vulva and breasts were uncovered predominantly near fire places.<sup>23</sup> An exception is an amulet made from black stones depicting the heraldic female, discovered in a storage pit. The amulet evidently had a protective function to fulfil, namely protecting the supplies from thieves or pest infestation (Fig. 10.7).<sup>24</sup>

In the same location, but in the subsequent, younger occupation layers, figurines appear frequently in the immediate proximity of fire places, covered ovens, or hearths, usually together with especially beautiful vessels (Fig. 10.8).

These figurines take on ethological symbols in a wholly undisguised manner: presenting the vulva and offering the breasts are the norm rather than the exception and prove that here as well, in South-east Europe where the Neolithic had barely begun to spread, the inhabitants could not abstain from the apotropaic characteristics of these small idols. Even more interesting, however, is a new feature: the figurines are frequently depicted seating, sat on a chair, or were cast on all fours straight away, thereby making it easier for the figurines to be erected near the fire

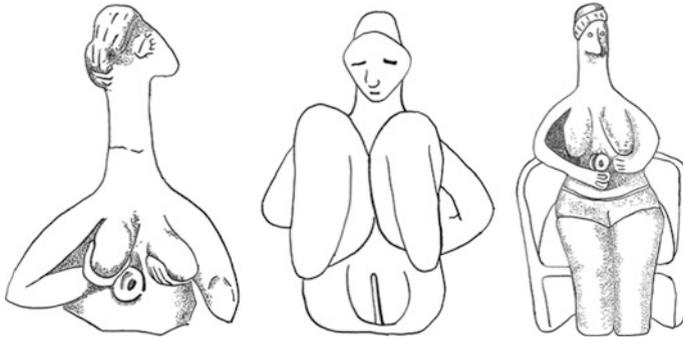
<sup>22</sup>Perlès, Catherine (2001). *The early Neolithic in Greece: the first farming communities in Europe*. Cambridge, Cambridge University Press.

Talalay, Lauren E. (1993). *Deities, Dolls, and Devices. Neolithic Figurines from Franchthi Cave, Greece*. Bloomington and Indianapolis: Indiana University Press.

Marangou, Christina (1992). *Eidolia. Figurines et miniatures du Néolithique Récent et du Bronze Ancien en Grèce*. Oxford: BAR.

<sup>23</sup>Gimbutas, Marija, Shan Win, and Daniel Shimabuku (1989). *Achilleion. A Neolithic Settlement in Thessaly, Greece, 6400–5600 BC*. Los Angeles: University of California, pp. 171–227.

<sup>24</sup>Gimbutas, Marija, Shan Win, and Daniel Shimabuku (1989). *Achilleion. A Neolithic Settlement in Thessaly, Greece, 6400–5600 BC*. Los Angeles: University of California, p. 181.



**Fig. 10.8** Figurines from Achilleion (Drawing: Karolina Rupik following Gimbutas)

place.<sup>25</sup> This feature allows for the following conclusion: they were no longer used only within the context of a temporary event, but now had been appointed a continuous presence by the fire place, where they were obviously worshipped and given food offerings (hence the vessels).

These and other discoveries from the Neolithic in South-eastern and Central Europe demonstrate the transition of these figurines, who had originally been connected to the visualisation of death during funerary rites and the immediate period afterwards, and who had now become something new. Veritable cult corners with small idols and especially beautiful vessels had sprung up inside houses—occasionally also miniature vessels—which, given our knowledge of their origins in the Fertile Crescent—can only mean one thing: they are ancestral figurines which were worshipped within the context of a house cult (Fig. 10.9).<sup>26</sup>

Cultic corners or altar-like platforms were not the only feature relevant for religious behaviour, but house models also played an important role, such as the one uncovered from the Middle Neolithic settlement Platia Magoula in Zarkos (Fig. 10.10).<sup>27</sup> Here, underneath the floors of a residential building, excavators uncovered a model house made of clay without its roof, but with interior details such as a sleeping platform, door opening, and oven, including 8 figurines. Evidently, the model had been buried underneath the floor within the context of a ritual as a building sacrifice and replaced the former burials within houses and the

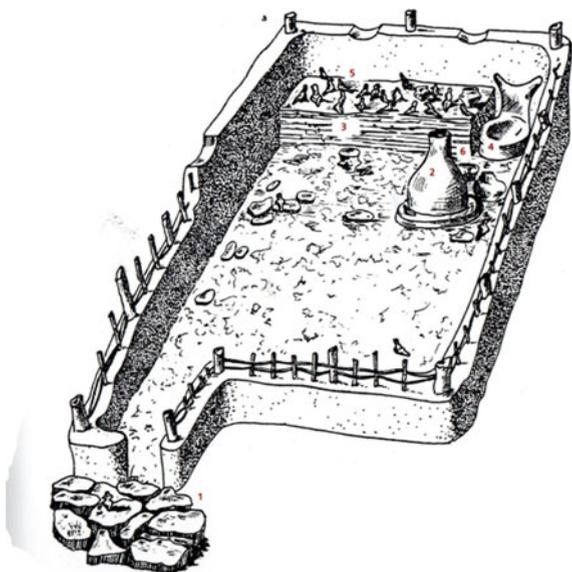
<sup>25</sup>Gimbutas, Marija, Shan Win, and Daniel Shimabuku (1989). *Achilleion. A Neolithic Settlement in Thessaly, Greece, 6400–5600 BC*. Los Angeles: University of California, pp. 179–199.

<sup>26</sup>Gimbutas, Marija (1996). *Die Zivilisation der Göttin*. Frankfurt am Main: Verlag Zweitausendeins, pp. 260–262.

<sup>27</sup>Gallis, Kostas (1996). *Die Grabungen von Platia Magula Zarkou, Souphli Magula und Makrychori 2*, in: Alram-Stern, Eva, *Die Ägäische Frühzeit, Vol. 1: Das Neolithikum in Griechenland; Forschungsbericht 1975–1993*, Wien, pp. 521–528.

Summative from an archaeological perspective: Nanoglou, Stratos (2015). *A Miniature World. Models and Figurines in South-East Europe*. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 621–637.

**Fig. 10.9** The “temple” of Sabatinovka (Ukraine) in the Moldova region (first half, 7000 ybp) (Drawing: Karolina Rupik following Gimbutas)

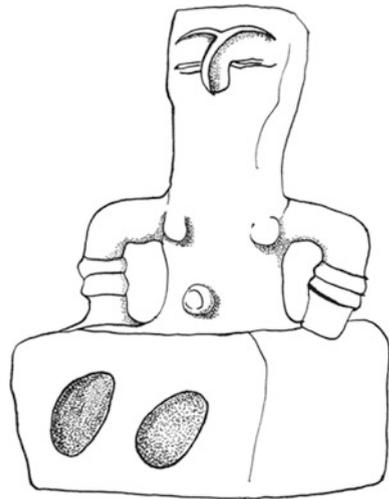


**Fig. 10.10** From Platia Magoula in Zarkos (Late Neolithic: 5300–4800 v. Chr.) (Drawing: Karolina Rupik)



depositing of skulls. Where once, ever since the Palaeolithic, skulls had been deposited in order to justify territorial claims, ancestral figures had taken on this responsibility. The clay images of ancestors would have been “buried” underneath the floor in proximity to the fire place and thereby indicated continuity on the one hand, and on the other hand they suggested that the house was considered holy and part of the Neolithic cosmos.

**Fig. 10.11** Model house, or rather house altar, from the Neolithic Macedonia (around 5500 B.C.) (Drawing: Karolina Rupik)



These little architectural models were not always used as building sacrifices, but have been uncovered in other locations as well, for example frequently near the fire place, the ancient cultic site, and depicted motives reminiscent of the domineering primordial mother of Çatal Höyük: the model house was dominated by a female figure who simultaneously was the house itself and evidently was considered its protector (Fig. 10.11). The primordial mother had already developed individual traits, special characteristics, and responsibilities, which in turn could indicate the process of hypostatisation.<sup>28</sup>

The custom of worshipping one's ancestors inside one's home was maintained over many millennia: not only does Walter Burkert, expert of Greek religion, speak of house cults in Crete during the Bronze Age,<sup>29</sup> but even in Ancient Rome the Lares continued to be worshipped, the domestic guardian spirits, who spoke thus according to the Roman poet Plautus:

Lest any one should wonder who I am, I will tell you in a few words. I am the household God of this family, from whose house you have seen me coming forth. It is now many years that I have been occupying this house and I inhabited it for the father and the grandfather of this person who now dwells here. By beseeching me, his grandfather entrusted to me a treasure of gold, unknown to all. He deposited it in the midst of the hearth, praying me that I would watch it for him.<sup>30</sup>

The Romans also, as part of the house cult, worshipped the *dii penates*, who protected the family and ensured the daily supply of food stuffs. Their shrine was

<sup>28</sup>Gimbutas, Marija (1996). *Die Zivilisation der Göttin*. Frankfurt am Main: Verlag Zweitausendeins, pp. 256–257.

<sup>29</sup>Burkert, Walter (2003). *Greek Religion: archaic and classical*. Oxford: Blackwell, p. 29.

<sup>30</sup>Plautus, T. Maccius (1912). *Aulularia, or The Concealed Treasure The Comedies of Plautus*. Henry Thomas Riley. London. G. Bell and Sons, The Prologue.

**Fig. 10.12** Sacrificial altar and niche for figurines (Lararium) in Pompeii (79 A.D.). (Openluchtmuseum in Nimwegen; © Wolfgang Sauber; Creative Commons Attribution-Share Alike 3.0 Unported license)



the fire place as the center of the house, on which a constant fire was kept up in their honor, and in Vesta's honor, and in whose immediate vicinity their small, doll-like likenesses had been erected (Fig. 10.12).<sup>31</sup>

The Roman house cult, thus, has its roots in the domestic ancestral cult of the Neolithic, which in turn has emerged from the two-level funerary rituals with the visualisation of the deceased dating back to the early Neolithic. The Roman goddess Vesta, worshipped at the hearth, could ultimately have her origins in the Neolithic Anatolian concept of the primordial mother, which in turn can look back onto even older roots, the apotropaic effect of the heraldic female and her protective and defensive symbols.<sup>32</sup>

<sup>31</sup>Schilling, Robert (1981, 1992). "The Penates," in *Roman and European Mythologies*. University of Chicago Press, p.138.

Schutz, Celia E. (2006). *Women's Religious Activity in the Roman Republic*. University of North Carolina Press, p. 123.

<sup>32</sup>Ryberg, Inez S. (1955). *Rites of the State Religion in Roman Art*, *Memoirs of the American Academy in Rome*, Vol. 22, University of Michigan Press for the American Academy in Rome, pp. 10–13.

Rüpke, Jörg (Ed.), (2007). *A Companion to Roman Religion*, Wiley-Blackwell.

Waites, Margaret C. (1920). *The Nature of the Lares and Their Representation in Roman Art*, *American Journal of Archaeology*, Vol. 24, No. 3 (July–Sept.), pp. 241–261.

De Marchi, Attilio (1896). *Il culto privato di Roma antica I: La religione nella vita domestica: iscrizioni e offerte votive*, Milano: Arno Press.

Fraser, Douglas (1966). *The Heraldic Woman. A Study in Diffusion*. In: Fraser, Douglas (ed.), *The Many Faces of Primitive Art. A Critical Anthology*. Englewood Cliffs: Prentice Hall, pp. 40–47.

## Rock Paintings on the Latmos—An Initiation Ritual

We have evidence not only for the survival and transition of ancient customs in the context of burials; the ritual itself became a constant component of Neolithic society (see Chap. 8). Rituals are an indispensable feature of conflict resolution in non-stratified societies; in part, because they refer to the highest of values, which in the myth are formulated as the spiritual likeness of the respective ideology. The fact that rituals, especially those related to death, played an important, if not the decisive, role in the Neolithic of the Levant and Anatolia, has been verified with the help of excavations; but also other transitions in life, such as the transition from child to adult, were celebrated. During these celebrations, the ritual performs and repeats the myth, thereby sustaining the cosmic order, and through reference to common values solves possible or actual conflicts. Thus, excavators believed to have uncovered a ritual site in Achilleion, which is characterised by centrally located fire places and a large platform. However, anything more detailed could not be made out.<sup>33</sup>

In contrast, let us look to the Latmos Mountains, more specifically the modern *Batı Menteşe Dağları* in the Turkish province of *Muğla*, where rock paintings of a unique thematic and stylistic unity offer an in-depth view of the religious actions of the Neolithic in Asia Minor. Here, in the back country of the ancient Greek city of *Miletus*, rock paintings had been discovered in caves and grotto-like niches and chambers of the rugged mountain range. These paintings depict highly stylised humans in characteristic groupings: frequently couples of men and women, facing each other or hugging, but also groups whose relationship has been highlighted by a line, or women with children, usually girls. These depictions are accompanied by ornaments, drawings, and symbols, the interpretation of which frequently remains difficult.<sup>34</sup>

Especially beautiful and simultaneously representative for a series of comparable places is the “Rock Chamber of *Balıktaş*”, idyllically located in a quiet and green valley with a stream, old trees, and ferns. Here, in a moist recess made up of three large rocks, tape-like hollows developed which now serve as a natural cartouche for one image group respectively. These include the already-familiar hand prints and depictions of people in characteristic constellations, of which couples and mother and child/daughter are of great importance (Figs. 10.13 and 10.14).

Images of lovers or parents/mothers with children appear in other, similar niches or under ledges, so frequently that it can be easily stated that the theme of these paintings had been the relationship between men and women, and possibly more specifically, marriage, love, and procreation (Fig. 10.15).

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<sup>33</sup>Gimbutas, Marija, Shan Win, and Daniel Shimabuku (1989). *Achilleion. A Neolithic Settlement in Thessaly, Greece, 6400–5600 BC*. Los Angeles: University of California, pp. 46–47.

<sup>34</sup>Peschlow-Bindokat, Anneliese (2003). *Frühe Menschenbilder. Die prähistorischen Felsmalereien des Latmos-Gebirges, Mainz: Zabern*.

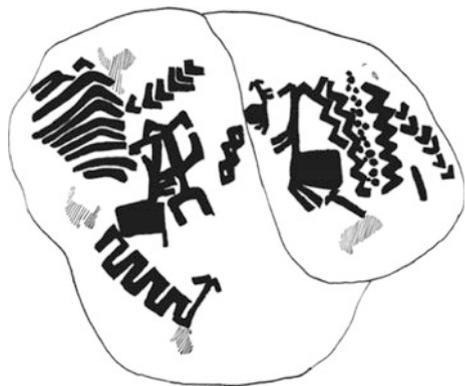
**Fig. 10.13** The couples' motive on the rock paintings on the Latmos Mountains (Drawing: Karolina Rupik following Peschlow-Bindokat)



**Fig. 10.14** Parents and child, frequently mother and daughter; rock paintings on the Latmos Mountains (Drawing: Karolina Rupik following Peschlow-Bindokat)



**Fig. 10.15** A lover's scene, and mother with daughter. Paintings in the rock chamber of Balıktas (Drawing: Karolina Rupik following Peschlow-Bindokat)





**Fig. 10.16** The Erechtheion on the Acropolis, scene of the myth of Kekrops' daughters

We now no longer are dealing with paintings which represented territorial signals, such as during the Palaeolithic, or which mirrored the ranking-competition, which included the notion of prestige; instead, these schematised images of men and women and the accompanying drawings now had a concrete use, which can be explained with the help of both ethnology and the traditions of Antiquity.

The Australian Aborigines, whose social organisation without hierarchies or a division of labour corresponds to the conditions of the Neolithic (but who, in order to avoid misunderstandings, of course do not adhere to the same religion, so that of course only fundamental questions can be answered with the help of the present ethnographical comparison rather than detailed questions of the pictorial content), hold to an ideology in which the *dema* deity and mighty ancestors are the decisive characters. Rock paintings play an important role in the context of initiation rituals: the Aborigines follow a processional path highlighted by a long series of chiselled or painted people, spiritual beings, or animals, and on this path they move from one painting to the next and repeat dramatic scenes from their own myths in front of these images (Fig. 10.16).<sup>35</sup>

The religious history of Ancient Greece also encounters traces of an ancient tradition together with an equally ancient myth, transmitted through to Antiquity even though their exact relationship and interpretation had ceased to be known a long time ago. As the Roman poet Ovid tells us, during the cultic festival Arrhaphoria, two young girls were chosen from among the elite families of Athens

<sup>35</sup>Morphy, Howard (1977). The social significance of schematisation in Northwest Coast American Indian Art. In: Ucko, Peter J. Form in indigenous art. Schematisation in the art of Aboriginal Australia and prehistoric Europe. Canberra: Australian Institute of Aboriginal Studies, pp. 73–76.

Morphy, Howard (1991). Ancestral Connections. Art and Aboriginal System of Knowledge. Chicago and London: The University of Chicago Press, pp. 115–141.

each autumn, in order to live on the temple precinct, to fulfil sacred responsibilities, and most importantly, to learn how to weave. After one year, the girls received a covered basket from Athena's priestess which they had to carry to Aphrodite's holy place in the gardens. The girls had to deposit their basket in a natural, humid grotto and subsequently had to return carrying a different, similarly covered object. The ideological background of this ritual is the myth of Kekrops' daughters, the first mythical king of Athens, who in primordial times lived in their father's house on the Acropolis and taught people how to weave clothes. The Goddess Athene gave them a basket in which lay the newly born snake-like Erechthonios, the second mythical king of Athens, and child of Hephaistos and Mother Earth. Despite her explicit prohibition, two of Kekrops' daughters looked into the basket and, terrified by the snake, threw themselves off the Acropolis.<sup>36</sup>

Both the myth as well as the cultic actions from classical times suggest an early initiation rite, in whose course young girls were separated from their parents' house and brought to the Acropolis in order to learn their role as women and the corresponding responsibilities, including weaving. From a ritualistic perspective, they repeat the deeds of Kekrops' daughters, who taught the people to weave.<sup>37</sup>

At the end of their stay, the girls for the first time encounter love, conception, and motherhood. The dew and humidity of the cave in Aphrodite's garden represents conception, the snake-like Erechthonios represents the male sexual organs and creation, the new-born in the covered basket represents motherhood. With their descent from the Acropolis, the girls ritually repeat the fall of Kekrops' daughters—they as well suffer a social death as children and rise up from the depths of Aphrodite's gardens as young women. In fact, archaeologists have uncovered evidence which proves that the cultic events described by Ovid and Pausanias had taken place: a steep, hidden pathway leads down from the Acropolis to a small sanctuary attributed to Aphrodite and Eros and to a small, humid grotto.<sup>38</sup>

Ultimately, the religio-typological deliberations, the ethnographic comparison, and the view into the history of religion allow us to interpret the rock paintings on the Latmos Mountains: at a certain point each year, young girls head to the Latmos in order to visit holy places which are considered to be the dwelling, or rather the former dwelling, of a familiar mythical figure such as a *dema*. The fate of this mythical figure—possibly the encounter with a male principle or Eros—is repeated during the ritual, whose completion implies a new form of existence for the initiated, thus adult, girls. The encounter with Eros has implications beyond the individual: the girl's future role as mother stands in the closest relationship to fertility as a whole. Water in the form of the nearby springs and the humidity of the cave-like

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<sup>36</sup>Burkert, Walter (1993). *Wilder Ursprung. Opferritual und Mythos bei den Griechen*. 3. Auflage, Berlin 1993, pp. 40–41.

<sup>37</sup>*Ibid.* p. 49.

<sup>38</sup>*Ibid.* pp. 50–53.

hollows would have represented a fertile element, similar to Hephaistos' dew (compare the above-mentioned symbols of the mother archetype) which would have turned the young girls into women. In this manner, they repeated the journey of the mythical figure and enabled both nature and culture to renew themselves: a primeval event is repeated in the course of a ritual in order to renew and secure the contemporary order.

# Chapter 11

## Heroes, Gods, Sanctuaries—The Male Principle and Collective Cult

### Religion in the Neolithic—A Flashback

The foundations of an ideology that we today would call religious thus developed during the Neolithic: a belief in, or a conceptualisation of, all-powerful creatures existed, who influenced the fate of men, who had to be cared for during the worship of the dead, and who are envisioned in the course of a ritual. Despite all the differences of ideals, concepts, and practices among the various cultures, despite even the differences from one place to the next, nevertheless several characteristics of this earliest of religion(s), its foundations in human biology, and characteristic developmental tendencies (cue “religious evolution”) can be highlighted.

First of all, we have the fact that old behavioural patterns (in biological terms: plesiomorph), especially when they have religious connotations, demonstrate persistence; this feature had already been noted by the founder of British anthropology, Edward Burnet Tylor (1832–1917).<sup>1</sup> An old custom is retained unaltered; the underlying rationale however is adapted to the respective time horizons, as the case study of the deposited skulls has demonstrated in the foregoing chapters. Originally employed to justify territorial claims, over the course of the centuries the skulls transformed into the seats of the deceased’s powers or spirit and are thus initially the precursors and subsequently the parallels to the gradually developing ancestral figures who ultimately replaced the deposited skulls.

A further characteristic development concerns the displaying or heraldic woman, who had initially in the Palaeolithic been merely the carrier of ethological signs and

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<sup>1</sup>Tylor, Edward Burnett (1871). *The Origins of Culture*, Cloucester, Mass. 1970 (1958), originally published under the title *Primitive Culture*, Kapitel I - X, London: John Murray, p. 16.

Lang, Andrew (1907). Edward Burnett Tylor, in: Balfour, Henry et al., *Anthropological Essays Presented to Edward Burnett Tylor in Honour of his 75th Birthday Oct. 2 1907*, Oxford 1907, p. 3.

From a biological/theory of evolution perspective, this would be the so-called plesiomorphy! Bernhard Wiesemüller, Hartmut Rothe, Winfried Henke (2003). *Phylogenetische Systematik. Eine Einführung*. Berlin: Springer.

used for apotropaic causes, and eventually developed into the protective primordial mother.

In the following centuries, through the process of hypostasation, this mythical figure evidently transformed into independent all-powerful creatures, of whom one must be associated with the Underworld, and the other with home and hearth—this is at least suggested by the female-shaped domestic altars as well as the depictions of a female figure in the funeral sites. Consequently, these powerful female figures slowly focused on the various fields of responsibility—and thus they were slowly attributed with specific characteristics.<sup>2</sup>

This ideology thus mirrors the requirements of a by now settled population, which required rituals in order to solve potential or specific conflicts in the respective societies. Reference was made to the highest common values. Aside from the so-called *dema*, this included the mutual ancestors whose fates had been tied together in mythical tales, which also served to bring together meaningfully the inexplicable conditions of being human: love, birth, and death (Chap. 10).

In sum: religious notions and practices now exist, as does a repertoire of symbols which refer to the Otherworld and higher powers on the one hand, and to mutual values on the other, which are all realised within a ritual—especially at those times during which breaks in the life-cycle of an individual (puberty, death) can disrupt the little community.

However: there can be no mention of veritable deities with clear areas of responsibilities and characteristics which define the individual *personae* with individual features. Instead, we have come across the *dema*, these all-powerful figures from a mythical past, characterised by a certain fate, who can appear in this or that shape under various different names; for example, the Mulua Hainuwele in the synonymous myth merges with Mulua Satene and only shows different faces of the same person. Such a blurred impression must have been on purpose, because the named figures are still conceptualised today among traditionally living peoples, just as they had been realised in Neolithic rituals: each small girl among the Alune and Wemale is wrapped into a sarong patola at birth and becomes the Mulua Hainuwele; every boy among the Makonde becomes a member of the ancestral world and thus a bearer of the ancient traditions. The world of the all-powerful and the world of the living are not completely separated; instead, we see qualitative differences which distinguish one from the other.

Only in later historical times did veritable deities develop (out of the *dema* as well, as the stories of Dionysius or Persephone demonstrate),<sup>3</sup> although these were no longer conceptualised in rituals but instead worshipped as part of a cult. Even in classical times, the older customs maintained themselves persistently, as the above-mentioned example of the *arrhephoria* demonstrates. The ritual was practiced

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<sup>2</sup>Thus, Jensen for example traces the goddesses Demeter and her daughter Persephone back to a *dema* of an older religious-historical period pre-dating the archaic and classical Greek religion. Jensen, Adolf E. (1948). *Das religiöse Weltbild einer frühen Kultur*. Stuttgart: August Schröder, pp. 66–77.

<sup>3</sup>Burkert, Walter (2003). *Greek Religion: archaic and classical*. Oxford: Blackwell, p. 31.

Jensen, Adolf E. (1948). *Das Weltbild einer frühen Kultur*. Stuttgart: Schröder, pp. 66–77.

in a time in which the religion had already transformed into something entirely new.<sup>4</sup> It is still a long journey to the deities of Antiquity which now lived in the lofty heights of heaven and no longer were attributed with the chthonic character of ancestors. More importantly, they were no longer conceptualised in a ritual but worshipped as part of a cult. However, the first steps of this journey were taken in the Middle Neolithic, and using the example of the development of religion in Central Europe, more specifically the Linear Pottery Culture and its cultural successors, these will be traced here.

### Timeline

- *13,500–11,500 ybp Proto-Neolithic (or Natufian):*  
Seasonal sedentary forager cultures in the Levante and on the Middle Euphrates. Figurines (sexual threatening) with apotropaic functions, e.g. Ain Shakri.
- *11,500–10,200 ybp Pre-Pottery Neolithic A, PPNA:*  
Permanent settlements with round houses; first cultivation of grains. Reliefs (usually dangerous animals, but also sexual threatening) with apotropaic function. Example: Göbekli Tepe III
- *10,200–8800/8500 ybp Pre-Pottery Neolithic B, PPNB:*  
Square-shaped houses, cultivation of grains, and domestication of first livestock. Mainly female idols with apotropaic function; intramural interments with separate skull deposition; remodelled skulls and first death figurines as part of a two-stage funeral. Example: ‘Ain Ghazal, Tell es-Sultan
- *8500–7500 ybp Neolithic in Anatolia and South-east Europe:*  
Elaborate interment rituals with two-stage funerals, initially depositing skulls and eventually ancestral figurines worshiped at the hearth. First funerals outside of settlements. Notions of the primordial mother and dema, who through hypostasation become all-powerful female figures with defined areas of responsibility. Example: Çatal Hüyük, Hacilar, Achilleion
- *7500–4200 ybp Neolithic in Central Europe with substages Early Neolithic, Middle Neolithic, Upper Neolithic, Late Neolithic, Final Neolithic (the latter also Chalcolithic or Aenolithic):*  
Continued depositing of skulls and ancestral worship; two-stage funerals in fields, in caves, or in the settlement; in the later Funnelbeaker Culture, megalithic graves are built with references to an all-powerful female figure who can be understood as the ruler of the Underworld. Roundels are used to determine important calendrical dates for an agricultural economy and for common cultic actions. During the Young Neolithic, the combination of heroism and ancestral cult together with the development of myths causes the first male all-powerful figures to appear. Example: Szegvár-Tüzköves

<sup>4</sup>Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, pp. 13–14.

- 7500–5300 ybp *Copper Stone Age (or Copper Age, Chalcolithic, or Aenolithic) in the Near East; 6500/6000–4200 ybp Chalcolithic in Central Europe*

Stronger social distinctions and a successive development of an elite. The *dema* become veritable deities worshiped as part of a cult.

## Heroes Wanted

Slow but gradual changes are evident first in the domestic ancestral cult which in the course of the Upper Neolithic slowly took on a new face: while previously the female figurines had stood in the foreground, we see the gradual but emphatic advance of the male element. During the excavations at Szegvár-Tüzköves (Theiss culture; a successor culture of the Eastern or Alföld Linear Pottery Culture in the East Hungarian Neolithic), a typical collection of figurines was found near the hearth which notably included a male figure on a throne with angled arms and hands resting on the chest. This figurine clearly stood out amongst the others on account of its size alone. On the left arm the figurine wore a double bracelet and on the right arm a six-layered bracelet, simultaneously holding a sickle-shaped weapon over its shoulder. The face of the figurine is mask-like, flat, and depicted schematically.<sup>5</sup> Similar figurines have been found in Romania and Greece, all dated to the Neolithic. Initially, the “sickle” threw up many questions; the same shape had been found as a burial gift in Neolithic graves in Portugal, as drawings in the Spanish Cueva de los Letreros/Almeria, and finally also as a concrete—albeit Bronze Age—discovery in Zaerzentmihály/Hungary. In fact, the sickle was a scimitar (as the outer edge is sharp, rather than the inside, which would have been the case had the shape been a sickle), a dangerous and effective weapon evidently pervasive in Neolithic Europe, and carried by the idol of Tüzköves as well (Fig. 11.1).<sup>6</sup>

<sup>5</sup>Csalog, József (1959). Die anthropomorphen Gefässe und Idolplastiken von Szegvár-Tüzköves, in: *Acta Archaeologica Academiae Scientiarum Hungaricae* 11/1959, pp. 7–38

Csalog, József (1960). Das Krummschwert des Idols von Szegvár-Tüzköves, *Acta Archaeologica Academiae Scientiarum Hungaricae* 12/1960, pp. 57–68

Borić, Dušan (2015). Mortuary Practices, Bodies, and Persons in the Neolithic and Early-Middle Copper Age of South-East Europe. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 946–947.

<sup>6</sup>Züchner, Christian (1998). Kulturhistorische Überlegungen zu den Felsbildern von Oukaimeden und Yagour im Hohen Atlas (Marokko). *Beiträge zur Allgemeinen und Vergleichenden Archäologie* 18, pp. 297–315.

Züchner, Christian (2000). Felsbildkunst und Prähistorische Archäologie. Überlegungen zu einer verkannten Quellengattung. Onlinepublikation des Institutes für Ur- und Frühgeschichte der Universität Erlangen. [http://www.uf.uni-erlangen.de/?page\\_id=1158](http://www.uf.uni-erlangen.de/?page_id=1158); seen on 2.1.2016.

**Fig. 11.1** Idol of Szegvár-Tüzköves (Eastern Hungary) (Drawing: Karolina Rupik)



Alongside the scimitars, the battle-axe experienced a successful rise during the Neolithic throughout Europe and either as an isolated object or as a weapon in the hands of a warrior was found decorating many megalithic structures.

With the rise of an aggressive male element and the ensuing hero worship, incipient agricultural communities reacted to the appearance of brutal acts which now unsettled the formerly idyllic life in the villages.<sup>7</sup> During the Linear Pottery Culture, raiders attacked a village in the modern Talheim near Heilbronn (around 7100–7000 ybp), murdered the inhabitants including the children with arrows and with the characteristic axe, the so-called shoe-last celt, and finally buried everyone in mass grave.<sup>8</sup> We cannot comprehensively trace the motives, whether this brutal act might have been a possible kidnapping of the women or whether the location was considered suitable for settlement with fertile lands, implying territorial claims. It remains a fact, however, that the Neolithic settlements both in South-east as well as in Central Europe from a certain point in time onwards were secured with fences—and clearly the inhabitants had their own grave reasons for such protective measures.<sup>9</sup>

<sup>7</sup>Schulting, Rick J. and Linda Fibiger (2014). Violence in Neolithic North-west Europe. A Population Perspective. In: Whittle, Alasdair and Penny Bickle (eds.), *Early Farmers. The View from Archaeology and Science*. Oxford: Oxford University press for The British Academy, pp. 281–306.

<sup>8</sup>Wahl, J. and H. G. König (1987/1988). Anthropologisch-traumatologische Untersuchung der menschlichen Skelettreste aus dem bandkeramischen Massengrab bei Thalheim, Kr. Heilbronn. *Fundber. Baden-Württemberg* 12.

<sup>9</sup>Strien, Hans-Christoph, Joachim Wahl und Christina Jacob (2014). Talheim – Ein Gewaltverbrechen am Ende der Bandkeramik/Talheim – A Violent Crime at the End of the Linear Pottery Culture. In: Thomas Link und Heidi Peter-Röcher (eds.) *Gewalt und Gesellschaft. Dimensionen der Gewalt in ur- und frühgeschichtlicher Zeit/Violence and Society*. Dimensions of

In the course of the spread of the Neolithic life-style, the interactions of the various groups changed, and the appearance of fortified villages from around 7000 ybp onwards is a novelty that suggests the proliferation of aggressive acts. Consequently, the character of the respective societies changed: the warrior-hero appeared on stage and now played an important role.

These shifts within Neolithic communities are clearly mirrored in the arrangement of the domestic cultic corners, where from the Upper Neolithic onwards, male idols appear which on account of their size and the care taken with their representation stand out from amongst the mass of figurines. The portraits represent the ancestral figures of outstanding personalities, these warrior-heroes who were initially worshipped within the framework of the domestic ancestral cult. Thus far the archaeological facts, which are reflected in the transmitted myths.<sup>10</sup>

## The Hero in Myths

We know little to nothing of most ancient myths—at the most, we can reconstruct them using rituals and traditions transmitted from historic times as in the case of the afore-mentioned arrhephoria. In this case, the persistence of old customs and old notions is evident, which, despite having been adapted to the respective cultural successors, nevertheless have been able to retain their old ideals in their basic forms.<sup>11</sup> These conditions, as we have seen in the previous chapter, form the basis for C.G. Jung's theory of archetypes. The same concept now applies to these early heroes who after a life of impressive deeds ultimately die a hero's death and, so tell us the ancient myths of Antiquity, become gods. Following on from the transformation of the primordial mother we can now in the later Neolithic trace the "birth" of a further archetype as described by Jung, the hero (compare Chap. 9), who now becomes a cultural constant.

The hero myth documents events whose historic foundations must be sought in the second half of the Neolithic: a young hero gathers treasures and experiences during the defence of his village and during attacks on other villages (the foreign world), and his native village community benefits from these treasures; thusly, he

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(Footnote 9 continued)

violence in pre- and protohistoric times. Internationale Tagung an der Julius-Maximilians-Universität Würzburg 14. – 16. März 2013. Bonn: Verlag Dr. Rudolf Habelt GmbH, pp. 247–256.

Golitzko, Mark & Keeley, Lawrence H. (2007). Beating ploughshares back into swords: warfare in the Linearbandkeramik. *Antiquity* 81, pp. 332–342.

<sup>10</sup>Witzel, Michael (2012). *The Origins of the World's Mythologies*. Oxford, New York: Oxford University Press, p. 78.

<sup>11</sup>Frog (2015). *Mythology in Cultural Practice: A Methodological Framework for Historical Analysis*. In: Frog and Karina Lukin (eds.), *Between Text and Practice. Mythology, Religion and Research*. The Retrospective Methods Network Newsletter No. 10, Helsinki: University of Helsinki, p. 33 (33–57).

acquires fame and reputation, until he ultimately dies a hero's death. His burial would have been accompanied by rituals, he would have benefitted from a complex, two-stage interment, and finally been realised and worshipped in the shape of an ancestral figurine, while his *alter ego* would have taken up residence in the realm of the *dema*, of the kind of a Mulua Satene, typically on or inside a mountain. Still today, old tales place gods or heroes near mountains: the Emperor Friedrich Redbeard still waits in the Kyffhäuser Mountain for the time when he must help his people, whilst Venus rules over her realm of lust and passion in the Hörselberg near Eisenach.<sup>12</sup>

Ideas and stories surrounding such an archetypical mythical hero had survived through to Antiquity. At this point at the latest the hero became a god whose fate, just like in Neolithic times, continued to be conceptualised as part of a ritual. The ritual and its accompanying myth held such spiritual powers that even centuries later, one of the most popular mystery cults from the Roman Empire developed out of these rituals: the cult of Dionysus, who will stand in as an example for the deified hero.

As the myth tells us, Dionysus was the son of Zeus and his mortal lover, the king's daughter Semele (moon). Spurred on by Zeus' jealous wife and sister Hera, Semele forced Zeus to show himself to her in his divine form. Zeus appeared as flaming lightning which burnt Semele. Hermes however saved her unborn child by sewing it into Zeus' thigh. The new-born however was torn apart by the Titans on orders of Hera, but saved by his paternal grandmother Rhea (a different manifestation of Gaia, the Greek variant of the primordial mother), who put all the pieces back together and breathed life into the baby.

Transformed into a lamb, Dionysus grew up among the nymphs and journeyed through the world with his mentor Silenos, accompanied by satyrs and maenads (note here the motive of a pathway), eventually reaching Egypt where he came across the Amazons and together with them conquered the Titans (motive of the heroic victory). Subsequently, he conquered India, fought against the Amazons, against the Thracians, celebrated triumphs as a god in Bootia, sailed back to Naxos where he freed the lovely Ariadne, and ultimately returned to Argos (return to the familiar Greek world). After all of the conquered regions had recognised his divinity, he rose up to heaven and settled amongst the other gods.<sup>13</sup>

Within this mythical figure of Dionysus, we find elements of a *dema*—his brutal death connected to the origins of important cultivated plants such as the pomegranate and wine (the gifts of the hero to society),<sup>14</sup> his proximity to Rhea, a goddess with

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<sup>12</sup>Weiser (2000/1927). Essay Berg. In: Handwörterbuch des deutschen Aberglaubens Bd. 1. Berlin: Walter de Gruyter, pp. 1043–1056.

<sup>13</sup>Otto, Walter F. (1933). Dionysos – Mythos und Kultus. Frankfurt am Main: Klostermann/Otto, Walter F. (1995). Dionysus Myth and Cult. Indiana University Press.

Kerényi, Karl (1976). Dionysos: Archetypal Image of Indestructible Life. Princeton: Bollingen.

<sup>14</sup>Witzel, Michael E. J. (2012). The Origin of the World's Mythologies. Oxford: Oxford University Press, p. 159.

Zum hohen Alter des Dionysosmythos: Beekes, R. S. P. (2009). Etymological Dictionary of Greek. Leiden: Brill, p. 337.

the characteristics of the primordial mother—mixed together with the elements of a hero as they are celebrated in epics. The historic background of the Dionysus myth is presumably the life of a hero who was initially worshipped after his death in the framework of the ancestral cults, and whose fate eventually was embellished corresponding to the contemporary notions of a *dema*. His origins in the world of the dead are remembered in ancient Greece through his allegiance with the chthonic deities, who—and this is also characteristic for the mighty creatures who have their origins in the Underworld—are associated with fertility.<sup>15</sup>

## How a Myth Develops

We derive our knowledge of the ancient myths from literary traditions which have come down to us in bits and pieces. The myth offers insight into the thought and ideology of a long-gone era, it allows insight into supra-temporal truths, and ultimately the myth offers a treasure trove of symbols which are still used and re-used today. There is only one thing the myth cannot do: it cannot tell us how and from which origins it developed. In this regard, we must focus on the present—also in order to determine possible rules and conventions.<sup>16</sup> The present is also familiar with the myth in the actual, i.e. religious sense, and three examples can be offered here for the development of contemporary myths.

In 1844, Bernadette Soubirous was born the daughter of an impoverished miller in Lourdes. The child was weak, sickly, and less gifted, so that both her ecclesiastical and her academic education failed. For the family living on the subsistence level, their daughter was a burden. Imprinted by her failure and her incapableness, Bernadette had a vision of a white female figure on 11th February, 1858, in the Massabielle Cave (*massa vièlha* = “ancient rock” in the *langue d’oc*, Occitan). These visions re-appeared whenever Bernadette visited the spot; the news of these events spread and eventually reached the local parish priest who took it upon himself to upbraid the child. Bernadette’s descriptions of the apparition and her statement that the woman had introduced herself with the words “Que soy era Immaculada Concepcion”, even though the new dogma of the Immaculate Conception was not yet familiar in this rural region, convinced the priest that this child was not trying to get attention but had in fact seen the Holy Virgin. For Bernadette, who despite the ensuing fuss concerning herself always remained modest, this encounter with the divine sphere meant a complete revolution of her previous precarious living condition: in 1866, she who had previously not even been allowed to participate in Holy Communion, joined the Convent Saint Gildard

<sup>15</sup>Riu, Xavier (1999). *Dionysism and Comedy*. Rowman and Littlefield, p. 122.

Burkert, Walter (1985). *Greek Religion*, pp. 64, 132

Otto, Walter F. (1995). *Dionysus Myth and Cult*. Indiana University Press.

<sup>16</sup>Witzel, Michael (2012). *The Origins of the World’s Mythologies*. Oxford, New York: Oxford University Press, pp. 431–432.

of the Merciful Sisters in Nevers, and for the first time could lead a life in secure and moderately luxurious surroundings. However, her previous tough childhood had severe consequences: Bernadette, having meanwhile acquired the reputation of a holy woman, suffered from bone tuberculosis and passed away at the age of 35 years. Her undecayed corpse was exhumed in 1909 and reburied in a glass coffin, she was beatified in 1925, and canonised eight years later. Until today, pilgrims in the search of healing visit the place where the Holy Virgin appeared.<sup>17</sup>

Another example is the myth of the Battle of Tannenberg. Here, on 15th July, 1410, the Teutonic order lost the decisive battle against the army of the Polish King Władysław II Jagiełło and the Grand Duke Vytautas of Latvia. In 1914, events appeared to repeat themselves (repetition is a sign of meaningful beginnings). Again, a German army found itself face-to-face with a foreign power in Eastern Prussia, and again, from a German perspective, it was not only about a battle, but about the survival of Germany, of the entire Western civilisation. In this desperate situation, Paul von Hindenburg and Erich Ludendorff succeeded in routing the opposing army with a genius tactical move and turned the expected defeat in the East into a victory. For propaganda reasons, the battle, which had actually taken place near Allenstein, was nominated the Battle of Tannenberg—this time a success for the Germans who thus redeemed the ignominious defeat 500 years earlier. Hindenburg especially was considered the saviour of the Fatherland, not least thanks to his ability to present himself for example as the Medieval Roland; he acquired almost a messianic reputation—along with the all too familiar fatal consequences.<sup>18</sup>

A final modern myth may be mentioned in this context. During the more pessimistic 1980s, UFO sightings and reports of contacts with extra-terrestrials proliferated. Generally, glowing creatures reportedly emerged from the UFOs who denounced the state of the world, gave clear directions to save the world, and ordered their contact persons to spread their message. The idea of these extra-terrestrial visits was immensely popular for many years and fascinated a large number of people.<sup>19</sup>

Despite the differences between these events and the resulting myths, they nevertheless have several features in common. They all begin with a situation perceived to be hopeless—Bernadette Soubirous' outlook on life, the fate of an entire people, or even of the whole world. Next a saviour appears, either a go-getter (hero) such as Hindenburg or creatures from the supernatural sphere who are perceived only by an enlightened character (Bernadette, those who could see the UFOs).

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<sup>17</sup>Dondelinger, Patrick (2003). *Die Visionen der Bernadette Soubirous und der Beginn der Wunderheilungen in Lourdes*. Regensburg: Pustet.

<sup>18</sup>von Hoegen, Jesko (2007). *Der Held von Tannenberg. Genese und Funktion des Hindenburg-Mythos (1914–1934)*. Köln: Böhlau.

<sup>19</sup>Jung, Carl Gustav (1978). [Originally published 1958 as *Ein moderner Mythos: von Dingen, die am Himmel gesehen werden*]. *Flying Saucers: A Modern Myth of Things Seen in the Skies*. Translation by R.F.C. Hull. Princeton, NJ: Princeton University Press.

McCampbell, James M. (1987). *Effects of UFOs Upon People*. In: Evans, Hilary; Spencer, John. *UFOs, 1947-1987: The 40-year Search for an Explanation*. London: Fortean Tomes.

A third party usually interprets these experiences or visions, always on the basis of familiar ideology and previous experiences. In the case of Bernadette Soubirous, the white woman could only have been the Virgin Mary (although Bernadette had always described her as fairy-like), the Battle of Tannenberg was the repetition of a medieval event, and the interpretation of glowing objects in the sky was based on a technical-scientific ideology in which the saviour no longer hails from the transmitted world of traditional religions or ancient hero epics, but has his *Sitz im Leben* in the modern, technical world of space travel.<sup>20</sup> Central focal point however is always the hope for rescue and release from existence-threatening evil, be it illness, an overpowering enemy, or an imminent ecological catastrophe.<sup>21</sup>

If we transfer these realisations onto the conditions of the fifth pre-Christian millennium, we achieve the following results: the agricultural communities saw themselves suddenly faced with existential threats, in the form of hostile attacks or a shortage of land. On the one hand, young warriors defended their villages, but on the other hand they were perhaps the same warriors who attacked and conquered other villages—these warriors appeared to their contemporaries to be heroes and saviours, and their lives were to become the foundations for a myth.

Heroic narratives can be traced not only in epics, but can be found throughout the history of religion. The Indian deity *Krishna* is such a hero with a presumed historical background who advanced to become a deity, and *Moses*, the mythical saviour of a fictitious, Bronze Age Israel, is the focus of a myth which supplies both a specific religion as well as an ethnic and cultural heterogenic nation with an identity.<sup>22</sup>

## The Cultural Environment—The Neolithic in Central Europe

Thus, or in a similar fashion, the above-mentioned developments occurred during the Neolithic of the Eastern Mediterranean, Central, and finally Western Europe. The reason for this direction of development can be found in the fact that emigrants moved from Anatolia to South-Eastern Europe, then from the South-East to Central Europe, carrying with them a Neolithic lifestyle as well as the corresponding ideology, which they subsequently adapted to their respective, new environment.<sup>23</sup>

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<sup>20</sup>Wagner, Andreas (1996). Gattung und „Sitz im Leben“. Zur Bedeutung der formgeschichtlichen Arbeit Hermann Gunkels (1862–1932) für das Verstehen der sprachlichen Größe “Text”. In: Susanne Michaelis, Doris Tophinke (eds.): *Texte–Konstitution, Verarbeitung, Typik* (= Edition Linguistik. Bd. 13). München et al.: LINCOM Europa, pp. 117–129.

<sup>21</sup>Knoblauch, Hubert (1999). *Berichte aus dem Jenseits*. Freiburg: Herder, pp. 8–10.

<sup>22</sup>Witzel, Michael (2012). *The Origins of the World’s Mythologies*. Oxford, New York: Oxford University Press, pp. 431–432.

<sup>23</sup>Haak W, Balanovsky O, Sanchez JJ, Koshel S, Zaporozhchenko V, et al. (2010). Ancient DNA from European Early Neolithic Farmers Reveals Their Near Eastern Affinities. *PLoS Biol* 8(11): e1000536. doi:10.1371/journal.pbio.1000536.

We must however not forget that the foundational religious symbols, which Warburg nominated the “*Psychologie des menschlichen Ausdrucks*”<sup>24</sup> (the psychology of human expression), are deeply anchored in human biology: in territoriality, in ranking, and in shared ethological signals, which aid communication and which play an important role in coping with existential fears (see Chap. 5).

The cultural background of this development can be described as follows: around 7600 ybp, Neolithic techniques, a Neolithic way of life, and the Neolithic ideology had arrived in Central Europe via South-Eastern Europe, although they had, in the course of their journey westward, changed considerably.<sup>25</sup> Instead of small houses built from air-dried mud bricks, Linear Pottery Culture knew large and massive houses built from huge tree trunks felled in the thick jungles which spread out from the Hungarian Lowlands all the way to the Paris Basin. The characteristic buildings were large, rectangle-shaped long houses reaching a length of 45 m and a width of five and a half to seven meters; these houses were carried by a construction of five rows of vertical beams anchored to the ground, while interior beams supported the heavy roof. The exterior walls consisted—just like modern timbered houses—of wattle and daub which on the weatherside of the building was further secured against strong rains by wainscot. The interior of the building shows a characteristic tripartition: presumably a sleeping area facing the North-west, a communal and work area comparable to the kitchen in old farm houses, and a storage area. The deep pits habitually found in the immediate proximity had originally supplied the clay for the buildings’ walls and later were used as waste pits.<sup>26</sup>

Initially, some of these pits, in which human remains had also been found, had been interpreted as sacrificial pits. However, the funerary customs of the Linear Pottery Culture now throw a different light onto these findings. In general, the deceased were buried in burial fields outside of the settlements, veritable cemeteries. Grave gifts such as vessels containing food make it clear that the deceased were equipped for their journey into the Otherworld. After the transitional phase,

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(Footnote 23 continued)

Schier, Wolfram (2015). Central and Eastern Europe. In: Fowler, Chris/Jan Harding/Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 99–120.

<sup>24</sup>Böhme, Hartmut (1997). Aby M. Warburg (1866-1929). In: Michaels, Axel (ed.), *Klassiker der Religionswissenschaft*. München: Beck, p. 139.

<sup>25</sup>Lenneis, Eva (2008). Perspectives on the beginnings of the earliest LBK in east-central Europe. In: Bailey, Douglass W., Alasdair Whittle and Daniela Homann (eds.), *Living Well Together? Settlement and Materiality in the Neolithic of South-East and Central Europe*. Oxford: Oxbow Books, pp. 164–178.

Bánffy, E. (2004). The 6th millenium BC boundary in Western Transdanubia and its role in the Central European Neolithic transition (the Szentgyörgyvölgy-Pityerdomb settlement). *Varia Arch. Hungarica XV*. Budapest.

<sup>26</sup>Last, Jonathan (2015). Longhouse Lifestyles in the Central European Neolithic. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 273–289.

which we have already encountered in Çatal Höyük, the deceased was exhumed and reburied a second, final time. This second burial could take place on the grounds of the settlement; occasionally, the skull was, again, kept inside the house. During the process of exhuming and re-burying the corpse, frequently parts of the skeleton would go missing or were moved from their original anatomical position—this fact was initially interpreted as the consequence of cannibalism or human sacrifices,<sup>27</sup> but is today correctly understood in the context of secondary burials. Human remains in the waste pits are the result of involuntarily opened, older funerals—be it in the course of cultivating a garden, scavenging fox or boars; the latter have been confirmed through microscopic examinations of what appeared to be human bones that had been nibbled on.<sup>28</sup>

Occasionally, these secondary burials had their own characteristic features and could thus divulge information about how the people of the Linear Pottery Culture understood the Otherworld. One of the most spectacular burial grounds in this respect is the Virgin's Cave (Jungfernhöhle) by Tiefenellern/Franconian Jura; a rather small cave with an irregular subterranean room to which leads a steep duct. Here, excavations during the 1950s unearthed the remains of human bones, almost exclusively of women, together with vessels, animal bones, charcoal, and other cultural waste. While the contemporary excavators once again assumed cannibalism or human sacrifices, forensic medicine and anthropological examinations can help more clearly interpret the events surrounding the Virgin's Cave. The scattered bone fragments, the large-scale lack of smaller bones such as ribs, hand, or foot, are an unmistakable indication of the fact that the deceased had first been buried in order to be exhumed at a later stage and transferred to their final resting place in the cave. While the soft tissue decayed first in the grave, the nonmaterial aspect of the deceased's personality, equipped with burial gifts of food, journeyed to the Otherworld, a journey which ended with the ritual and final burial in the cave. Here, the deceased had reached his final resting place, in an Underworld, to which caves and chasms were the entrances. Traces of the final interment and the respective festivities were also uncovered: potsherds and animal bones prove that a festive meal had been arranged in honour of the deceased and/or that they had been equipped with burial gifts.<sup>29</sup>

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<sup>27</sup>Kaufmann, Dieter (1989). Kultische Äußerungen im Frühneolithikum des Elbe-Saale-Gebietes. In: Schlette, F. and D. Kaufmann (eds.), *Religion und Kult in ur- und frühgeschichtlicher Zeit*. Berlin: Akademie Verlag, pp. 111–139.

<sup>28</sup>Nieszery, Norbert (1995). *Linearbandkeramische Gräberfelder in Bayern*. Espelkamp: Marie L. Leidorf.

Bonnardin, S. (2003). *La parure funéraire du Néolithique ancien en Bassin parisien et rhénan: matériel, techniques, fonctions et usage social*. Thèse Université de Paris I, Sorbonne-Panthéon, sous la direction de M. Lichardus-Itten. Paris, unpublished.

<sup>29</sup>Kunkel, Otto (1955). *Die Jungfernhöhle bei Tiefenellern. Eine neolithische Kultstätte auf dem Fränkischen Jura bei Bamberg*. München: Beck, (Münchner Beiträge zur Vor- und Frühgeschichte 5).

Orschiedt, Jörg (1997). *Die Jungfernhöhle bei Tiefenellern. Eine Neuinterpretation*. In: 133. Bericht des Historischen Vereines Bamberg 1997, S. 185–198.

The distinguished appearance of the rituals connected with death during the Linear Pottery Culture thus seamlessly fits into the context of Neolithic customs despite the differences in the details, while the typical elements can be traced for traditionally living and prehistoric agricultural cultures. Just like in the early Neolithic villages in Anatolia, death was not considered the immediate end of an individual's existence in Neolithic Central Europe, but was instead viewed as a break in the cycle of life, as a transition from one form of existence into another in which man leaves the social community of the living to be accepted into the community of the dead. Such a change was a profound moment for the respective society, and as a consequence, the power balance experienced a period of instability which could only be brought back into balance with the help of rituals. Traditional, non-stratified agricultural societies with their carefully balanced equilibrium concerning property, livestock, or other economical property react sensitively to such shifts in power as they are experienced after the death of a community member.<sup>30</sup> Simultaneously, in terms of their ideology, death is the beginning of a transformation in whose course the deceased becomes a member of the Underworld. The different phases of these transitions from one existence into the next—departure from one's previous life, the sojourn in a state of betwixt and between, and the entry into a new form of existence—are accompanied by rituals which have been well documented by ethnologists. We can also trace such transition rituals connected with death for the Linear Pottery Culture. The first phase of separation is documented by the primary funeral on a graveyard or within the settlement grounds. The remains of vessels and the traces of fire suggest a final meal eaten together with the deceased. The deceased was now understood to be in a state of transition from the world of the living to the Otherworld, and burial gifts were meant to provide food and sustenance during his journey. This transition is visibly documented through the process of decomposition or through the equally common act of cremation, in whose course the organic parts of a body are destroyed. Subsequently, the bones are exhumed and finally laid to rest. Another ritual act was surely connected with this final step, as seen for example in the Virgin's Cave, where the deceased was officially introduced to the world of the dead.<sup>31</sup> Simultaneously, the immortal personality of the deceased was afforded a definitive place which during the Linear Pottery Culture usually meant a skull, following an ancient tradition, or possibly a figurine, whilst the other part—the spirit, or we would today speak of the soul—entered into the Underworld, the world of the dead.<sup>32</sup>

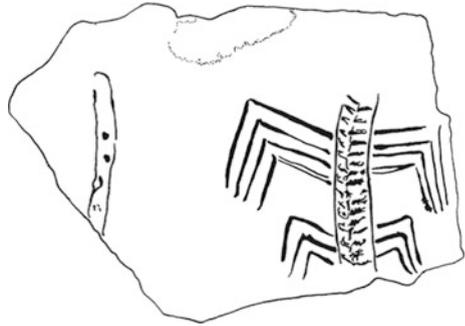
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<sup>30</sup>On LBK-society and the egalitarian principle: Coudart, Anick (2015). The Bandkeramik Longhouses. A Material, Social, and Mental Metaphor for Small-Scale Sedentary Societies. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 310–325.

<sup>31</sup>Tillmann, Andreas (2006). Die Jungfernhöhle. In: Sommer, C. Sebastian (ed.), *Archäologie in Bayern – Fenster zur Vergangenheit*. Regensburg: Pustet p. 62.

<sup>32</sup>Becker, Valeska (2007). Early and middle Neolithic figurines – the migration of religious belief. *Documenta Praehistorica* 34, 2007 pp. 119–127.

**Fig. 11.2** The so-called frog-image on a potsherd discovered in Assenheim: a stylised depiction of the primordial mother (drawing: Karolina Rupik)



One final point must be made in this discussion: the displaying female which has in the previous chapters, with the help of historic and ethnological comparisons, been referred to as a *dema*, a primordial mother who had evidently through hypostasation developed into a ruler of the Underworld on the one hand, and into a *dema* of home and hearth on the other. Although this figure no longer appears as dominating wall relief as in Anatolia or as figurine, she nevertheless remains a prominent figure in connection to death. We are here referring to vessels with the familiar, anthropomorphic depictions of a stylised displaying female, as was for example uncovered in Gneiding/Bavaria, Derenburg/near Magdeburg, Monsheim/near Worms, Stuttgart Bad Cannstatt, or Assenheim/Hesse. The well-preserved vessels and their association with graves make it clear that the primordial mother—here the ruler of the Underworld—had found her way from Anatolia over South-eastern Europe all the way to Central Europe (Fig. 11.2).<sup>33</sup>

## Circular Enclosures and Roundels—From a Domestic Cult to a Cultic Complex

Thus far, Linear Pottery Culture adhered to traditional notions which they had imported as immigrants from South-eastern Europe and which in turn could be traced back to Anatolian predecessors. However, over the course of the subsequent centuries something new developed in the farms and hamlets amidst the thick forests: the place of collective worship.

The expression *Woodhenge* is surely familiar only to specialists; *Stonehenge* on the other hand is more widely known. In the middle of a plain—today bare of any trees—in Wiltshire, Southern England, stand the impressive megalithic, concentric

<sup>33</sup>Röder, Brigitte (1998). Jungsteinzeit: Frauenzeit? - Frauen in frühen bäuerlichen Gesellschaften Mitteleuropas, in: Auffermann, Bäbel und Gerd-Christian Weniger (eds.), Frauen - Zeiten - Spuren, Mettmann: Neanderthal-Museum, pp. 241–269.



**Fig. 11.3** The famous Stonehenge near Amesbury in Wiltshire (England) (© Maiva Petry; with kind permission)

stone circles whose use as a cultic centre cannot be doubted, even if the details of this cult remain until today the object of partially adventurous speculations (Fig. 11.3).

Science however knows that Stonehenge (dated to the Late Neolithic/Bronze Age) as well as other Henge-monuments, circular enclosures, and roundels are archaeo-astronomical objects which were used to observe the sky and the movements of the celestial bodies. Calendrical cornerstones such as the winter solstice and the equinoxes, important dates in the agricultural calendar, could be determined with the help of these stone placements, as the space-time orientation using the positions of sun, moon, and stars has always been of the utmost importance for agricultural societies, for example when to plough or seed.<sup>34</sup>

Stonehenge however is not a unique phenomenon, but had its predecessors and parallels in the so-called circular enclosures which are widespread from the Rhineland and Bavaria all the way to Hungary. One of the oldest Henge-complexes, the Schalkenburg, lies in the Middle Elbe-Saale region and has been dated to the stroke-ornamented ware culture (6900–6500 ybp). It consisted of five concentric, oval rings of wooden palisades which were broken up by earthen bridges in three

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<sup>34</sup>Schlosser, Wolfhard and Jan Cierny (1996). *Sterne und Steine. Eine praktische Astronomie der Vorzeit*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Bialas, Volker (1989). *Astronomie und Glaubensvorstellungen in der Megalithkultur*. München: Beck.

Schier, Wolfram (2015). Central and Eastern Europe. In: Fowler, Chris, Jan Harding and Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 104–106.



**Fig. 11.4** Reconstruction of a circular enclosure for the Lower Austrian exhibition 2005 in Heldenberg (© Wolfgang Glock)

locations. With this simple complex, which reflects the methodology of the Indian Circle familiar to ethnologists, early agricultural societies could determine these essential calendrical cornerstones (Fig. 11.4).

These constructions however were able to fulfil more than their original purpose: they were places of early collective cultic actions, as for example the roundel near Těšetice-Kyjovice in Moravia.<sup>35</sup> The roundel is enclosed by a trench and two interior palisades and has four entrances, one for every cardinal point. In its centre

<sup>35</sup>Podborský, Wladimír (1989). Neolithische Kultsitten der Bevölkerung im mährischen Gebiet. In: Schlette, Friedrich and Dieter Kaufmann (eds.), *Religion und Kult in Ur- und frühgeschichtlicher Zeit*. Berlin: Akademie Verlag, pp.165–170.

On enclosures and defences in Europe in general:

Becker, H. (1996). Kultplätze, Sonnentempel und Kalenderbauten aus dem 5. Jahrtausend v. Chr. – Die mittelneolithischen Kreisgrabenanlagen in Niederbayern. In: H. Becker (Hrsg.), *Archäologische Prospektion. Luftbildarchäologie und Geophysik. Arbeitsh. Bayer. Landesamt Denkmalpf.* 59 (München 1996) 101–122.

Bujna, J. and P. Romsauer (1986). Siedlung und Kreisanlage der Lengyel-Kultur in Bučany. In: B. Chropovský/H. Friesinger (Hrsg.), *Internationales Symposium über die Lengyel-Kultur, Nové Vozokany 1984* (Nitra/Wien 1986), pp. 27–35

Burgess C./P. Topping/C. Mordant/M. Maddison (eds), (1988). *Enclosures and Defences in the Neolithic of Western Europe*. BAR Internat. Ser. 403 Oxford.

Kalicz, N. (1983–1984). Übersicht über den Forschungsstand der Entwicklung der Lengyel-Kultur und die ältesten “Wehranlagen“ in Ungarn. *Mitt. Österr. Arbeitsgemeinschaft Ur- u. Frühgesch.* 33/34, 1983/84, pp. 271–293.

Meyer, M. (2002). Palisaded Enclosures in German Neolithic. In: A. Gibson (eds.), *Behind wooden Walls. Neolithic palisaded enclosures in Europe*. BAR Internat. Ser. 1013, Oxford, pp. 59–92.

was a pit in which were uncovered ceramics, the fragments of a large human, and a human skull. In the roundel itself lay a further skeleton and the already familiar female figurines. The notably younger Stonehenge also holds traces of burial remains: in the so-called Aubrey holes—56 holes lining the inner edge of the complex—the remains of cremation burials have been uncovered.<sup>36</sup>

Roundels or Henge-complexes, which were always located within a settlement area, were thus not only early calendars but also places of funerals and a place for the collective veneration of the dead; they thus fit seamlessly into the contemporary, typical ideological background.<sup>37</sup> A death cult and the observation of the main celestial bodies were thus closely connected and played an important role in the beliefs and understandings of the Otherworld. According to the beliefs of modern, traditionally living peoples—see above for example the Hainuwele myth—the cardinal points are frequently important locations within a myth narrating the experiences of a cultural hero or a *dema* who would have come from one specific direction in order to bring to the people important cultural goods, but then after his or her violent death would disappear into a different direction towards the Underworld—and simultaneously appear in the skies as a celestial body. In such an ideology, one's ancestors are not only the mythical founders of a lineage, but are also for the first time brought into connection with the movements of the celestial bodies and are venerated collectively.

### **From a Collective Cult to Collective Burials: The Megalith Graves of the Funnel Beaker Culture (6200–4800 ybp)**

The Funnel Beaker Culture, which had spread over the modern Czech Republic via Central Germany to the Weser River in North-west Germany, is distinguished by its notable burial customs, which despite all regional differences amongst the various archaeological groups nevertheless all have one thing in common: the grave mound, an earth bank which would occasionally reach nearly gigantic proportions. The Funnel Beaker Culture in Lower Saxony and Mecklenburg more than any other impresses with its megalithic graves which give the natural landscape a unique appearance. The first megalithic graves, also known as dolmen, had been small funerary chambers consisting of four wall-stones and a single stone as a roof for one corpse only. Over the course of time, the funerals of several bodies together became more and more common and thus the original grave architecture had to be expanded. The resulting funerary chambers were carefully prepared: their floors

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<sup>36</sup>North, John (1996). *Stonehenge. Neolithic Man and the Cosmos*. London: Harper Collins, pp. 81–216.

<sup>37</sup>On the connection between burial monuments and houses: Brophy, Kenneth (2015). *Houses, Halls, and Occupation in Britain and Ireland*. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, p. 338 (326–343).

**Fig. 11.5** The stone tomb of Züschen. The tomb is known for its carved drawings of stylised cattle harnessed with a plough. The stone with the hole, which separated the burial chamber from an ante-chamber, enabled others to make contact with the deceased (© Armin Schönewolf)



consisted of sandy loam, slab-shaped stones covered with grey granite, flint, or white sand. They were usually accessed by a wooden or stone tunnel erected on the narrow side of the grave. Over the construction earth fill rose up surrounded by a rectangular or trapeze-shaped border of glacial boulders.<sup>38</sup>

However, these large collective graves were not always constructed with such boulders. In Odagsen near Einbeck, a collective grave dated to the Late Neolithic has been uncovered and reconstructed, demonstrating that the funerary site had consisted of a tent-like wooden construction over a pit dug into the bluff formation, so that the funerary level lay roughly one meter underneath the ground level. In a roughly 30sqm large paved grave chamber, at least 100 dead had been interred over a long period of time in three layers, by positioning the deceased on their backs parallel to the longitudinal axis of the chamber. The skeletal remains were then moved to the edges of the building whenever a new burial demanded the spot in the centre. The “house for the dead” in Odagsen however reveals even more concerning the funerary rites and notions of death during the Funnel Beaker Culture. The deceased was equipped with all necessities in his new abode. Thus, he kept not only his clothing and jewellery (the fangs of wolf, fox, and dog were especially popular), but also received food in ceramic vessels, pieces of meat, tools, and weapons (Fig. 11.5).<sup>39</sup>

Of course, these above-mentioned examples in no way represent the variety of funerary customs (interments in settlements continued) nor the form-variety of the

<sup>38</sup>Rzepecki, Seweryn (2011). *The Roots of Megalithism in the TRB Culture*. Łódź: Instytut Archeologii Uniwersytetu Łódzkiego.

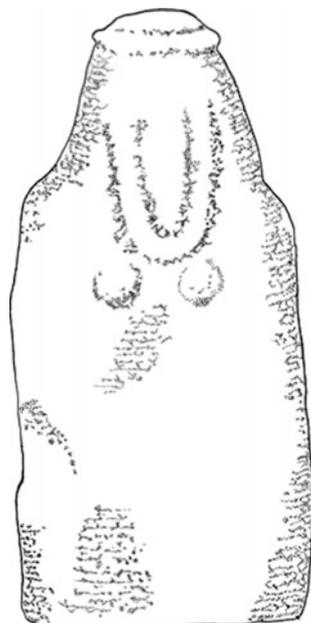
<sup>39</sup>Heege, Elke und Andreas (1989). *Die Häuser der Toten. Jungsteinzeitliche Kollektivgräber im Landkreis Northeim, Hildesheim*.

Allgemein:

Midgley, Magdalena (1992). *TRB Culture. The First Farmers of the North European Plain*. Edinburgh: Edinburgh University Press.

Müller, Johannes (2011). *Megaliths and Funnel Beakers: Societies in Change 4100–2700 BC*. Amsterdam: Drieëndertigste Kroon-Voordracht.

**Fig. 11.6** A dolmen deity from a megalithic grave on Guernsey, Channel Islands (drawing: Karolina Rupik)



large collective graves, but it has become clear that both during the Funnel Beaker Culture as well as during the Western European Neolithic, collective burials became common in houses built specially for the dead.<sup>40</sup> These houses for the dead were covered by grave mounds and thus marked as belonging to the Underworld. Discoveries of clay vessels and remains of meals in the entrance areas of these collective graves prove that the bereaved continued to maintain contact with the deceased by eating together at certain times and by offering gifts. The basis of this form of memory culture **was the idea that the deceased entered an Underworld which was ruled by a veritable goddess of the Underworld**, also called a dolmen deity. The presence of this mighty female figure is reflected not only in the potsherds with the typical frog images (e.g. Fig. 11.2), but also now in the small and starkly simplified idols of the dolmen deity with threatening, staring eyes, and especially in the depictions of eyes, breasts, or also necklaces which all appear as wall decorations in the graves or on menhirs (Fig. 11.6).<sup>41</sup>

<sup>40</sup>Cummings, Vicki, Magdalena S. Midgley, and Chris Scarre (2015). Chambered Tombs and Passage Graves of Western and Northern Europe. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 813–838.

<sup>41</sup>Gimbutas, Marija (1974). *The Goddesses and Gods of Old Europe: Myths and Cult Images (6500–3500 B.C.)*. London: Thames and Hudson Ltd.

Zervos, C. (1935). *L' Art de la Mesopotamie de la fin du quatrième millénaire au XV<sup>e</sup> siècle avant notre ère*, Paris, plates 51, 157, 174,

The deceased in the Underworld now led an existence comparable with their previous lives, which nevertheless had to be secured through regular care. As members of the tellurian world, the dead had also become very powerful—they were especially influential for all things connected with fertility as they now inhabited the ground on whose fertility their descendants depended. Until only a few decades ago, villages in Northern Germany had maintained the following custom: a woman wishing to fall pregnant had to sit on a Dolmen at midnight, naked, in order to increase her fertility.<sup>42</sup>

## Why the Megalithic Burial Sites?

Overall, we can trace decisive developments for the period between 7000 and 5000 ybp—presented here using the case study of Central Europe—and these developments can be seen both in regards to cultic behaviour as well as in the customs related to the dead.

First of all, the transition impacted on society. At the beginning of the Neolithic in Central Europe, during the Linear Pottery Culture, the first farmers settled down, built their villages, and turned to agriculture. Societies were egalitarian, with no division of labour. Every member had the same rights and responsibilities—at the utmost, we see a division of labour based on gender and age. Conflicts within these early agricultural societies were solved with the help of a ritual, calling upon common values. These common values were embodied by the actual and mythical ancestors, these first farmers to which were traced both the customs and the property divisions. Proof was a deposited skull or a figurine. Any important member of a community could become such an ancestor if after his death he completed the transition to the ancestral world as part of a complex, two-stage burial.

The producing economic system and the increasing dependency on the cultivation of grain meant new challenges for the agricultural communities: for example, the agriculturally important calendrical corner dates had to be determined. Large, common complexes were used to aid in the determination of such dates with the help of the sun and these were in turn connected to the actual and mythical

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(Footnote 41 continued)

Neumann, Erich (1955). *The Great Mother*, New York: Princeton University Press, plates 6, 8, 10–14, 16–17, 23.

Riemschneider, Margarete (1935). *Augengott und heilige Hochzeit*. Leipzig: Koehler & Amelang.

<sup>42</sup>Anonymus: *Kapellen, Menhire und Brunnen der Hingabe gegen Unfruchtbarkeit*. <http://www.avoir-un-bebe.fr/chapelles-menhirs-et-fontaines-de-devotion-contre-la-sterilite/?lang=de>, seen 3.12.2015.

Tschumi (2000/1935) Article *Megalithbauten*. In: *Handwörterbuch des deutschen Aberglaubens* Vol. 6, pp. 78–89.

ancestors: the ancestors buried in the henges, the inhabitants of the telluric world, were responsible for plough and sowing, and thus ultimately for the fertility and the welfare of their descendants. Collective cults developed, offering a framework for solving conflicts between competing settlements. The palisades fortifying the villages prove the competition between settlements.

Overall, an aggressive element appears to have been on the rise:<sup>43</sup> on the one hand, we find traces of violent disputes reaching mass murder after a hostile attack, and as a reaction, the first social distinctions emerged—perhaps still based on age, as young men were probably initiated into a *Männerbund* (literally an age-class of warriors) before they had reached marriageable age. However, this must remain a speculation. Much younger customs from the Iron Ages with their martial male leagues following the God Odin could suggest the existence of such a custom.<sup>44</sup> We do know, however, that with these changes in society, the image of a military hero arose who came to dominate the ancestral cult and ultimately developed into a mythical figure. Numerous ancient deities can still boast of their origins in such hero cults.<sup>45</sup>

The increasing competition amongst settlements, encouraged by what appears to have been a growing lack of suitable settlement areas, also led to changes in the rituals related to the veneration of the dead. Ancestors now no longer were understood only as guarantors for common values, but, just as during the Palaeolithic, as justifiable proof for territorial claims. In order to make such claims valid, the deposited skull or a figurine with defensive symbols no longer sufficed; instead, along with the justification of the claim, the economical and physical power of the community had to be emphasised.<sup>46</sup> This was achieved by erecting huge graves, in order to exhibit one's own strength, perhaps for the benefit of an aggressive neighbour, and thus also displaying the risks of a physical encounter. Again, we see competition and ranking—this time between villages rather than between individuals.<sup>47</sup> The deceased thus held new responsibilities. They were no longer only the guarantors for a consensus but as members of the all-powerful tellurian world they were responsible for the welfare for their descendants. These in

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<sup>43</sup>Orschied, Jörg and Haidle, M. (2006). The LBK enclosure at Herxheim: theatre of war or ritual centre? References from osteoarchaeological investigations. *Journal of Conflict Archaeology* 2, pp. 153–167.

<sup>44</sup>Chadwick, H. M. (1899). *The Cult of Othin: An Essay in the Ancient Religion of the North*. London: Clay & Sons.

Hasenfratz, Hans-Peter (1992). *Die religiöse Welt der Germanen. Ritual, Magie, Kult, Mythos*. Freiburg: Herder.

<sup>45</sup>Burkert, Walter (1985). *Greek Religion*. Oxford: Blackwell, pp. 203–208.

<sup>46</sup>Daniel, Glyn (1970). Megalithic Answers, in: *Antiquity* 44/1970, pp. 260–269.

Bloch, Maurice (1975). Property and the end of affinity. In: Bloch, Maurice (ed.), *Marxist Analyses and Social Anthropology*, London: Malaby Press, pp. 203–228.

<sup>47</sup>Müller, Johannes, et al. (2013). Landscapes as Social Spaces and Ritual Meaning: Some New Results on TRB in Northern Germany. In: Bakker, J. A., Bloo, S. C. B. and M.K. Dütting (eds.), *From Funeral Monuments to Household Pottery. Current Advances in Funnel Beaker Culture (TRB/TBK) research*. BAR International Series 2474. Oxford: Archaeopress, p. 77.

turn had to ensure that their ancestors were able to maintain their powers and positive allegiances with the help of gifts.

How much this form of competition for habitat can mark a culture and encourage them to reach cultural heights can be seen in Malta: this Mediterranean island will be the focus of the next chapter.

## Chapter 12

# The Exchange of Gifts and the Underworld: Malta

### The Power of the Underworld

The **Neolithic notions of an Underworld**, in which the dead continue their existence ruled by a female (see Chap. 11), have left their mark not only in the myth itself, i.e. in the ideology-forming creation story of the respective society, but also in the numerous notions and customs of popular belief, in folk and fairy tales.

The Greek myth knows of Persephone, daughter of the mother deity Demeter, who was desired by the ruler of the Realm of the Dead, Hades, and kidnapped. Feeling sorrow over the loss of her daughter, Demeter, goddess of the earth's fertility, of grain, of seeds, and the seasons, allowed the vegetation to die, so that Zeus urged his brother Hades to release his beloved back into the world. Persephone, however, had already tasted the pomegranate in the Underworld, the apple of death, and was thus tied to the Underworld. Consequently, she spends a third of the year with her husband Hades as ruler of the subterranean World of the Dead. During this time, all vegetation on earth lies dormant. The other two thirds of the year, she spends with her mother, who thus enables all vegetation including grains to grow and prosper.<sup>1</sup> This ancient myth of Demeter, according also to Walter Burkert's opinion, thus logically combines life and death with notions of sowing and harvesting. The seeds which are placed into the ground, the Underworld, sprout and will carry fruit during the summer season. Similar to the myth of Dionysius, the myth of Demeter had such power that it advanced to one of the most important mystery cults of Antiquity. From the Underworld, thus states the

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<sup>1</sup>Hesiodus. *Theogony*. Ed. and transl. by Glenn W. Most. Loeb Classical Library. Cambridge, MA: Harvard University Press, 2006.

Ovidius Naso, Publius (Ovid). *Metamorphoses: Books 1–8*. With an English translation by Frank Justus Miller. 2nd ed. F.J. Miller (Hg.). Loeb Classical Library. Cambridge, MA: Harvard University Press, 1960; 5, 501.

Richardson, N. J., ed. (1974). *The Homeric Hymn to Demeter*. Oxford: Oxford University Press.

myth, comes fertility; the inhabitants of the Underworld and their female leader decide over the fertility of the fields, the cattle, and the humans.<sup>2</sup>

In the German-speaking world, the notion of a female ruler of the Dead who influences the fate of the Living and who rules over immense wealth has been sustained until today. In the folktale of Mother Holle/Mother Frost (German: *Frau Holle*), i.e. the Germanic deity Hel, Hulda, Holle, or Perchta, she rules over the subterranean Underworld which can be reached through caves, wells, or chasms. In the fairy tale of the Brothers Grimm, a young girl is tortured by an evil stepmother and she throws herself into a well and thus enters into the Underworld. In this Underworld, a copy of the world above with fields, fruit trees, and baking ovens, she encounters *Frau Holle*, in whose services she subsequently proves herself. Amongst other things, she is responsible for the weather—when she shakes up the beds, it snows in the world above. Eventually, the girl wishes to return home, and upon leaving the Underworld she is showered with gold. Her lazy stepsister, who now also wishes to find her luck in the Underworld, finds a different reward waiting for her: as a punishment for her laziness, she is doused with tar pitch.<sup>3</sup> The Dead, or their ruler, therefore, generously reward helpfulness and hard work.<sup>4</sup> Simultaneously, in this fairy tale, *Frau Holle* is the archetype of fertility who blesses the spring. In order to strengthen this blessing, folk customs knows of various practices, including the presentation of meals or the provision of a coin as a gift for the powerful ruler of the Underworld.<sup>5</sup>

Amongst the retinue of the ruler of the Underworld, we find dwarves who dwell in caves and also in the so called *Hünengräber*, which are nothing else than the megalithic grave mounds of the Stone Ages. Here, they guard immeasurable treasures, especially gold. However, they also own objects for the daily use of an agricultural society, which all have the quality of producing inexhaustible material goods—for example, the legendary spindle granted by the dwarves means that the flax produced on this spindle will never run low; another such legendary figure is Rumpelstiltskin who is famed for spinning gold.<sup>6</sup>

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<sup>2</sup>Burkert, Walter (1985). *Greek Religion*. Oxford: Blackwell, pp. 159–160.

<sup>3</sup>Jacob and Wilhelm Grimm (1884). *Household Tales, Frau Holle (Mother Holle)* translated by Margaret Hunt.

<sup>4</sup>Timm, Erika (2003). *Frau Holle, Frau Percht und verwandte Gestalten: 160 Jahre nach Grimm aus germanistischer Sicht betrachtet*. Stuttgart: S. Hirzel Verlag.

Grimm, Jacob (1882). *Deutsche Mythologie* 4th ed. [1875]. Trans. James Stallybrass *Grimm's Teutonic Mythology Volume 1*.

Schwarz (2000). Pertha. In: Bächthold-Stäubli, H. and Hoffmann-Krayer, E. (eds.), *Handwörterbuch des deutschen Aberglaubens*. Vol. 6. Berlin, pp. 1478–1492.

<sup>5</sup>Buschan, Georg (1914–22). *Das deutsche Volk in Sitte und Brauch. Die Sitten der Völker*. Vol. 4. Stuttgart/Berlin: Union deutsche Verlagsgesellschaft, p. 42.

<sup>6</sup>Müller-Bergström (2000). *Zwerge und Riesen*. In: Bächthold-Stäubli, H. and Hoffmann-Krayer, E. (eds.), *Handwörterbuch des deutschen Aberglaubens*. Vol. 9. Berlin: Walter de Gruyter, pp. 1008–1138.

The notions of powerful dead, presented here by using the examples of a Greek myth and a German folk tale, which had developed from older notions dating back to the Neolithic, as demonstrated in the preceding chapters, have all had a powerful influence on the culture of Neolithic Malta.

## Malta

Malta is the largest and name-giving island of a small archipelago in the Central Mediterranean, including the Island of Gozo and three further, much smaller, uninhabited islands. Despite the proximity to the European mainland, these islands remained uninhabited until the late sixth century BCE/8000 ybp. Only then did early settlers from Sicily succeed in reaching these paradisiacal islands with their sumptuous flora and fauna. These natural resources initially appeared inexhaustible, supplemented by imported cattle, allowing the first generation a carefree life; as a consequence, the population density rapidly increased.<sup>7</sup> After about 2000 years of continuous use, the natural resources showed early signs of misuse; these negative effects strongly increased over the subsequent centuries. This slow but continuous economic-ecological aberration with dramatic consequences for the inhabitants was mirrored in the ideology of Maltese culture and found an impressive expression in the building of impressive temple and grave complexes.<sup>8</sup>

Here, also from a religio-ecological perspective, several phases must be distinguished, during which the grave and temple architecture developed from its early, simple beginnings to the final impressive buildings, always dependant on the declining resources.

After a settlement phase with its early, unfortunately barely preserved cultic spots (Ghar-Dalam and Skorba-phase), the Zebbug phase began in the early fourth century (4100–3800 BCE/6100–5800 ybp), a period of the temple culture proper for which Malta today is famous and which so impressively characterises this small island. This phase was followed by the Mġarr period, during which the temple culture, inspired by megaliths, reached its first climax. With the building of the Ġgantija temple on Gozo, the synonymous Ġgantija phase (3600–3000 BCE/5600–5000 ybp) had reached the level of an early advanced civilisation which was

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<sup>7</sup>Freeden, Joachim von (1993). *Malta und die Baukunst seiner Megalithtempel*, Darmstadt: Wissenschaftliche Buchgesellschaft, p. 4

Stoddart et al. however suggest that the resources of the island had already been limited during the settlement phase: Stoddart, Simon, Anthony Bonanno, Tancred Gouder, Caroline Malone und David Trump (1993). *Cult in an Island Society: Prehistoric Malta in the Tarxien Period*, in: *Cambridge Archaeological Journal* 3:1/1993, pp. 3–19.

<sup>8</sup>Malone, Caroline und Simon Stoddart (1998). *The conditions of creativity for prehistoric Maltese art*, in Steven Mithen (ed.), *Creativity in Human Evolution and Prehistory*, London/New York: Routledge, pp. 241–259.



**Fig. 12.1** The temple of Haġar Qim (3600–2500 v. Chr.) in the South of Malta (© Christine Wunn, edited by Wolfgang Winkler; with kind permission)

nearing its climax during the subsequent Tarxien phase (3000–2500 BCE/5000–4500 ybp) (Fig. 12.1).<sup>9</sup>

During the subsequent centuries, the exhaustion of the natural resources together with the karst formation as a consequence of their overuse caused a population decline and ultimately the downfall of the Maltese temple culture.<sup>10</sup>

In contrast to the sacred architecture, which is our main topic, the archaeologically retrieved evidence of an early domestic architecture is rather slim and limited to a few, badly maintained sites, including Għar Dalam, a cave dwelling, Skorba with its clay brick architecture over an oval layout, and Għajnsielem, also with its oval building construction (Fig. 12.2).<sup>11</sup>

We can be fairly certain of the appearance of domestic buildings because discoveries of model houses, such as those near Ta'Haġrat, can supplement the excavated findings. It is decisive for these discoveries that there evidently was an architectural relationship between domestic, sacred, and sepulchral architecture, which is no coincidence—even in earliest times, living quarters copied graves!<sup>12</sup>

The oval, i.e. cave-like, form of Maltese domestic buildings can be found easily both in the temple architecture as well as in burial sites. After a badly documented early phase of individual burials in small, saucer or kidney-shaped graves, the inhabitants of Malta during the Żebbuġ period began to bury their dead collectively

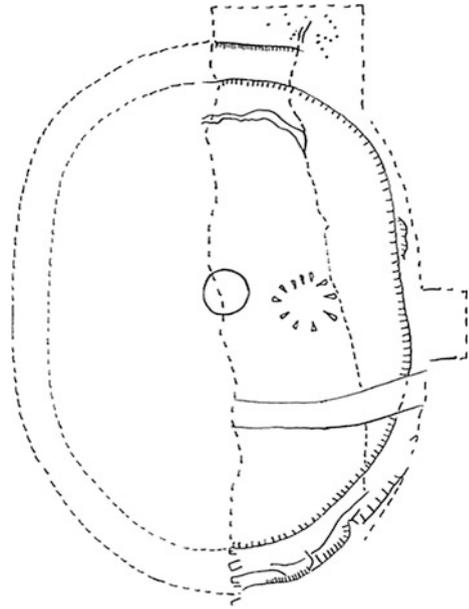
<sup>9</sup>For the individual periods, compare Evans, John D. (1959). *Malta*, London: Thames and Hudson. Extensively discussed in: Wunn, Ina (2005). *Die Religionen in vorgeschichtlicher Zeit*. Stuttgart: Kohlhammer, pp. 419–450.

<sup>10</sup>Freeden, Joachim von (1993). *Malta und die Baukunst seiner Megalithtempel*, Darmstadt: Wissenschaftliche Buchgesellschaft pp. 32–35.

<sup>11</sup>Malone, Caroline, Reuben Grimma, Joseph Magro-Conti, David Trump, Simon Stoddart und Holly Hardisty (2009). *The Domestic Environment*, in: Malone, Caroline, Simon Stoddart, Anthony Bonanno und David Trump: *Mortuary customs in prehistoric Malta*. Cambridge: McDonald Institute Monographs, p. 47.

<sup>12</sup>Evans, John D. (1971). *The Prehistoric Antiquities of the Maltese Islands: A Survey*, London: Athlone Press, pp. 32 and 35.

**Fig. 12.2** Layout of a house in Ghajnsielem. (Drawing: Karolina Rupik)



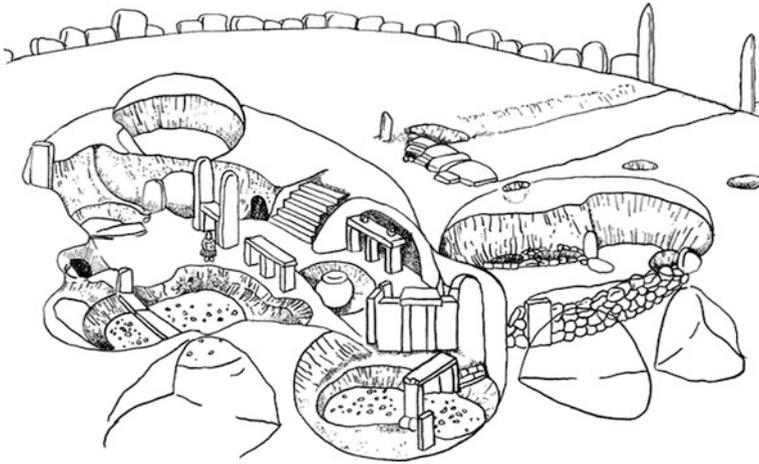
in rock graves.<sup>13</sup> The subsequent development can luckily be traced by referring to the so-called Brochtorff-Circle on the smaller island of Gozo, which had been continuously used as burial and cultic place and thus beautifully reflects the change in burial customs from the Żebbuġ to the Tarxien phase (Fig. 12.3).<sup>14</sup>

At the beginning of the developments on Gozo, there were two simple burial chambers from the Żebbuġ period, which eventually held the bodies of over 50 dead. During the subsequent Ġgantija period, the inhabitants transitioned to including a neighbouring, natural cave system into the subterranean complex, until finally during the Tarxien period, the complex was extended to a veritable subterranean monument in which numerous collective burial sites were grouped around a cathedral-like cult chamber. The entire area with its various collective graves was then surrounded by a megalithic stone circle. The main subterranean cave at this point was designed to correspond with the megalithic temples above ground, while the entrances to further burial niches to the sides were optically separated from the main cave through megalithic blocks.

The exact architectural agreement of subterranean burial site and the temple complex above ground becomes especially clear in the case of the famed hypogeum of Ħal Saflieni, which lies at a distance of only 500 m from the cult complex of Tarxien, and which had a very specific relationship with the complex. This cult and

<sup>13</sup>Ibid. pp. 166–169.

<sup>14</sup>Malone, Caroline, Simon Stoddart, Anthony Bonanno und David Trump (2009). *Mortuary customs in prehistoric Malta*, Cambridge: McDonald Institute Monographs.



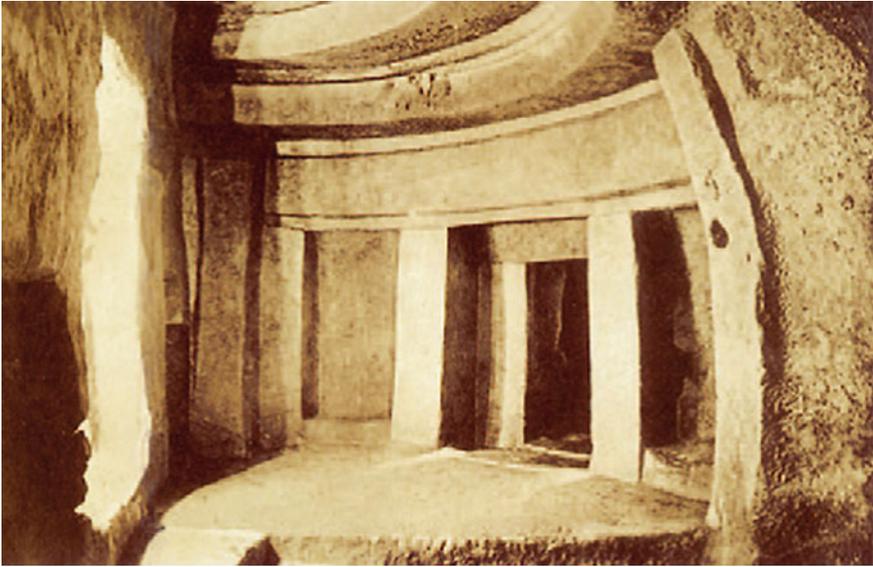
**Fig. 12.3** The Brochtorff-Circle on Gozo (Drawing: Karolina Rupik)

burial site, a tangle of rock chambers and halls connected through stairs, paths, and chutes, was in continuous use from the Żebbuġ to the Tarxien phase. Each of these chambers and halls has an oval layout and thus mirrors in form the oldest grave chambers of the Żebbuġ type which stood at the outset of the local building history. The subsequent generations extended these cave-like chambers to find space to new burials and the related cultic practices. Finally, the hypogeum represents a complex of halls and chambers which reach over three main stories. The entrance to the hypogeum itself leads through a trilith which could be entered straight through the topmost level which consisted of only a few, roughly hewn chambers. On the next-lower level, carefully planned halls with a series of purely decorative elements stand out which were still missing in the older parts, including sacral fixtures constructed out of carefully sculpted megalithic blocks, as they were also known from the temple complexes of the Ġgantija and Tarxien periods. An exterior wall of a hall-like central room, constructed to resemble a building façade, picks up the temple architecture by dividing the wall spaces with shallow niches, the façade is concave, and the ceiling appears to be a corbelled vault with a central opening, constructed of megalithic blocks—only in fact it is hewn out of the rocks, while the identically-shaped temples above ground were built of such blocks (Fig. 12.4).<sup>15</sup>

Aside from these and other carefully built, partially painted rooms and chambers on the second level, a set of stairs leads down to the lowest level with its burial chambers.

Despite the delicate setting of some rooms, especially on the second level, neither the hypogeum of Ħal Saffieni nor the Brochtorff-Circle appear to have been the locations for cultic actions themselves, but instead served only as a place of

<sup>15</sup>Evans, John D. (1959). Malta, London: Thames and Hudson, pp. 130–132.



**Fig. 12.4** A form-identical hall of the Hal Saflieni hypogeum, shaped to resemble to temple façade above ground (© Richard Ellis 1924)

burial, while the cultic actions in the real sense were practiced in the associated temple complexes, which of course superficially resemble the burial sites sites (see Fig. 12.4).

## Temple and Death Cult on Malta

The concave exterior façade and the construction of round or half-moon shaped rooms along a row of yards and passageways was characteristic for all temple complexes—originally more than 30. These layouts, according to the British archaeologist and Malta-expert John Davies Evans (1925–2011), were so peculiar and unpractical from a structural engineer’s perspective that they must have been modelled on something beyond the sphere of regular building architecture. A comparison of the original temple layouts with early burial caves such as those of Xemxija proves an astounding and detailed correlation, allowing for the conclusion that the inhabitants of Malta wanted to give their temples the appearance of subterranean burial sites. The room formations resembling caves eventually developed into the temple architecture towards strongly schematised layouts, without losing the original, organic round forms.

An example is a temple on the Island of Gozo dated to the Ġgantija period, which originally consisted of two independent buildings which were connected



**Fig. 12.5** An altar-like construction, here from Haġar Qim (© Christine Wunn with kind permission)

through a short passage and surrounded by an exterior wall. The older part of the building exhibits the characteristic, albeit enlarged shamrock-shaped layout, consisting of a yard and three horse shoe shaped rooms. Later, an oval was set in front of this building and connected to the older building with a passage. A smaller, less massive neighbouring building essentially repeats this building scheme. For the first time, altar-like constructions can be seen, consisting of vertical, standing blocks topped by a horizontal slab which frame the passage to the back chambers (Fig. 12.5).

The use for these altar-like constructions becomes clear especially in the larger complexes, e.g. from the Tarxien period. The latter consists of three complexes built at different times and eventually combined to form a unity. Immediately by the entrance of the western temple complex, we find a niche with a cored block (*Lochstein*) for libation sacrifices. In the same temple area stand two altars decorated with elaborate reliefs, one of which had been hollowed so that it could be filled with animal bones. Simultaneously, a covered opening contained a sacrificial knife made of flint which makes it clear that animal sacrifices of sheep, goats, pigs, or cattle were a part of the cultic practices (Fig. 12.6).

This same temple area is dominated by a colossal statue, originally two to three meters tall, of which unfortunately only the lower part with the fat calves and a pleated skirt remain (Fig. 12.7).

These large-bodied colossal statues and smaller statuettes were, from the Mġarr period onwards, habitually found in connection with temples and burials, and thus must have played an important role in the respective cultic practices. The funerary



**Fig. 12.6** The sacrificial block decorated with tendrils, from Tarxien (© Christine Wunn, with kind permission)



**Fig. 12.7** The colossal statue of Tarxien (© Christine Wunn, with kind permission)

cult is thus the key to understanding not only the temple itself, but also the anthropomorphic statuettes and figurines!<sup>16</sup>

<sup>16</sup>A comprehensive discussion can be found in: Wunn, Ina (2005). *Religionen in vorgeschichtlicher Zeit*. Stuttgart: Kohlhammer, pp. 424–450.

Consequently, the development of the Neolithic religion on Malta must have progressed as follows: the inhabitants of Malta had brought with them from the European mainland the by now familiar custom of veneration of the dead,<sup>17</sup> which in the cultural isolation of the island gradually took on more and more complex forms resulting in an ancestral cult. The first sanctuaries and temple complexes on Malta were used to venerate the deceased. Other, additional cultic sites with their complex layouts, their altars, and their shrines were ultimately no more than developments of these original ancestral temples in which the deceased were presented with gifts and sacrifices. Numerous cored stones with cavities and saucer-like hollows in these temples were used to catch the libation and food sacrifices for the ancestors, while the recesses in the walls of later temples were filled with the corpses of sacrificed animals. These included pigs, sheep, cattle, and goats, as a palaeobiological analysis of the bones and a view to the temple frescoes decorated with these sacrificial animals prove.<sup>18</sup>

The colossal statues and the smaller statuettes fit seamlessly into this context: they are ancestral figures, which played an important role both in the funerary cult as well as during later cultic practices in the temple areas.

Thus, the development of religion on Malta can be outlined as follows: at the outset of the development, Malta knew of comparatively simple customs related to the veneration of the dead. They were buried individually, and eventually collectively in caves or in artificially deepened, cave-like graves. The form of these burial sites was repeated in the temple complexes; temples were thus a copy of the graves, which in contrast to their architectural models remained accessible for the community also outside of burial celebrations. Here, contact could be made with the dead who continued their existence in the subterranean sites, and they could receive gifts through the medium of sacrifices. The deceased, represented as statuettes, were erected in the temples and became objects of veneration. The generous body mass of these idols was a reference to the paradisiac conditions of the Telluric World. Here, the ancestors could exist amongst an endless supply of anything they desired. These ideal conditions were secured through the care taken by their descendants: libations and sacrificial animals ensured the ancestors' constant supplies. While liquids could immediately access the realm of the Underworld through recesses, the bones of sacrificial animals were placed in the tabernacles and altars of the temple and thus symbolically joined the deceased in their graves.

The obesity of these ancestral statues was proof of how well the ancestors, the mighty members of the Telluric World and lords of fertility and subterranean wealth, were cared for. Adhering to the principle of *do ut des*, people expected that

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<sup>17</sup>Skeates, Robin (2015). Underground Religion in the Central Mediterranean Neolithic. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 895–910.

<sup>18</sup>Wunn, Ina/Davina Grojnowski (2013). The Religion of Ancient Malta – an Evolutionary Approach, in: G. Sfameni Gasparro, A. Cosentino, M. Monaca (Hg.), *Religion in the History of European Culture. Proceedings of the 9th EASR Conference and IAHR Special Conference, 14–17 September 2009*, Messina, Biblioteca dell'Officina di Studi Medievali 16. 1/2, Palermo 2013.

the ancestors in turn granted the urgently needed fertility of field and livestock. It is thus not surprising that towards the end of the temple building era, when the resources had become noticeably scarce, the cultic efforts reached a feverish quality.<sup>19</sup>

## The Exchange of Gifts

Thus, a form of cultic behaviour had developed on the Maltese islands which totally redefined the relationship between the living and the dead. Let us briefly look back to the familiar form of the ritualistic burial. The ritual is a performative repetition of the primeval events narrated in the myth; the myth in turn is a creation narrative which interprets the life of the respective community and the existential foundations of human existence included its social relationships. In such an ideology, each individual is the image of “his” specific and mythical ancestors; in his life the experiences of the clan’s founder regularly repeat themselves. The extraordinary French anthropologist Marcel Mauss had presented such an ideology; by reverting to the original meaning of *persona*,<sup>20</sup> Mauss demonstrated that *persona* was something more than only the biological individual. A “person” is someone who holds a certain position within a family/clan/lineage, i.e. a predetermined role. This can even mean that the victor in a duel not only appropriates his opponent’s weapons, but also his property, his name, and his position within his family. In a non-stratified society, in which the myth defines the ideology, the ritual as a conflict-solving authority on the one hand and as a performative repetition of the mythical primeval events on the other defines the *persona*, i.e. the social existence of the individual.<sup>21</sup>

So far the relationship of the living to the deceased in the Neolithic, as presented in the previous chapters. Now, however, a totally new manner of contact with the Supernatural comes to the fore—and this is especially clear to see on the Maltese islands—which was to become characteristic for the *archaic religion* sensu Bellah (see Chap. 1). The gift exchange evidently regulated the relationships between the world of the living and the Underworld. The living provided the deceased with everything they required for their continued existence, especially food and drink. The deceased, as members of the Telluric world, of course could not access the food and drink but on the other hand were considered powerful and could constrain or encourage earthly luck. More than anything else, they decided over the fertility of

<sup>19</sup>Wunn, Ina (2005). *Religionen in vorgeschichtlicher Zeit*. Stuttgart: Kohlhammer, pp. 447–450.

<sup>20</sup>In ancient Rome, however, the death masks of the ancestors were displayed in the atrium—not only in the sense of a genealogic tree, but because they were believed to pull together the family by means of their inherent spirits. Pliny Major, *Hist. Nat.* XXXV, 2.

<sup>21</sup>Mauss, Marcel (1989/1950). *Eine Kategorie des menschlichen Geistes. Der Begriff der Person und des “Ich”*, in: Mauss, Marcel, *Soziologie und Anthropologie 2*, Frankfurt: Fischer (Paris), pp. 221–251.

the fields and the cattle. In order to ensure the services of their ancestors, the inhabitants of Neolithic Malta used the exchange of gifts, an archaic custom whose analysis we also owe to Marcel Mauss.

As Mauss had uncovered using the anthropological literature of his times, several traditionally living peoples were beholden to a *système des prestations totales*/a system of total services; the moral obligation to present gifts, to accept gifts, and to reciprocate. This custom of exchanging gifts is deeply rooted in the biology not only of primates but also in some other animal species—gifts are used to defuse possible aggression, usually in a sexual partner. Thus, the male spider assuages his chosen female's lust to kill by presenting her with a fly to eat during the mating process.<sup>22</sup> Birds also beguile their mates with gifts, and the females not only accept these gifts but encourage the males in their joy of giving by mimicking the begging behaviour of young birds (rapid wing movements).<sup>23</sup> Parallels to *Homo sapiens*, where we can occasionally also witness a similar infantile behaviour, can also be found on non-scientific levels.

The mutual exchange of gifts, which anthropology describes as an early form of economy in archaic societies, is bound up with an entire set of rights and responsibilities which regulate the use of gifts, their required reciprocation, offering, and receiving of gifts. In these respective archaic societies, all goods including food, tools, talismans, produce, landed property, work, priestly positions, social standing, and life partners are objects of gift and return. Each member of such a society is required, in accordance with his social standing, to offer gifts to entitled personalities at predetermined occasions; these must be accepted and, and this is of immense importance, after a suitable period a gift of equal value must be offered in return. An almost judicial relationship forms between the donor and recipient as a consequence of this conventionally regulated exchange of gifts; in addition, they develop a far-reaching subtle relationship (today we would speak of an emotional relationship), which is formed over the gift's spiritual potency. This potency is understood as an effective force which is a part of the gift itself but which also entails aspects of the giver's potency. Through these subtle or emotional shares of the gift, the giver can acquire a certain power over the new owner so that a close relationship develops between giver and recipient. This system of continuous gift exchange however does not include only the society of the living, but can also incorporate the deceased, i.e. ancestors, and the deities.<sup>24</sup> Thus, for example during the North-west American potlatch, an immense amount of goods are regularly given away and consumed, and even destroyed.<sup>25</sup>

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<sup>22</sup>Alcock, John (2012). *Animal Behavior: An Evolutionary Approach* (9th ed.) Sunderland, MA: Sinauer p. 550.

<sup>23</sup>Lack, David (1940). Courtship Feeding in Birds. In: *The Auk* Vol. 57, No. 2 (Apr. 1940), pp. 169–178.

<sup>24</sup>Mauss, Marcel (1989). Die Gabe. Form und Funktion des Austauschs in archaischen Gesellschaften, in: idem., *Soziologie und Anthropologie* 2, Frankfurt: Fischer (Paris 1950), pp. 9–144.

<sup>25</sup>Boas, Franz (1997). The Social Organization and the Secret Societies of the Kwakiutl Indians, in: Report of the U.S. National Museum for 1895, pp. 311–738.

The underlying, generally accepted fiction used to explain this orgy of waste suggests in addition to the living members of the community, the mythical and the actual ancestors also participate; these are represented by those people who currently bear their names and are thus considered as their personification (*persona!*). The exchange of gifts with one's ancestors, spirits, and deities is also necessary as they are considered to be the real owners of the land and the goods produced on and by this land. The motive of destruction can thus ultimately be traced back to the understanding of destroying goods as a gift to higher powers. In return, the required responsibility to exchange gifts forces the recipient, in the case of Malta the ancestors, to generous gifts in return.

As in the case of Neolithic Malta, if precious sacrifices are offered, the ancestors are obliged to accept them. Consequently, they enter into a close relationship with the living who expect and even demand a corresponding gift in return. The deceased and with them probably other *demas* addressed simultaneously are required to offer a gift of equal or higher value in return, i.e. to ensure the prosperity of the donor. The givers, in the case of Malta, were not individuals but the village communities who collectively venerated their ancestors in a cultic framework. Thus, the relationship to the superior powers had achieved a new quality in Malta. While previously identification and participation were required when contacting the ancestors and *dema*, i.e. visualising the powers in a ritual, in order to guarantee the cosmic order, now the **do-ut-des** principle had taken over. Ancestors and deities had become objects of veneration and cultic objects in order to receive protection and services from them in this manner (Fig. 12.8).



**Fig. 12.8** The goddess of the Underworld also ruled the World of the Dead on Malta. However, she was no longer visualised as an idol, but now depicted as a pair of eyes which informs the visitor that he was within the realm of the so-called dolmen goddess (© Christine Wunn; with kind permission)

## Malta: Religion and the Ecosystem

The inhabitants of Neolithic Malta reacted to the decline of their living conditions as a consequence of overpopulation and wearing out of the natural resources with the system of exchanging gifts, which from a secular, economical perspective is nothing more than the destruction of goods; the connection quickly becomes clear when observing the divisions within the temple complexes on the islands of Malta and Gozo. The temples are bound to areas of fertile and thus agriculturally valuable soil and are thus the visible signs of an autarkic economic and cultic community. The rather regular distribution of the temples across the island makes it clear that during the period of temple building, the arable land on the islands had largely been developed, although the agricultural characteristics with its small-scale distribution of fertile *terra rossa* dictated the size of the individual settlements.

The temples represented the cultic places of each settlement with its (presumably) related individuals. Thus, the ancestor presented by the respective idol figures would have simultaneously been the mythical and factual founder of the clan, whose *persona* and the corresponding line of descent also serve to justify territorial claims. This correlation can be seen clearly with the help of the uncovered graves of the Brochtorff-Circle, in which underneath a melange of human bones, skeletons were found which were interpreted by the excavators as proof for a genealogical ideology. The 25–40 cm high figurines, so characteristic for Neolithic temple complexes on Malta, depicting full-bodied, usually seated, naked or clothed sexless people, are thus to be considered cultic figures whose lack of gender would allow for the identification with male and female deceased. The colossal statues of later times are also ancestral figures, which however now, as part of a competition between the different temple communities, proliferated in size.

We can thus also explain the immense size of the megalithic temple complexes. As parallels from the fields of religious history and ethnology show, these megalithic constructions serve to emphasise territorial claims. In Madagascar, for example, the Merina people cultivate rice under limited agricultural and engineering circumstances, and are thus forced to give the utmost care when handling the limited natural resources. The necessity of securing a limited agricultural area for the own group leads to the emphasis of lineages which can be traced back to mutual ancestors. These ancestors were considered the factual owners of the land which they had conquered back in mythical times and they can thus put forward legitimate claims. Megalithic burial sites as dwellings for ancestors and widely visible signs in the landscape are demonstrably the symbols both of continuity and territoriality. Sparse resources and a still largely segmentary society veritably provoked the development of certain funerary customs and grave forms, so that a requirement for distinctive grave sites develops especially when the available resources become rare. In a society in which overarching, political regulations dealing with territorial claims are lacking, megalithic structures relating to ancestors are used to put forward territorial claims in a way which includes justification and continuity equally, and logically refers back to these ancestors. Ancestors as legitimate owners of the

land since mythical times are a means and argument to consolidate religious and to anchor contemporary territorial demands.<sup>26</sup>

The ideologically fixed relationship between the living and the dead receives additional relevance if, as in the case of the prehistoric development of Malta, the natural resources decline: on the one hand, a competition for the available resources arises amongst the living, in whose course the justified claims over territory are emphasised with reference to the ancestors. On the other hand, the deceased as inhabitants of the Underworld are included in the complex economic conditions. They are the recipients of sacrifices and thus required to ensure the provision of their descendants. Large temple complexes, a decline of resources, a possibly very pronounced competition, and an elaborate ancestral cult thus all stand in close relationship to each other.

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<sup>26</sup>Bloch, Maurice (1975). Property and the end of affinity, in: Bloch, Maurice (ed.), *Marxist Analyses and Social Anthropology*, London: Malaby Press, pp. 203–228.

## Chapter 13

# The Double Axe and the Bull—A Pantheon Develops

### The Weather God Enters the Stage

At the end of the Neolithic, ideology had once again transformed itself dramatically. Beginning with the depositing of skulls in the Palaeolithic, followed and supplanted by the ancestral figurines in the context of burial rituals, a house cult had developed in Western Anatolia and South-eastern Europe, which especially on Malta had developed further into a veritable ancestral cult. As powerful inhabitants of the Underworld, into which they had been ritually led after their death, the ancestors were both the visible proof for the justification of territorial claims and also members of the Telluric world and thus responsible for the welfare of their descendants. While the relationship of the descendants to their ancestors had been one of identification and participation at the beginning of the Neolithic, envisioned in a ritual, over the course of the subsequent three to four millennia, the relationship between the living and the dead transformed into a relationship based on the exchange of gifts. This means that veneration replaced visualisation. Simultaneously, social differentiation which had begun in the second half of the Neolithic did not exclude the deceased: prominent personalities, mainly heroes, were gradually afforded an increasingly important status in connection with the worship of the powerful members of the telluric world. This was reflected in the myth—the first telluric deities developed (see Chap. 11). At the same time, a female figure continued to play an important role, who had from the Palaeolithic, apotropaic (displaying) female figure developed first into a dema (*Urmutter*, primordial mother), and eventually through the process of hypostatization into an actual female deity. Archaeologically, she was repeatedly traceable as ruler of the Underworld (dolmen goddess), whose image appeared initially as the displaying woman in connection with domestic burials in Anatolia, subsequently in the context of burials of the Linear Pottery Culture in Central Europe, and finally as dolmen goddess in the megalithic cultures of Europe. The same figure still appears in the myth, although it becomes tangible for us only in historic times, as a powerful female deity (as Gaea or Rhea) of a meanwhile

disempowered generation of gods and thus represents a piece of religious history in collective memory culture.

This religious bedrock was joined, in the context of agriculture and the necessity of being able to determine calendrical cornerstones, by the observation of the seasons and the weather, as the earliest roundels/henges during the Linear Pottery Culture demonstrated (see Chap. 11). From an archaeological point of view, burials in these circular enclosures make it clear that the cardinal directions and thus also the weather—see for example the folk tale of *Frau Holle*—were related to the Underworld and ancestors.

At this point in time, when the deceased as powerful creatures of the Underworld were made responsible for the fertility of the fields and thus by default had to influence the weather as well—burials and the determination of calendrical dates occurred simultaneously in the circular enclosures—a male idol repeatedly appears in the megalithic burial sites of Central and Western Europe, which clearly displays phallic references and is characterised by an axe. A glance to religious history (Bronze and Iron Ages) and the comparison with the corresponding iconography suggests that these images should be viewed as an indication of the existence of an early weather deity, whose weapon represented thunder and lightning and who was attributed with the snake as lightning symbol. Additional archaeological evidence for the existence of such a deity can be found in the shape of building sacrifices in the foundations of houses especially during the Funnel Beaker Culture, where erect axe-blades were meant to protect from lightning. In addition, the occasional depictions of axes and the less frequent images of snakes found in megalithic graves must be understood as symbols of this deity and could relate to his fertile and life-spending attributes.<sup>1</sup>

How could the notion of such a trans-regional deity develop? According to Aby Warburg, existential fears ultimately lead to the idea of deities: by interposing an interval of reflection between impulse and action, human beings are capable of turning the uncontrolled reactions of emotion into symbols of gesture and art (Chap. 5). A source of such existential fears was the weather; thunderstorms especially, as the ensuing rainfall was considered life-giving, but at the same time dangers such as a stroke of lightning or the destruction of the harvest through inopportune hail or rain were life-threatening. By personalizing the unpredictable weather and the ensuing ability of dialoguing with this mythical creature, Warburg's afore-mentioned space for reflection could be accessed which made the existential threat of the Neolithic more bearable.<sup>2</sup> In this process, the notions of

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<sup>1</sup>Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell Publishing, pp. 25, 38.

Renfrew, Colin (1969). The development and chronology of early Cycladic figurines. *AJA* 73, pp. 1–32.

Beilke-Voigt, Ines (2002). Kultische Deponierungen in neolithischen Hausbefunden, in: *Varia Neolithica II/2002*, pp. 141–154.

<sup>2</sup>Warburg, Aby (1939). A Lecture on Serpent Ritual. In: *Journal of the Warburg Institute* Vol. 2, No. 4 (Apr., 1939), pp. 277–292.



**Fig. 13.1** Lightning-throwing Zeus (© National Archaeological Museum of Athens)

powerful creatures responsible for the weather were not created out of thin air but could build on a pre-existing ideology in which the ancestors cared for the welfare of their descendants, with whom they were closely connected—in the first half of the Neolithic by means of the ritual (identification and participation), and subsequently through exchanging gifts. The existential fears which were caused by a dependence on a still young agricultural system with its numerous vagaries, as well as a common ideology developed over the course of millennia, meant that these fears could be processed with the help of identical symbols: snake and lightning!<sup>3</sup> These identical symbols ultimately meant that the various local powers were parallelised and ultimately superimposed on each other to create a single deity—the best example from archaic Greek culture being Zeus, whose numerous sobriquets indicate the different points of origin of this weather deity universally known in the Greek world (Fig. 13.1).<sup>4</sup>

<sup>3</sup>Ibid.

<sup>4</sup>Frog (2015). *Mythology in Cultural Practice: A Methodological Framework for Historical Analysis*. In: Frog and Lukin, Karina (eds.), *Between Text and Practice. Mythology, Religion and Research. The Retrospective Methods Network Newsletter No. 10*, Helsinki: University of Helsinki, pp. 33–57.

Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, p. 120.

## Gods and the Cognitive Science of Religion

A (albeit complementary) attempt at explaining the appearance of new deities is provided by the cognitive science of religion.<sup>5</sup> A short overview: approaches based on the cognitive sciences aim to explain the development of religious feelings and behaviours based on neuroscience, i.e. the physiological and neuronal foundations of the religious experience. Focus of the research interests here lies on the specific forms of how humans process information, cognition.<sup>6</sup> The brain's performance relevant for religion is a reaction now known as HADD (hyperactive agency detection device). Here, the brain automatically associates an unfamiliar, disquieting event it cannot initially pigeonhole to the most complex and dangerous cause imaginable. An example: if an individual hears rustling in the thicket, it is safer for the inadequately armed Stone Age man to seek shelter before he begins the complex process of deliberating whether the noise had merely been wind or maybe another hostile man, or even a dangerous predator. The recognition of actors is thus a decisive ability in the fight for survival. This mechanism explains the nervousness and readiness to escape of rabbits, mice, or even sparrows, whose existence is constantly threatened by attackers. Amongst humans, the predisposition to assume a perpetrator when faced with inexplicable events is supplemented by a further theory: the ToM (Theory of Mind). This theory describes the (not only) human ability to recognise foreign emotional and conscious states and to empathise, thus recognising emotions such as fear, sadness, or anger in their counterpart (see Chap. 5), and also the ability to predict their reactions with a fair amount of certainty. HADD and ToM have assuredly contributed to the survival of our species, as a potential enemy can be divined in time and certain intentions can be attributed. These abilities then led our ancestors and relatives to behave in a manner ensuring their survival. In the context of the question searching for the origins of religion, both

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<sup>5</sup>A short overview can be found in Geertz, Armin (2015). *Evolution of Religious Belief*. In: *Encyclopedia of the Social and Behavioral Sciences*, Second Edition, pp. 384–395.

The authors would like to thank Constantin Klein from the University of Bielefeld for his supplement from a psychological perspective.

<sup>6</sup>Baron-Cohen, S. (1991). Precursors to a Theory of Mind: Understanding Attention in Others. In: Whiten, A. (ed.), *Natural Theories of Mind: Evolution, Development and Simulation of Everyday Mindreading* (pp. 233–251). Oxford: Blackwell.

Barrett, J. L. (2004). *Why Would Anyone Believe in God*. Lanham/MD: Alta Mira Press.

Barrett, J. L. (2007). *Cognitive Science of Religion: What is it and Why is it?* *Religion Compass*, 1, 768–786.

Barrett, J. L. (2012). *Cognitive Science, Religion, and Theology: From Human Minds to Divine Minds*. West Conshohocken/PA: Templeton Press.

Bischof, H. J. (1989). *Neuroethologie. Einführung in die neurophysiologischen Grundlagen des Verhaltens*. Stuttgart: Ulmer.

Boyer, Pascal (1994). *The Naturalness of Religious Ideas: A Cognitive Theory of Religion*. Berkeley: University of California Press.

D'Aquili, E.G. & Newberg, A. B. (1998). *The Neuropsychological Basis of Religions: Or why God won't go away*. *Zygon*, 33, 187–201.

factors would have played an equally decisive role, as humans also attributed a consciousness, intentions, and thus personality to natural phenomena such as the sunrise, the constellations, or the weather; from here, the belief in deities must have developed.<sup>7</sup> Thus, man initially and automatically assumed a consciously acting perpetrator behind all events—and thus theoretically also behind natural events such as thunderstorms or rain. However, the reference to neuronal physiological processes does not suffice to explain the origins of religions, because, as could be demonstrated here, the development of religion was much more complex. However, should the development have progressed so far that a religious cosmos had developed, inhabited by dema, powerful ancestors, heroes, and eventually the chthonic deities, it seems reasonable to attribute to weather phenomena, of essential importance for the harvest, superhuman actors as the underlying causes, *sensu HADD*. The relationship of exchanging gifts with the ancestors dwelling in the Underworld, who had been made responsible for the success of the harvest, was thus the first step on the way towards the notion of powerful, specialised actors—responsible amongst other things for the weather. Here, the theory of *HADD* helps us to understand how on the basis of previously extant notions of the existence of superhuman creatures successively an entire pantheon could develop in which each deity had been assigned its own area of responsibility.<sup>8</sup>

The fact that these superhuman and later celestial creatures were still for a long period considered earthly beings is demonstrated by the fact that even in historic times, they were located on heights and eventually on unreachably high mountains—the Greeks still believed their deities to live on Mount Olympus—and they were undoubtedly a part of the real and extremely earthly world.<sup>9</sup>

With this explanation of how ancestors developed into chthonic deities and subsequently into celestial gods, our original research question, namely the **search for the origins of religion**, has been comprehensively answered: **initially, territorial behaviour, dominance, and existential fears led to the development of the first symbols and symbolic acts on the basis of inherited neuronal patterns supporting communication. These in turn ultimately resulted in the notions of an Underworld. This Underworld had acquired such a reality over**

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<sup>7</sup>Guthrie, S. G. (1980). A Cognitive Theory of Religion. *Current Anthropology*, 21, 181–203.

Guthrie, S. G. (1993). *Faces in the Clouds: A New Theory of Religion*. Oxford: Oxford University Press.

Boyer, P. (2001). *Religion Explained: The Evolutionary Origins of Religious Thought*. New York: Basic Books.

Boyer, P. (2008). Religion: Bound to believe? *Nature*, 455, 1038–1039.

Newberg, A. B., D’Aquili, E.G. & Rause, V. (2001). *Why God Won’t Go Away. Brain Science and the Biology of Belief*. New York: Ballantine Books.

<sup>8</sup>In this context, it is interesting that Burkert considers the Greek weather god Zeus to be a very ancient deity. Literally, he states: “Zeus is much more a weather god than the etymology would suggest, and this connects him with the weather gods of Asia Minor with whom he was indeed later equated. Already in Mycenaean times Zeus was one of the most important gods.” Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, p. 28.

<sup>9</sup>Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, p. 26.

**the course of the millennia that it came to constitute an important part of the spiritual culture of the late Neolithic societies and it transformed along with and dependant on this culture—a process, which can justifiably be referred to as the evolution of the respective, specific religions.** The religion of Neolithic Malta, focussed wholly on an ancestral cult, was presented as an example of an island religion in its own very specific niche. The following discussion will demonstrate the evolution in Greece.

## Social Change

Already during the Neolithic, social change was looming, which during the millennia led to a differentiation and ultimately to a stratification of society—important preconditions for the development of a veritable realm of gods from the dema and mythical ancestors (Chap. 1).<sup>10</sup> These developments can be traced clearly with the help of the settlement structures of Greece and the Balkans. The first, rather rare Neolithic settlements dated to the 8th–6th pre-Christian centuries such as Nea Nicomedeia in Macedonia still consisted of small, rectangular houses; in the afore-mentioned example, it was always 6 houses grouped around one larger central building, emphasising social unities within the village, but not allowing any conclusions regarding social distinctions.<sup>11</sup> During the course of the centuries, not only the individual houses, but the settlements themselves grew in size, and we can also trace developments in the social structure: in Dimini, Thessaly, we find a central, fortified area surrounded by a stone wall with a large public place and a megaron-like central building dated to the fifth pre-Christian century.<sup>12</sup> In terms of handicraft, especially pottery, we can note that specific, distinctive styles had evolved, suggesting that the villages had educed specific identities which distinguished them from other settlements in the neighbouring regions; on the other hand, we see that an intense trade exchange had developed with regions further away.

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<sup>10</sup>For the dependence of Greek religion on social development, compare Bellah, Robert N. (2011). *Religion in Human Evolution. From the Paleolithic to the Axial Age*. Cambridge, Mass/London: The Belknap Press of Harvard University Press, p. 266.

<sup>11</sup>Guilaine, Jean (2015). *The Neolithization of Mediterranean Europe. Mobility and Interactions from the Near East to the Iberian Peninsula*. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.), *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, p. 88.

Renfrew, Colin (2011/1972). *The Emergence of Civilization*. Oxford: Oxbow Books, p. 64.

Gimbutas, Marija (1996). *Die Zivilisation der Göttin*. Frankfurt: Zweitausendeins, p. 27.

Whittle, Alasdair (2000). *Die ersten Bauern*. In: Cunliffe, Bary (ed.), *Illustrierte Vor- und Frühgeschichte Europas*. Frankfurt/New York: Campus, pp. 159–160.

<sup>12</sup>*Ibid.*, p. 166.

Tomkins, Peter (2010). *Neolithic Antecedents*. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, p. 37 (31–49).

The evolution of religious notions, described in the preceding chapters, reflects this transformation, as the individual cult was gradually supplemented and eventually replaced by collective cultic actions which emphasised the role of the local community and served to project a specific self-presentation to the outside.

The high level of artistry of pottery and the related experiences in handling minerals and fire led to a revolutionary innovation around the middle of the fifth pre-Christian century: metal processing.<sup>13</sup> Initially, copper and gold were hammered or cast into simple shapes to be used as status symbols and traded over long distances, and ultimately became valuable grave gifts. In this respect, a grave field of the Karanovo culture near Varna/Bulgaria (6600–6200 ybp) has become famous.<sup>14</sup> Vessels from which alcoholic beverages could be consumed were also popular as prestigious objects, finding their origins in Anatolia (e.g. Troy). From an economic perspective, the invention of the plough, a waggon pulled by cattle, or other domesticated livestock such as the wool-providing sheep were of great importance. Socially, these developments influenced the development of clear behavioural norms which had been adapted to the new challenges following an aggressive competition, i.e. the ability to negotiate, bravery, but also reliable hospitality. These characteristics, together with the ability of amassing material goods, enabled the development of an elite, a ruling class.<sup>15</sup>

In the course of this transformation, and influenced by a development which had set in much earlier in the East, large central buildings were constructed, especially

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<sup>13</sup>Papadatos, Yiannis (2007). The Beginning of Metallurgy in Crete: New Evidence from the FN—EM I Settlement at Kephala Petras, Siteia. In: Day, Peter M. and Roger C. P. Doonan (eds.), *Metallurgy in the Early Bronze Age Aegean*. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow, pp. 154–167.

Evely, Dorniert (2010). Materials and Industries. In: Cline, Eric (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, pp. 387–404.

<sup>14</sup>Chapman, John (1990). Social inequality on Bulgarian tells and the Varna problem, In Ross Samson (ed.): *The social archaeology of houses*. Edinburgh: Edinburgh University Press.

Krauß, Raiko, V. Leusch, S. Zäuner (2012). Zur frühesten Metallurgie in Europa—Untersuchungen des kupferzeitlichen Gräberfeldes von Varna. *Bulgarien-Jahrbuch 2012*, pp. 64–82.

Lichardus, Jan (1991). Das Gräberfeld von Varna im Rahmen des Totenrituals des Kodzadernen-Gumelnita-Karanovo VI-Komplexes. In: Lichardus, Jan (ed.): *Die Kupferzeit als historische Epoche I-II. Symposium Saarbrücken und Otzenhausen 6.–13. November 1988*. Saarbrücken 1991.

Politis, Thea (2001). Gold and Granulation: Exploring the Social Implications of a Prestige Technology in the Bronze Age Mediterranean. In: Shortland, Andrew J. (ed.), *The Social Context of Technological Change: Egypt and the Near East, 1650–1550 BC*. Proceedings of a Conference held at St. Edmund Hall, Oxford, 12–14 September 2000. Oxford: Oxbow, pp. 161–194.

<sup>15</sup>Sherratt, Andrew (2000). Das Jungneolithikum und die Kupferzeit. In: Cunliffe, Barry (ed.), *Oxford illustrierte Vor- und Frühgeschichte Europas*. Frankfurt/New York: Campus, pp. 191–201 (191–229).

**Fig. 13.2** The grave field of Varna (© Yelkrokoyade; Creative Commons Attribution-Share Alike 3.0 Unported license)



on the Peloponnese and the Aegean islands. This development can be traced especially well on Crete (Fig. 13.2).

Even though the theory of Crete's general isolation has become rather shaky, nevertheless within this manageable island society, the old notions of female, superhuman creatures could develop without interruption and were maintained for much longer than on the mainland, where an increasingly aggressive competition had shifted the ideal power balance in favour of the male element and male "virtues" such as power and bravery. In the meantime, Crete developed into a trade centre, on account of the innovation of seaworthy ships equipped with sails. This of course had repercussions for the island's social development: Knossos and other settlements on the island became proper palatial centres.<sup>16</sup>

<sup>16</sup>Schachermeyr, F. (1979). *Die minoische Kultur des alten Kreta*. Stuttgart: Kohlhammer.

Critical: Tomkins, Peter (2010) *Neolithic Antecedents*. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, pp. 31–49.

Tomkins, Peter, and Ilse Schoep (2010) *Crete*. In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, pp. 66–82.

## Crete During the Bronze Ages

During the so-called pre-palatial period (3300–2000/1900 BCE), technical and agricultural innovations (including the cultivation of wine and olives) resulted in a demographic growth and stable social conditions which in turn allowed villages to expand into settlements with an almost urban character. Between 2000 and 1600 BCE, the older palatial period, palace-like buildings were constructed which—thus the previous interpretation—were initially used to store food stuffs.<sup>17</sup> Surely however, the palaces of Knossos, Mallia, or Phaistos, respectively located in the centre of each region, also served to represent, as costly decorated rooms made of precious materials suggest. The central importance of the palaces and their dominating position within the economic system of a still non-monetary society eventually resulted in trade specialisations and thus social distinctions: farmers who had initially executed their trade in passing and passed their produce on to the palace, now came to work for the palace and were supplied with foodstuffs—and these responsibilities and transactions were recorded in writing on clay tablets.<sup>18</sup>

During the Younger Palatial Period (1600–1425 BCE), the palaces developed into centres of social life with all the signs of displaying splendour and luxury with which the elite could make life more comfortable but could also represent themselves. The palace-like complexes from this period—well preserved as they had not been built over by subsequent generations—were structured around one central yard, just like their chronological predecessors. A part of the ground floor was used to store agricultural products, while other rooms were preceded by atria supported with columns, and stairs led to the larger rooms on the higher level. In Knossos, the excavator Sir Arthur John Evans (1851–1941) believed he was able to identify a “megaron of a king”, a “megaron of a queen” with bathroom, and an elegant suit on the higher level, while other rooms presumably had cultic functions.<sup>19</sup> Aside from the sophisticated and highly developed construction, the complex impresses especially with its splendour and elaborate wall paintings (see Fig. 13.3), which allow us insights into a life that can undoubtedly be referred to as a court life. In the immediate vicinity of the palaces, smaller, but equally elegant buildings have been excavated, which have been attributed to dignitaries or important private persons, i.e. a wealthy elite. Villas were at this time also constructed in the country side, which, again following the old interpretation, had been the home and administrative

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<sup>17</sup>Weingarten, Judith (1990). Three Upheavals in Minoan Sealing Administration: Evidence for Radical Change. In: *Aegean Seals*, pp. 105–114.

<sup>18</sup>Renfrew, Colin (2011/1972). *The Emergence of Civilization*. Oxford: Oxbow Books, p. 51.

Schoep, Ilse (2010). Crete (Chap. 8). In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, p. 113 (113–125).

<sup>19</sup>Traditional: Evans, Arthur (1921). *The Palace of Minos*. vol. 1. London: Macmillan.



**Fig. 13.3** Inside the palace of Knossos (© Nikater; GNU-Lizenz für freie Dokumentation)

centre of a governor nominated by the palace or a local ruler. However, this “palatial model” and the related notion of local rulers has been superseded following the excavations at Quartier Mu near Malia and the evidence extracted from numerous affluent households, and must be replaced with an elite-centred model.<sup>20</sup>

The intensive use of the cave of Eileithyia near Knossos as a sanctuary can be documented to date back to the Minoan period LMIII. Characteristic features of this cave include a stalagmite whose contours are reminiscent of a female body. This stalagmite was surrounded by a wall, and a massive stone slab in front served as an altar. Water was drawn from a mineral-rich pool in the background. A clay tablet discovered in Knossos proves that the Greek goddess of childbirth, Eileithyia, was venerated here: “Amnisos, for Eleuthia,

<sup>20</sup>Schoep, Ilse (2010). Crete (Chap. 8). In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, pp. 116–117.

Schoep, Ilse (2002). The State of the Minoan Palaces or Minoan Palace-state? In: Driessen, Jan, Ilse Schoep, and Robert Laffineur (eds.), *Monuments of Minos. Rethinking the Minoan Palaces. Proceedings of the International Workshop “Crete of the Hundred Palaces?”* Université Catholique de Louvain-la-Neuve, 14–15 Decembre 2001. *Aegeum* 23. Liège: Université de Liège, pp. 15–33.

one amphora of honey.“Burkert 1985: p. 26) In keeping with the tradition of the gift exchange with the powerful inhabitants of the Underworld, her help was sought out whenever questions of fertility were of concern.

As fascinating as the palatial complexes of an indigenous elite, the Minoan society, and its art may have been, they are not at the forefront of our deliberations, but can merely help as background for the current question, the search for the development of religion. Here it is imperative to note that now, at the latest with the onset of the Bronze Ages and in no way limited to Crete only, we are dealing with a stratified society with a corresponding division of labour, at whose head an elite on the one hand coordinated the economic productivity of the group, and on the other hand had taken on the contact to and protection from possible competition and aggressors. It is characteristic for such a society that they and the superhuman creatures of the Otherworld no longer stand in the ancient relationship of identification and participation, but instead now maintain a balance governed by the exchange of gifts; this development has already been indicated on Malta or with the help of burials of the megalithic culture, but now, *inter alia* on Crete it takes on a characteristic imprint.

## The Ideology of a Differentiating Society: Crete

Initially, however, during the pre-Palatial Period on Crete (according to Evans: early Minoan I—Middle Minoan IA), all elements of the traditional Neolithic ancient customs including communal festivities by the graves of the deceased can still be uncovered. The Underworld, which can be accessed especially through caves (compare also Chap. 11), remained important. The caves of Psychro, Kamares, and the Cave of Eileithyia in Amnissos were considered holy places and entrances to the Otherworld, where sacrifices were now made on behalf of the inhabitants of the subterranean world, in keeping with the exchange of gifts.<sup>21</sup> The sacrifices included male and female figurines, animal figures, or miniatures of body parts, in order to receive in return healing (body parts) or material gain from the powerful beings.<sup>22</sup> This all moves within the framework of a tradition which has been presented in the previous chapters, for Malta and for the Central European Neolithic (using the Virgin’s Cave in Tiefellern and the graves of the Funnel Beaker Culture as example; Chap. 11), which was characteristic for the Neolithic world view and which had been maintained until the Bronze Ages. In contrast to these

<sup>21</sup>Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, pp. 25, 26, 170–171.

<sup>22</sup>Pilali-Papasteriou, Angeliki (1985). *Die bronzenen Tierfiguren aus Kreta. Prähistorische Bronzefunde Abteilung 1 Band 3*, München: Beck’sche Verlagsbuchhandlung.

predecessors, however, the focus was no longer on access to the Underworld in which one had imagined the powerful dead and a dolmen goddess with vague features and responsibilities, but rather on sanctuaries for specific deities with sharply defined areas of responsibility.

A further element of Neolithic religiosity had evidently not only survived, but could safely develop further on Crete, which as an island could for a long period protect itself from hostile aggression: the *Urmutter*. While her differentiation into a superhuman being and ruler of the Underworld on the one hand, and the protector of house and hearth on the other in Anatolia and Europe became traceable, here on Crete at least one more superhuman female figure is frequently heraldically depicted, accompanied by two animals, who was the object of cultic veneration in peak sanctuaries, i.e. she had a veritably divine status.<sup>23</sup> These peak sanctuaries stood in a direct relationship with the respective communities (which were clearly attributed, comparable to the temple of the dead on Malta) and protected their wellbeing and ensured their wealth—and to maintain the privileged position of the palatial elite. The archaeologist Alan Peatfield, specialist for Minoan Crete, is of the opinion that:

peak sanctuaries... [have] developed naturally from tomb cult...[and] that the palatial elite of the Neopalatial period appropriated the already established cult of the peak sanctuaries to 'maintain its hierarchical position' by taking on the 'social prestige' associated with the mountain goddess.<sup>24</sup>

The archaeological reports on Crete confirm the correlations between venerating ancestors and the appearance of veritable deities on the one hand and the etiologically related social organization on the other.<sup>25</sup>

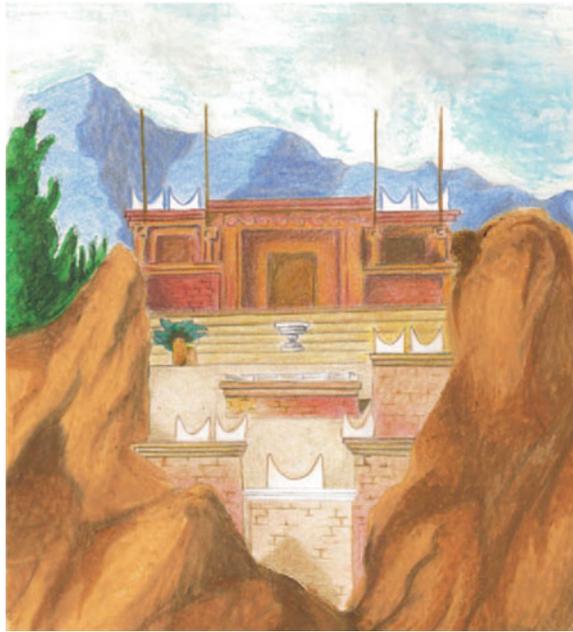
What such a sanctuary could have looked like is demonstrated by a relief on a rhyton (a vessel for libation) from the palace of Katos Zakros: a stone pedestal stood underneath a symmetrical, tripartite temple façade crowned with the horns of a bull, with a door in the center, while several altars, partially decorated with horns, can be seen in the front. The depicted goats must have been intended for sacrifice. Pictures also narrate the process of these sacrificial festivities: thus, a large fire was lit at night-time, votive figurines fashioned from clay were thrown into the fire, and animals were sacrificed. Walter Burkert (\*1931), philologist and intimately acquainted with the Greek religion, thus posits the origins of later Greek fire festivals such as the *Daidala* by Plataea. We cannot conclusively answer the question of which deity specifically was the intended recipient of the sacrifices, as no cultic images have to date been uncovered. Merely a seal uncovered in Knossos depicting a female figure flanked by two lions on the tip of a mountain—the other side of the

<sup>23</sup>Rutkowski, B. (1987). Die Topographie des Höhenheiligtums auf Juktas, Kreta. *Archaeologia Polona*, 25–26, 85–96.

<sup>24</sup>Lupack, Susan (2010). Minoan Religion. In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean* (ca. 3000–1000 BC). Oxford: Oxford University Press, p. 252.

<sup>25</sup>Peatfield, Alan (1990). Minoan Peak Sanctuaries: History and Society. *OpAth* 18, pp. 117–131.

**Fig. 13.4** Reconstruction of a peak sanctuary (Drawing by Karolina Rupik)



seal depicts a cultic building crowned with horns—suggests that female deities had been venerated in these sanctuaries.<sup>26</sup>

This much however is clear: the relationship between the peak sanctuaries and the palaces and their cities proves that each settlement had its own protective deity with his or her respective sanctuary in which sacrifices could be offered, either to support a plea or to give thanks (Fig. 13.4).

These sacrificial gifts were mainly typical votive gifts also familiar from archaic Greek temples, in the form of human or animal miniatures,<sup>27</sup> although an archaeological report from Anemospilia, on the Juktas Mountain south of Knossos, suggests the existence of additional, much more dramatic sacrificial customs. Here stands an isolated building destroyed and burnt down during an earthquake, in whose central hall stands a pair of clay feet as the only remains of an original idol, surrounded by clay vessels as repositories for agricultural products. A connecting room was equipped with a pedestal, on which lay the skeleton of a young man with a dagger on his chest; two further skeletons were uncovered in the same room. Whether we are faced with human sacrifices cannot be conclusively clarified.<sup>28</sup>

<sup>26</sup>Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, pp. 26–28.

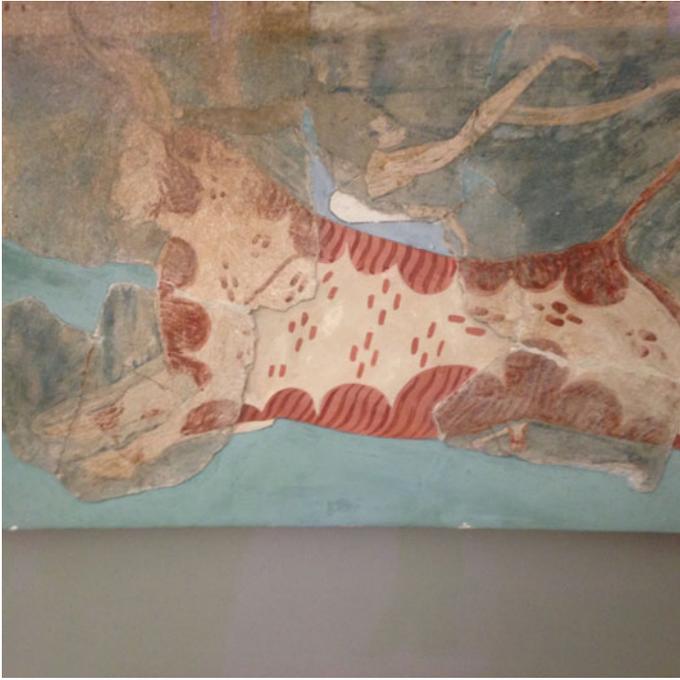
<sup>27</sup>Marangou, Christina (1992). *Eidolia. Figurines et miniatures du Néolithique Récent et du Bronze Ancien en Grèce*. Oxford: BAR International.

<sup>28</sup>Lupack, Susan (2010). *Minoan Religion*. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, pp. 258–259.

The religion of Crete has become famous beyond the smaller circle of specialists. Earlier archaeologists had wanted to see a religion in which a large mother goddess was venerated, with her son and lover at her side, depicted as a bull. The origins of this religion, so the theory, could already be seen in the Neolithic Çatal Höyük, by inadmissibly contextually combining not only the wall reliefs of the displaying woman with the omnipresent bucrania but also by ignoring the social environment—an egalitarian, not yet stratified society. To make it short: no case can be made for the existence of a bull-shaped deity or a partner of the female deities venerated in the various sanctuaries, not even on Crete. Admittedly, the bull was sacrificed; a building with a stone altar, blood funnel, and cultic tools (including a stand for the famous double axe) suggests as much. Paintings on a coffin from Ayia Triada narrate the sequence of events for such a bull sacrifice, including the depiction of a tree sanctuary and a priestess and an altar; on top the images show a libation vessel and a basket full of bread intended as a pre-sacrifice. On the sacrificial table in the background lies the slaughtered bull, from whose slashed throat the blood runs into a vessel. A flute player accompanies the scene.<sup>29</sup> Thus, the picture of this Bronze Age sacrifice shows all elements which would later characterise the Greek sacrificial ritual: *pompé*, an altar, a pre-sacrifice, and the flute. The contextual connection of this sacrifice with a funeral relates to ancient traditions: in Neolithic Anatolia, sacrifices of cattle, including hanging the skull on the walls of the house, had stood in close context with funerary rituals (see Chap. 9).<sup>30</sup> In the context of the older, briefly mentioned misinterpretations, we might note two motives which could be considered the characteristic features of Minoan religion: bull horns and the double axe. The double axe, which was presumably used during the cattle sacrifices, can be traced back to the third pre-Christian millennium, to Sumer (as the ritualistic weapon of the priestesses), Elam, and then Troy, before reaching Crete in the Early Minoan Period, where it was initially used as temple-offering until it was used to mark out sanctuaries, i.e. could be considered their distinguishing mark. However, it was also used as a purely decorative element. The bull sacrifices (including the preceding games such as the famous bull leaping, see Fig. 13.5) and the double axe—labryx equals labyrinth—eventually made a narrative impact in Greek mythology, when Zeus kidnaps Europe and brings her to Crete, where she gives birth to the later Cretan King Minos. His wife Pasiphae in turn gives birth to the Minotaur, who, trapped in the labyrinth, the house of the double axe, is ultimately killed by the hero Theseus. The real historical background to this narrative could be the conquest of Crete by the militant inhabitants of the Greek mainland, since the end of Crete's flowering culture came suddenly and

<sup>29</sup>Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell.

<sup>30</sup>Compare also Lupack, Susan (2010). *Minoan Religion*. In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, p. 251 (251–262).



**Fig. 13.5** The famous bull leaping on Crete (here a depiction from the earlier Thyrins palace) (© National Museum, Athens)

violently: the Minoan culture experienced a sudden, catastrophic downfall around 1400 BCE, and the power of Mycenae began to make itself known.<sup>31</sup>

## Mycenean Culture and Religion

The stratification of society continued on the mainland. Here, from around 2000 BCE (Middle Helladic Period), local elites were able to establish themselves near the coast, who owed their success and wealth both to the contact with the culturally advanced Aegean islands and also to their military prowess. From the 16th pre-Christian century (during the Early Mycenaean or Late Helladic I-II Period), the power centres had shifted towards the interior. At the tip of a now stratified society stood regional rulers or oligarchs who during the subsequent generations were able

<sup>31</sup>Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, p. 64.

Sheldon, Kim (2010). *Mainland Greece* (Chap. 10) In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, p. 143.

to consolidate their power and area of influence. The wealth which this elite had amassed, and which ultimately proved useful amongst the competition and for status marking, is noteworthy: precious funerary gifts including prestigious objects of foreign manufacture were given to the deceased; in this regard, the shaft graves of Mycenae have become famous, whose wealth led their excavator Heinrich Schliemann to assume he had uncovered the final resting place of Homer's hero Agamemnon.<sup>32</sup>

Mycenean culture owes its cultural rise to its contact with Crete, from where it adopted not only technical abilities but also the palatial system with its corresponding social and political organisation. After Crete's political crash, the power centres of the Greek mainland took control of the Aegean and could thus further extend their position. At the end of this development—during the so-called Palatial Period of the Late Helladic (14–13th centuries BCE)—the centralised, strictly organised, and socially stratified states of Mycenae, Tiryns, Pylos, or Thebes had established themselves, following the Minoan example, all ruled by an *anax*, king.<sup>33</sup> Many of these power centres can also be identified with the towns mentioned in the Iliad. Even though the palace complexes were considerably smaller than their Cretan models, their interior decorations including frescoes and painted stucco flooring clearly show a Cretan influence, such as women with carefully made-up hairstyles and layered skirts. Cultic procedures also had their accustomed spot in the immediate vicinity of the palaces, or even in the palaces themselves, including the large ceremonial hearth (a successor of the “holy” hearth of the Neolithic with its skull deposits or ancestral figurines). In Mycenae, a cult centre has been uncovered near a number of graves including a room which has become known as the “room with the fresco complex”. Here were uncovered a hearth, an altar-like bench underneath some frescoes, and an ivory head of a young man which had presumably been originally attached to a wooden body. The main room of this cultic site housed a roughly fashioned female clay figure; beneath it, pantries contained more figurines of both genders with raised arms, which must have been votive figures. The offering of sacrifices in the shape of jewellery and other gifts which were displayed on benches and altars was a demonstrable aspect of cultic actions.<sup>34</sup>

Unfortunately, we cannot determine at which deity the cult in Mycenae was directed. However, some information is contained on the inscribed clay tables

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<sup>32</sup>Sheldon, Kim (2010). Mainland Greece (Chap. 10) In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, pp. 140–141 (139–148).

<sup>33</sup>*Ibid.*, pp. 143–148.

<sup>34</sup>Maran, Joseph (2012). Ceremonial feasting equipment, social space and interculturality in Post-Palatial Tiryns. In: Joseph Maran and Philipp W. Stockhammer (eds.), *Materiality and Social Practice. Transformative Capacities of Intercultural Encounters*. Oxford and Oakville: Oxbow books, pp. 121–136

Schofield, Louise (2007). *The Mycenaean*. London: The British Museum Press.

Lupack, Susan (2010). Mycenaean Religion (Chap. 20) In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, p. 266 (263–276).

(in Linear B) which were fired during the destruction of the Mycenaean culture, during which the palaces also burnt down. Thus, in the case of Pylos for example, Zeus and Poseidon were mentioned amongst some other gods, and especially the latter was held in great esteem. His sanctuary in the city was the recipient of regular contributions, and a ceremony, the “preparation of the bed”, suggests a holy marriage: in historical times, the holy marriage of Poseidon to Demeter Erinys (“angry”) played an important role in the cult. It is however also possible that a marriage of the deity to a mortal is referred to, the wife of the ruler, in order to justify the rule. Further deities, such as the goddess Diwija and Posidaeja, had their own cults and cultic locations, while the goddess of the main sanctuary in Pylos was merely known as Potnia—mistress. When the palaces of the Mycenaean period ceased to exist around 1200 BCE—perhaps on account of the violent intrusions of maritime peoples,<sup>35</sup> but more likely because the palatial system of political organisation had run its course—numerous deities existed in Greek ideology, who were all worshipped in different, respectively dedicated sanctuaries: a polytheism in the true sense of the word had already become a widely spread form of religion.<sup>36</sup>

## The Homeric Era

Two famous epics are attributed to the Greek poet Homer, the *Iliad* and the *Odyssey*; general agreement dates the poetry, and thus the lifetime of their author, to the second half of the 8th pre-Christian century, and points to either Chios or Smyrna as his place of birth.<sup>37</sup> The contents of his poetry consist of narratives of events dating back to the above-mentioned Cretan-Mycenaean periods. The stories behind these

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<sup>35</sup>According to Thomas R. Martin, the so-called sea peoples could also have been “independent bands displaced and still in motion by the local political and economic troubles of their homelands.” Martin, Thomas R. (2013/2000). *Ancient Greece. From Prehistoric to Hellenistic Times*. New Haven & London: Yale University Press, p. 41.

<sup>36</sup>On warfare and political reasons: Maran, Joseph (2015). Tiryns and the Argolid in Mycenaean Times. New clues and interpretations. In: Schallin, Ann-Louise, and Iphiyenia Tournavitou (eds.) *Mycenaeans up to date. The archaeology of the north-eastern Peloponnese—current concepts and new directions*. Krifter utgivna av Svenska Institutet i Athen, 4<sup>o</sup>, 56 Acta Instituti Atheniensis Regni Sueciae, Series in 4<sup>o</sup>, 56. Stockholm, pp. 277–293.

Georganas, Ioannis (2010). *Society and Culture - Weapons and Warfare*. In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, p. 313 (305–314)

Bryce, Trevor (2010) *The Trojan War*. In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, p. 489 (475–490)

Burkert, Walter (1885). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, pp. 43–46.

<sup>37</sup>Willcock, M.M. (2003). Article “Homer”. In Hornblower, Simon, and Anthony Spawforth (eds.), *The Oxford Classical Dictionary. Third Revised Edition*. Oxford: Oxford University Press, pp. 718–720.

epics had been transmitted orally for generations and now supplied the material for an independent poetry—a form of poetry which could already resort to a formulaic repertoire. Homer's epics can thus be understood as the rearrangement and compendium of varied material which itself could look back on a long, independent tradition.<sup>38</sup> The *Iliad* narrates the dispute between Achilles and Agamemnon, military leaders of the Greek armies in the war against Troy, Asia Minor; the gods intervened, once at the expense of one side, and once at the expense of the other.<sup>39</sup> Thus, the disputes between the heroes, for honour, fame, wealth, and ultimately also beautiful women, were merged together with a higher calling: ultimately, the gods and their frequently emotionally-led resolutions control the fate of men.

In the story which Homer develops for his audience, the sea goddess Thetis demands justice from Zeus for her son Achilles and hence brings about the initial victory for the Trojans. But the other gods also repeatedly intervene on both sides of the battle, which reaches a climax in the battle between Hector and Achilles. While Hector is supported by Apollo, Athena rushes to Achilles's aid and effects his victory, despite having to obey Apollo in the matter of returning Hector's corpse to his father, Priam.<sup>40</sup>

Aside from Homer, it was presumably the Boeotian poet Hesiod of Ascra to whom the Greeks owed their divine heavens. In his poetry, especially in the epic *Theogony*, he designed a picture of the creation of the world and the divine lineage, in which the Otherworld was ruled by a polytheistic pantheon of gods, who in turn owed their existence to events in the mythical, primeval times when the female deity Gaea played a decisive role.<sup>41</sup>

Homer's and Hesiod's deities were located on the Mount Olympus in Greece and in the region of Troas, Asia Minor, on Mount Ida, these high mountains whose cloud-covered heights—thus impenetrable for the human eye—could easily be imagined to house the gods.<sup>42</sup> In terms of the history of religion, the sojourn of the

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<sup>38</sup>Page, Denys (1959). *History and the Homeric Iliad*. Berkeley, University of California Press.

Kirk, G.S. (1985). *The Iliad: A Commentary*. Volume I: books 1–4. Cambridge: Cambridge University Press. For the Homeric use of stock epithets, see also Adam Parry (1987). *The Making of Homeric Verse*, the *Collected Papers of Milman Parry*. Oxford: Oxford University Press.

<sup>39</sup>Bryce, Trevor (2010). *The Trojan War*. In: Cline, Eric H. (ed.), *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, p. 474.

<sup>40</sup>*Ibid.*, pp. 475–490.

Jensen, Minna Skafte (1999). *Dividing Homer: When and How were the Iliad and the Odyssey divided into Songs?*, in: *Symbolae Osloenses*, Band 74, Oslo 1999, S. 5–91.

<sup>41</sup>Gomperz, Theodor (1996). *Griechische Denker*, Vol. 1. Reprint of the 4th edition. Frankfurt/Main: Vito von Eichborn, pp. 32–36.

Dietrich, Bernard G. (2004/1974). *The Origins of Greek Religion*. Bristol: Phoenix Press, p. 51.

Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, pp. 120–124.

<sup>42</sup>Dietrich, Bernard G. (2004/1974). *The Origins of Greek Religion*. Bristol: Phoenix Press, p. 45.

gods on a mountain seamlessly follows on from older notions which situated creatures with superhuman abilities—the deceased—in or on mountains (the Neolithic grave mounds) or heights; creatures, which stood in a specific protective relationship with a specific person, a relationship which is clearly visible in Homer's *Iliad*, as individual deities take the side of certain humans. The gods thus remained a part of the earthly sphere, and not only in regards to their dwellings, but also in regards to their behaviour. Again and again, they interact with humans, be it that a mortal such as Paris makes a judgement that is of such significance that it divides the usually superior immortals, or be it that they directly intervene in the battles and wars of the mortals, or approach them in human form. The latter goes so far that gods and mortals beget children who can belong to both the human and the divine sphere: the goddess Thetis is the mother of the mortal Achilles, the human Semele the mother of the divine Dionysius, while Europa, also impregnated by Zeus, gives birth to the human king Minos.

Homer's epics and the poetry of Hesiod were created at the beginning of an era which followed the so-called Dark Ages, a period following on from the downfall of Mycenaean culture. In this time, a very specific system of political and social organisation developed. Characterised on the one hand by the competition between noble families for power and by the precarious position of the farmers on the other, we see in the city states the development either of tyrannies, with the support of the people and which always remained dependant on this support, or a polity with documented justice and an institutionalised leadership which shows the main features of an early democracy. The city states, poleis, of this period not only remained independent but also maintained an active and aggressive state of competition amongst each other; the numerous wars of this period are proof of their volatile nature. The conflicting interests of the competing poleis are bridged at the very least from an ideological aspect by the great poetry of Homer and Hesiod and thus created a feeling of cultural community, or expressed differently: despite all political differences which were reflected by the numerous militant disputes between the Greek city states, there remained a common ideological background which is reflected by the poetry of the Archaic Period and which created amongst all the Greeks despite the differences amongst the individual local cults (some of which were so famous that they had developed an importance transgressing regional boundaries, such as the Temple of Apollo in Delphi) a common religion (Table 13.1).<sup>43</sup>

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<sup>43</sup>Stahl, Michael (2003). *Gesellschaft und Staat bei den Griechen: Archaische Zeit*. Paderborn/München/Wien/Zürich: Schöningh.

**Table 13.1** Timetable Ancient Greece

Timetable	
Around 3000 BCE:	The oldest castles are built in Troy; Troy I with megaron houses, Troy II, which was destroyed in a major fire
Around 2500 BCE:	The beginnings of a Minoan-Cretan culture on Crete. Palatial complexes in Knossos and Phaistos; the myth of the Minotaur's labyrinth. Linear A (not yet deciphered)
Around 1700 BCE:	Destruction of the Cretan palaces through earthquakes. Rebuilding and naturalistic artistry. Processions and bull games. Worship of local, largely female deities
Around 1600 BCE:	Chamber graves of Mycenae with golden burial gifts in Minoan style. Adoption of Cretan script (Linear B)
Around 1400 BCE:	Destruction of the palatial towns on Crete, the end of Minoan culture. Zenith of Mycenaean culture
Around 1300 BCE:	Palatial complexes (Mycenae, Lion Gate, and Tyrins), monumental buildings, tholos (domed) tombs (treasure house of Atreus in Mycenae) as death cult for rulers
Around 1200 BCE:	Demise of Mycenaean culture
Around 1150 BCE:	Demise of Troy VIIa (historic model for the Trojan war?)
Around 900 BCE:	Precedence for military nobility: religion of the Olympic gods. Oracle of Dodona and Delphi. Development of city states (poleis)
Around 800 BCE:	Demise. Feuds. Despotism. Calls for justice and order. Hesiod ( <i>Theogony, Works and Days</i> )
Around 776 BCE:	First Olympic Games in the sanctuary of Zeus in Olympia. Lycurgus' legislation in Doric Sparta; full citizens now subject to newly-formed warfare. Birth of the notion of a state on the basis of equal citizens. Heroic epics ( <i>Iliad, Odyssey</i> )
From 740 BCE:	First clear orientation of art towards personality
Since 650 BCE:	Ambitious nobles, supported by the Unsatisfied, rise to tyrannies
Around 530 BCE:	Countermovement: demands for a constitutional state for free citizens. Development of the Greek mystery religions. Cult of Apollo of Delphi (demands for purity and moderation)
594 BCE:	Solon's legislation
From 570 until approx. 470 BCE:	Xenophanes criticises anthropomorphic and unethical notions of the divine
508/507 BCE:	In Athens, waged workers are granted access to the city council and to the courts. The heyday of Greece begins
500 to 338 BCE:	Conflicts with the Persian Empire. Athens under Pericles advances to Greek leadership; the consequences: disputes with Sparta and Corinth during the Peloponnesian War. The Macedonian royal house benefits from Greek in-fighting
428/427 to 348/347 BCE:	Plato discovers reason as the divine part of the human soul
384 to 322 BCE:	Aristotle, tutor to Alexander the Great, understands divinity as the pure form (spirit), without matter

## Philosophy

Aside from its literary and historical value, these great epics deserve the merit for supplying to the Greeks a uniform set of deities, polytheism, despite the perseverance of an obvious multiplicity of gods, different cults, and cultic practices. What had during the Bronze Ages still been deities responsible for the protection of a city and its domains (including Delphi, originally a sanctuary of Gaea—*delphys* means womb—and also originally the sanctuary of the city Kirrha), was now brought together into a contextual relationship and hierarchized. This makes it clear that already during the times of Homer and Hesiod, a rational element was present in religion—the quest for connections between the individual cults and the desire for systematisation—which in the subsequent centuries gathered momentum and finally pushed aside the mythical aspects of religion in favour of rational deliberations.<sup>44</sup>

Because the Greek form of religion maintained so many options regarding the deities to be worshipped, the cult, including the so-called mystery cults, and the different notions about the origins of gods and mortals, religion placed itself into the centre of ideological speculations, which in turn led to criticism being vocalised of a divine heaven as had been developed by Homer and Hesiod. Thus, Xenophanes (approx. 570—approx. 470 BCE) was the first to critique the behaviour of the gods from an ethical point of view and found faults in the anthropomorphism of the gods:

*“If they could paint, horses would paint the forms of the gods like horses, and cattle like cattle.”*<sup>45</sup>

This ethical criticism directed against the widespread notions of deities was notably picked up by Plato (428/427-348/347 BCE). In one of his early dialogues, *Euthyphro*, he has a young man hunting down his father refer to Zeus as an excuse for his behaviour, who had also enchained his father, Chronos. In his later work, *Politeia*, he generally criticizes the divine narrative as designed by Hesiod including the wars the gods had led against each other. These stories were untrue and not feasible as ideological background for the welfare of state and family. Instead, the focus on virtue and rationality was decisive, and it was the responsibility of the state-rulers to cultivate these values. Thus far Plato’s ideal philosophies. Rationality marks the divine aspects of the immortal human soul, and its strive for insight is thus directed towards the notion of the Good (which in Plato’s allegories, for example the famous Allegory of the Cave, is symbolised by the sun several times). Plato thus held to the idea of the soul’s afterlife after death, which he attributed to the divine sphere (*nous*), just as in his dialogue *Timaeus* he presumed creation through a demiurge (literally: skilled worker) who logically designed the world, in accordance with rationality, modelled on the paradigm of eternal ideas.<sup>46</sup>

<sup>44</sup>Sandywell Barry, (1996). *Presocratic Philosophy* vol. 3. New York: Routledge. p. 28, 42.

<sup>45</sup>Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell, p. 308.

<sup>46</sup>*Ibid.*, pp. 321–329.

Aristotle (384–322 BCE), however, assumed that the celestial bodies had originally been considered gods and that in earlier times people had viewed all of nature as being saturated with divinity. All additional stories and myths had thus been developed in order to impress the people and to influence them. However, Aristotle was able to conflate criticism of religion (or rather of an all too anthropomorphic understanding of the divine, since he understood deity as a pure form free of any matter, i.e. a pure spirit) with the transmitted forms of worship, as even in his final will, he ordered that two statues should be erected in honour of Zeus and Athene to show his gratitude for the safe return of his adoptive son.<sup>47</sup>

The philosopher's criticism raised against the Homeric and Hesiodian notions of the gods at the time thus for philosophers remained compatible with the ancient transmitted cult (the only exception were the Cynics, a philosophical school following the teachings of leading figures such as Diogenes of Sinope [approx. 400–325 BCE], who never participated in cultic actions)—even though for Aristotle, the universe itself owed its existence to a single creature which, unmoved himself, nevertheless was responsible for every movement in the universe and thus represented the primal cause for all being.

During the first centuries of the Christian era, Christianity spread through the Mediterranean and thereby came into contact with the ancient philosophical teachings; the ideas of Christian and ancient thought merged in a process referred to by researchers as the “Hellenization of Christianity”. Here, the Church Fathers could include and dialogue with Platonic and Aristotelian ideas, as teachings in line with Christian monotheism could be found in the works of both philosophers. Thus, the Christian god as creator of the world was associated both with Plato's demiurge as well as with Aristotle's unmoved mover, and the Platonic idea of the form of the good and the immaterial form of being of the deity in the Aristotelian work were both suitable for determining the entity of the Christian god.<sup>48</sup>

Now, however, we have fully entered the sphere of established religions, whose respective historic development must remain the object of the history of religion.

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<sup>47</sup>Ibid., pp. 329–332.

Gomperz, Theodor (1996). *Griechische Denker* Vol. 3. Frankfurt am Main: Eichborn, pp. 143–184.

<sup>48</sup>Antes, Peter (2004). *Das Christentum. Eine Einführung*. München: Deutscher Taschenbuchverlag, pp. 162–164

Boys-Stone, George (2001). *Post-Hellenistic Philosophy: A Study of Its Development from the Stoics to Origen*. Oxford: Oxford University Press.

# Bibliography

- Adami, Norbert R. (1991). *Religion und Schamanismus der Ainu auf Sachalin. Ein Beitrag zur historischen Völkerkunde Nordostasiens*. München: Iudicum Verlag.
- Akkermans, Peter M. M. G. and Glenn M. Schwartz (2003). *The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (16,000 – 300 B.C.)*. New York: Cambridge University Press.
- Alcock, John (2012). *Animal Behavior: An Evolutionary Approach (9th ed.)*. Sunderland, MA: Sinauer.
- Alonso, Alex A. (1999). *Territoriality Among African-American Street Gangs in Los Angeles*. Master's Thesis. University of Southern California.
- Andersen, Jorgen (1977). *The Witch on the Wall*. Copenhagen: Rosenkilde & Bagger.
- Antes, Peter (1992). Article Religion, religionswissenschaftlich In: *Evangelisches Kirchenlexikon Vol. 3*, Göttingen: Vandenhoeck & Ruprecht.
- Antes, Peter (2004). *Das Christentum. Eine Einführung*. München: Deutscher Taschenbuchverlag.
- Appenzeller, Tim (2013). *El Castillo: Earliest Known Cave Paintings Might Have Been Made By Neanderthals*. Nature news 5/17/2013.
- Arens, William (1979). *The Man Eating Myth. Anthropology & Anthropophagy*. Oxford, New York: Oxford University Press.
- Arensburg, B. et. al. (1985). *Une sépulture néanderthalien dans la grotte de Kebara (Israel)*. *Compte Rendus des Séances de l'Académie des Sciences (Paris), Série II*, 300: 227–230.
- Aurenche, Oliver (2007). *Das „Goldene Dreieck“ und die Anfänge des Neolithikums im Vorderen Orient*. In: *Badisches Landesmuseum Karlsruhe (ed.) Vor 12.000 Jahren in Anatolien. Die ältesten Monumente der Menschheit*. Stuttgart: Konrad Theiss Verlag, pp. 50–65.
- Baales, Michael (2005). *Archäologie des Eiszeitalters. Archäologie am Mittelrhein und Mosel 16*, Koblenz.
- Bächler, Emil, (1934). *Das Wildenmannlisloch am Selun*. St Gallen: Fehr'sche Buchhandlung.
- Bánffy, E. (2004). *The 6th millenium BC boundary in Western Transdanubia and its role in the Central European Neolithic transition (the Szentgyörgyvölgy-Pityerdomb settlement)*. *Varia Arch. Hungarica XV*. Budapest.
- Banning, Edward Bruce (2010). *Houses, Households, and Changing Society in the Late Neolithic and Chalcolithic of the Southern Levant*. *Paléorient Vol. 36.1*, pp. 49–87.
- Banning, Edward Bruce (2011a). *Comment on Ian Hodder and Lynn Meskell: A “Curious and Sometimes a Trifle Macabre Artistry”*. *Some Aspects of Symbolism in Neolithic Turkey*. In: *Current Anthropology, Vol. 52, No. 2 (April 2011)*, pp. 235–263. Comment on pp. 252–253.
- Banning, Edward Bruce (2011b). *So Fair a House. Göbekli Tepe and the Identification of Temples in the Pre-Pottery Neolithic of the Near East*, in: *Current Anthropology 52, No 5, October 2011*, pp. 619–660.
- Barham, Lawrence (2002). *Systematic pigment use in the Middle Pleistocene of South Central Africa*. In: *Current Anthropology, Vol. 43, 1, 2002*, pp. 181–190.

- Baron-Cohen, S. (1991). Precursors to a Theory of Mind: Understanding Attention in Others. In: Whiten, A. (Ed.), *Natural Theories of Mind: Evolution, Development and Simulation of Everyday Mindreading*. Oxford: Blackwell, pp. 233–251.
- Barrett, J. L. (2004). *Why Would Anyone Believe in God*. Lanham/MD: Alta Mira Press.
- Barrett, J. L. (2007). Cognitive Science of Religion: What is it and Why is it? In: *Religion Compass*, 1, pp. 768–786.
- Barrett, J. L. (2012). *Cognitive Science, Religion, and Theology: From Human Minds to Divine Minds*. West Conshohocken/PA: Templeton Press.
- Bartley, Mary M. (1995). Courtship and Continued Progress: Julian Huxley's Studies on Bird Behavior. *Journal of the History of Biology* Vol. 28, No. 1, pp. 91–108
- Bar-Yosef, Ofer (1998). The Natufian culture in the Levant, threshold to the origins of agriculture; *Evol Anthropol* 6, pp. 159–177.
- Bar-Yosef, Ofer, and Gopher, A. (1997). An Early Neolithic Village in the Jordan Valley. Part I. The Archaeology of Netiv Hagdud. *American School of Prehistoric Research Bulletin* 43, Cambridge, MA.
- Batto, Bernard Frank (1992). *Slaying the dragon: mythmaking in the biblical tradition*, Westminster: John Knox Press.
- Bayet, Laurie, Paul C. Quinn, James W. Tanaka, Kang Lee, Edouard Gentaz and Olivier Pascalis (2015). Face Gender Influences the Looking Preference for Smiling Expressions in 3.5-Month-Old Human Infants. *PLoS ONE* (Impact Factor: 3.23). 06/2015; 10(6):e0129812. DOI:10.1371/journal.pone.0129812.
- Becker, H. (1996). Kultplätze, Sonnentempel und Kalenderbauten aus dem 5. Jahrtausend v. Chr. – Die mittelneolithischen Kreisgrabenanlagen in Niederbayern. In: H. Becker (eds.), *Archäologische Prospektion. Luftbildarchäologie und Geophysik. Arbeitsh. Bayer. Landesamt Denkmalpf.* 59, München, pp. 101–122.
- Becker, Valeska (2007). Early and middle Neolithic figurines – the migration of religious belief. *Documenta Praehistorica* 34, pp. 119–127
- Beekes, R. S. P. (2009). *Etymological Dictionary of Greek*, Leiden: Brill.
- Beilke-Voigt, Ines (2002). Kultische Deponierungen in neolithischen Hausbefunden, in: *Varia Neolithica II* / 2002, pp. 141–154.
- Bell, Catherine (1997). *Ritual. Perspectives and dimensions*. New York / Oxford: Oxford University Press.
- Bellah, Robert N. (1964). Religious Evolution, in: *American Sociological Review*, Vol. 29, No. 3, pp. 358 – 374.
- Bellah, Robert N. (2011). *Religion in Human Evolution. From the Paleolithic to the Axial Age*. London / Cambridge, Mass.: Belknap Press.
- Benz M., Coşkun A., Rössner C., Deckers K., Riehl S., Alt K.W., and Özkaya V. (2012). First evidence of an Epipalaeolithic hunter-fisher-gatherer settlement at Körtek Tepe. *Kazı Sonuçları Toplantısı* 34,1, pp. 65-78.
- Berger, Peter (1999). *Die lange Reise der Toten: zwei Studien zu Ideologie und Praxis des Todes in Süd- und Südostasien*. Hamburg : Kovač.
- Beth, M. (2000/1935). Article Mutter. In: *Handwörterbuch des deutschen Aberglaubens* Vol. 6, Berlin / New York: de Gruyter, pp. 694–699.
- Bialas, Volker (1989). *Astronomie und Glaubensvorstellungen in der Megalithkultur*, München: Beck.
- Bischof, H. J. (1989). *Neuroethologie. Einführung in die neurophysiologischen Grundlagen des Verhaltens*. Stuttgart: Ulmer.
- Blackmore, Susan (1999). *The Meme Machine*. Oxford: Oxford University Press.
- Blanc, Alberto Carlo (1942). I Paleantropi di Saccopastore e del Circeo. In: *Quartär 4. Jahrbuch für Erforschung des Eiszeitalters und seiner Kulturen*. Berlin, pp. 1–37.
- Bloch, Maurice (1975). Property and the end of affinity, in: Bloch, Maurice (Hg.), *Marxist Analyses and Social Anthropology*, London: Malaby Press, pp. 203–228.
- Boas, Franz (1888). The Indians of British Columbia. *The Popular Science Monthly*, March 1888 (vol. 32).

- Boas, Franz (1997). The Social Organization and the Secret Societies of the Kwakiutl Indians, in: Report of the U.S. National Museum for 1895, pp. 311–738
- Bocquet-Appel, J., P. and Bar-Yosef, Ofer, eds., (2008). *The Neolithic Demographic Transition and its Consequences*. New York: Springer.
- Bogucki, Peter (2000). *The Origins of Human Society*. Malden, USA and Oxford: Blackwell, pp. 186–191.
- Böhme, Hartmut (1997). Aby M. Warburg (1866-1929). In: Michaels, Axel (ed.) *Klassiker der Religionswissenschaft*. München: Beck, pp. 133–156.
- Bolus, Michael and Ralf W. Schmitz (2006). *Der Neandertaler*. Stuttgart: Jan Thorbecke.
- Bonnardin, S. (2003). *La parure funéraire du Néolithique ancien en Bassin parisien et rhénan: matériels, techniques, fonctions et usage social*. Thèse Université de Paris I, Sorbonne-Panthéon, sous la direction de M. Lichardus-Itten. Paris, unpublished.
- Bonsall, Clive, Ivana Radovanović, Mirjana Roksandic, Gordon Cook, Thomas Higham & Catriona Pickard (2008a). Dating burial practices and architecture at Lepenski Vir. In: Clive Bonsall, Vasile Boroneanț, Ivana Radovanović (eds.) *The Iron Gates in Prehistory: New Perspectives*. BAR International Series 1893.
- Bonsall, Clive, Ivana Radovanović, Mirjana Roksandic, Gordon Cook, Thomas Higham & Catriona Pickard (2008b). Dating burial practices and architecture at Lepenski Vir. In: Clive Bonsall, Vasile Boroneanț, Ivana Radovanović (eds.) *The Iron Gates in Prehistory: New Perspectives*. BAR International Series 1893, pp. 175–204.
- Borić, Dušan (2015). Mortuary Practices, Bodies, and Persons in the Neolithic and Early-Middle Copper Age of South-East Europe. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 927–957.
- Bosinski, Gerhard (2011). Les figurations féminines de la fin des temps glaciaires. In: Norbert Aujoulat (Ed.): *Mille et une femmes de la fin des temps glaciaires*. Musée National de Préhistoire - Les Eyzies-de-Tayac, 17 juin - 19 septembre, Paris 2011, pp. 49–72.
- Boulestin B., Henry-Gambier D., Mallye J.-B., Michel P. (2013) Modifications anthropiques sur des restes humains mésolithiques et néolithiques de la grotte d'Unikoté (Iholdy, Pyrénées-Atlantiques), *Bulletin de la Société préhistorique française*, t. 110, no 2, pp. 281–297.
- Bourdieu, Pierre (1982). Les rites comme actes d'institution. In: *Actes de la recherche en sciences sociales*. Vol. 43. Rites et fétiches. pp. 58–63.
- Bouzouggar, A., N. Barton, M. Vanhaeren, F. d'Errico, S. Collcutt, T. Higham, E. Hodge, S. Parfitt, E. Rhodes, J.-L. Schwenninger, C. Stringer, E. Turner, S. Ward, A. Moutmir, and A. Stambouli (2007). 82,000-year-old shell beads from North Africa and implications for the origins of modern human behavior. *Proceedings of the National Academy of Science USA* 104 (24), pp. 9964–9969.
- Box, L. S. (2008). Death in the Mesolithic. From the article: *Archaeology: The lost world*. Published online 9 July 2008 | *Nature* 454, pp. 151–153.
- Boyd, B. and J. Cook (1993). A reconsideration of the “Ain Sakhri” figurine. *Proceedings of the Prehistoric Society*, 59. pp. 399–405
- Boyer, Pascal (1994). *The Naturalness of Religious Ideas: A Cognitive Theory of Religion*. Berkeley: University of California Press.
- Boyer, Pascal (2001). *Religion Explained: The Evolutionary Origins of Religious Thought*. New York: Basic Books.
- Boyer, Pascal (2008). Religion: Bound to believe? *Nature*, 455, 1038–1039.
- Boys-Stone, George (2001). *Post-Hellenistic Philosophy: A Study of Its Development from the Stoics to Origen*. Oxford: Oxford University Press.
- Bradshaw, John L. (1998). *Human Evolution: A Neuropsychological Perspective*. Hove and New York: Psychology Press.
- Brunner-Traut, Emma (1990). *Frühformen des Erkennens - am Beispiel Altägyptens*. Darmstadt: Wissenschaftliche Buchgesellschaft.

- Bryce, Trevor (2010). The Trojan War. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000 – 1000 BC)*. Oxford: Oxford University Press, pp. 474–490.
- Bujna, J., and P. Romsauer (1986). Siedlung und Kreisanlage der Lengyel-Kultur in Bučany. In: B Chropovský/H. Friesinger (eds.), *Internationales Symposium über die Lengyel-Kultur, Nové Vozokany 1984 (Nitra/Wien 1986)*, pp. 27–35
- Burgess C., P. Topping, C. Mordant, and M. Maddison, eds., (1988). *Enclosures and Defences in the Neolithic of Western Europe*. BAR Inter-nat. Ser. 403, Oxford.
- Burkert, Walter (1985). *Greek Religion. Archaic and Classical*. Oxford: Blackwell Publishing.
- Burkert, Walter (1993). *Wilder Ursprung. Opferritual und Mythos bei den Griechen*, 3rd edition. Berlin: Wagenbach.
- Burkhardt, Richard W. (2005). *Patterns of Behavior: Konrad Lorenz, Niko Tinbergen, and the Founding of Ethology*. Chicago and London: The University of Chicago Press.
- Buschan, Georg (1914–22). *Das deutsche Volk in Sitte und Brauch. Die Sitten der Völker*. Vol. 4. Stuttgart.
- Cassirer, Ernst (1995). *Zur Metaphysik der symbolischen Formen. Nachgelassene Manuskripte und Texte*. Ed. by John Michael Krois. Hamburg: Meiner.
- Cauvin, Jacques (1977). Les fouilles de Mureybet (1971–1974) et leur signification pour les origines de la sédentarisation au Proche-Orient, *The Annual of the American Schools of Oriental Research* 44, pp. 19–48.
- Cavalli-Sforza, Luigi Luca (2000). *Genes, Peoples, and Languages*. New York: North Point Press.
- Cessford, C., M.W., Newton., P.I., Kuniholm, S.W., Manning et al. (2006). Absolute dating at Çatalhöyük. In: *Changing Materialities at Çatalhöyük: Reports from the 1995–99 Seasons*, ed. I. Hodder. (McDonald Institute Monographs/BIAA mono-graph 39.) Cambridge: McDonald Institute for Archaeological Research/London: British Institute at Ankara, pp. 65–99.
- Chadwick, H. M. (1899). *The Cult of Othin: An Essay in the Ancient Religion of the North*. London: Clay & Sons.
- Chalmers, Alan F. (1999). *What is This Thing Called Science*, 3rd Edition, New York: Queensland University press.
- Chapman, John (1990). Social inequality on Bulgarian tells and the Varna problem, In Ross Samson (ed.): *The social archaeology of houses*. Edinburgh: Edinburgh University Press.
- Chris Stringer (2012). Evolution: What makes a modern human? *Nature* 485, pp. 33–35.
- Clark, Ronald W. (1984). *The Survival of Charles Darwin. A Biography of a Man and an Idea*, New York: Random House.
- Clottes, Jean and David Lewis-Williams (1998) *The Shamans of Prehistory: Trance and Magic in the Painted Caves*. New York: Harry N. Abrams.
- Comte, Auguste (1842). *Cours de philosophie positive, édition originale en six tomes*. Paris: Rouen Frères.
- Conard, Nicholas (2011). The Demise of the Neanderthal Cultural Niche and the Beginning of the Upper Palaeolithic in Southwestern Germany. In: Conard, Nicholas & J. Richter (Eds.) *Neanderthal Lifeways, Subsistence, and Technology: One Hundred Fifty Years of Neanderthal Study, Vertebrate Paleobiology and Paleanthropology*. Heidelberg and others: Springer Science+Business Media B. V., pp. 223–240.
- Condorcet, Antoine de (1976). *Entwurf einer historischen Darstellung der Fortschritte des menschlichen Geistes*, edited and commented by Wilhelm Alff, Frankfurt: Suhrkamp.
- Cramp, S. (1977). *Handbook of the Birds of Europe the Middle East and North Africa, the Birds of the Western Palearctic, Volume 1: Ostrich to Ducks*. Oxford: Oxford University Press.
- Csalog, József (1959). Die anthropomorphen Gefäße und Idolplastiken von Szegvár-Tüzköves, in: *Acta Archaeologica Academiae Scientiarum Hungaricae* 11, pp. 7–38.
- Csalog, József (1960). Das Krummschwert des Idols von Szegvár-Tüzköves, *Acta Archaeologica Academiae Scientiarum Hungaricae* 12, pp. 57–68.

- Cummings, Vicki, Magdalena S. Midgley, and Chris Scarre (2015). Chambered Tombs and Passage Graves of Western and Northern Europe. In: In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 813–838.
- D'Aquili, E. G. & Newberg, A. B. (1998). The Neuropsychological Basis of Religions: Or why God won't go away. *Zygon*, 33, 187–201.
- D'Errico, Francesco (2008). *Le Rouge et le Noir: Implications of Early Pigment Use in Africa, the Near East and Europe for the Origin of Cultural Modernity* South African Archaeological Society Goodwin Series 10: pp. 168–174.
- D'Errico, Francesco, Chris Henshilwood, and Peter Nilssen (2001). An engraved bone fragment from c. 70,000-year-old Middle Stone Age levels at Blombos Cave, South Africa: implications for the origin of symbolism and language. *Antiquity* 75: pp. 309–318.
- D'Errico, Francesco, Chris Henshilwood, Michael Vanhaeren, and K. van Nierkerk (2005). Nassarius kraussianus shell beads from Blombos Cave: evidence for symbolic behaviour in the Middle Stone Age. *Journal of Human Evolution* 48: pp. 3–24.
- Daniel, Glyn (1970). Megalithic Answers, in: *Antiquity* 44/1970, pp. 260–269.
- Darwin, Charles (1871). *The Descent of Man, and Selection in Relation to Sex*. London: John Murray.
- Darwin, Charles (1872a). *The Expression of the Emotions in Man and Animals*. London: John Murray.
- Darwin, Charles (1872b). *The Origin of Species by Means of Natural Selection*, 6th edition. London: John Murray.
- Darwin, Charles, and Wallace, Alfred Russel (1858). On the Tendency of Species to form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection, *Zoological Journal of the Linnean Society* 3: 46–50, doi:[10.1111/j.1096-3642.1858.tb02500.x](https://doi.org/10.1111/j.1096-3642.1858.tb02500.x), retrieved 14 January 2007
- Dawkins, Richard (1976). *The Selfish Gene*. Oxford: Oxford University Press.
- De Marchi, Attilio (1896). *Il culto privato di Roma antica 1: La religione nella vita domestica: iscrizioni e offerte votive*, Milano: Arno Press.
- Defleur Alban, White Tim, Valensi P, Slimak L, Crégut-Bonnoure E (1999). Neandertal Cannibalism at Moula-Guercy, Ardèche, France. *Science* 286: pp. 128–131.
- Diamond, Jared (1986). Biology of Birds of Paradise and Bowerbirds. In: *Annual Review of Ecology and Systematics*, Vol. 17, pp. 17–37.
- Dias, Jorge, Margot Dias, and Manuel Viegas Guerreiro (1963-1970). *Os macondes de Moçambique*. Lisboa: Junta de investigações do Ultramar, Centro de estudos de antropologia cultural.
- Dietrich, Bernard G. (2004/1974). *The Origins of Greek Religion*. Bristol: Phoenix Press.
- Dietrich, Oliver, Jens Notroff & Klaus Schmidt (2015). Göbekli Tepe. Ein exzeptioneller Fundplatz des frühesten Neolithikums auf dem Weg zum Weltkulturerbe. In: *Anatolien - Brücke der Kulturen. Aktuelle Forschungen und Perspektiven in den deutsch-türkischen Altertumswissenschaften. Tagungsband des Internationalen Symposiums „Anatolien – Brücke der Kulturen“* in Bonn vom 7. bis 9. Juli 2014, pp. 91–110.
- Dietrich, Oliver, Manfred Heun, Jens Notroff, Klaus Schmidt & Martin Zarnkow (2012). The role of cult and feasting in the emergence of Neolithic communities. New evidence from Göbekli Tepe, south-eastern Turkey. *Antiquity* Volume 86/Issue 333/January 2012, pp. 674–695.
- Dietrich, Olivier & Jens Notroff (2015). A sanctuary, or so fair a house? In defense of an archaeology of cult at Pre-Pottery Neolithic Göbekli Tepe. In: Laneri, Nicola (ed.) *Defining the Sacred*. Oxford and Havertown: Oxbow Books, pp. 75–89.
- Dobzhansky, Theodosius (March 1973). Nothing in Biology Makes Sense Except in the Light of Evolution. *American Biology Teacher* 35 (3): 125–129.
- Donahue, Randolph E. and William A. Lovis (2006). Mesolithic mobility, exchange, and interaction. *Journal of Anthropological Archaeology*. Volume 25, Issue 2, June 2006, pp. 248–258.

- Dondelinger, Patrick (2003). *Die Visionen der Bernadette Soubirous und der Beginn der Wunderheilungen in Lourdes*. Regensburg: Pustet.
- Döppes, Doris & Rabeder, Gernot (1997). Pliozäne und Pleistozäne Faunen Österreichs. Ein Katalog der wichtigsten Fossilfundstellen und ihrer Faunen. *Mitt. Komm. Quartärforsch. Österr. Akad. Wiss.* 10, 1–411. Wien, pp. 68–74.
- Doucet, Stephanie M. and Robert Montgomerie (2003). Multiple sexual ornaments in satin bowerbirds: ultraviolet plumage and bowers signal different aspects of male quality. *Behavioral Ecology* 14 (4): pp. 503–509.
- Doucet, Stephanie M. and Robert Montgomerie (2003). Structural plumage colour and parasites in satin bowerbirds *Ptilonorhynchus violaceus*: implications for sexual selection. *Journal of Avian Biology* 34: pp. 237–242.
- Dunn, Ross E. (1986) *The Adventures of Ibn Battuta*. Berkeley: University of California Press.
- Duru, Refik (1999). The Neolithic of the Lake District, in: Özdoğan, Mehmet und Neziğ Başgelen, Neolithic in Turkey. *The Cradle of Civilization*, Istanbul, pp. 178–179.
- Duru, Refik (2008). From 8000 BC to 2000 BC. Six thousand years of the Burdur-Antalya region. *Suna-İnan Kıraç Akdeniz Medeniyetleri Araştırma Enstitüsü*, Antalya.
- Eckart Voland / Wulf Schiefenhövel (eds.) (2009). *The Biological Evolution of Religious Mind and Behavior*. Dordrecht, Heidelberg, New York, London: Springer.
- Eibl-Eibesfeldt, Irenäus (1997). *Die Biologie des menschlichen Verhaltens. Grundriß der Humanethologie*. Weyarn: Seehamer Verlag.
- Eibl-Eibesfeldt, Irenäus und Christa Sütterlin (1992). *Im Banne der Angst. Zur Natur- und Kunstgeschichte menschlicher Abwehrsymbolik*. München and Zürich: Pieper.
- Eibl-Eibesfeldt, Irenäus (1974). *Stammesgeschichtliche Anpassungen im menschlichen Verhalten*. In: Grzimeks Tierleben, Sonderband Verhaltensforschung. Zürich: Kindler Verlag.
- Eliade, Mircea (1978). *Geschichte der religiösen Ideen. Von der Steinzeit bis zu den Mysterien von Eleusis*. Freiburg: Herder.
- Evans, Arthur (1921). *The Palace of Minos*. vol. 1. London: Macmillan.
- Evans, John D. (1959). *Malta*, London: Thames and Hudson.
- Evans, John D. (1971). *The Prehistoric Antiquities of the Maltese Islands: A Survey*, London: Athlone Press.
- Evely, Dorniert (2010). *Materials and Industries*. In: Cline, Eric (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000 – 1000 BC)*. Oxford: Oxford University Press, pp. 387–404.
- Fauth, Wolfgang (1979). *Baubo* in: *Der kleine Pauly. Lexikon der Antike [in 5 Bänden] auf der Grundlage von Pauly's Realencyclopädie der classischen Altertumswissenschaft unter Mitwirkung zahlreicher Fachgelehrter bearbeitet und herausgegeben von Konrat Ziegler und Walther Sontheimer*. Munich: Deutscher Taschenbuch Verlag, p. 843
- Feerman, Jay R. (2009). *How Some Major Components of Religion Could Have Evolved by Natural Selection?* In: Eckart Voland / Wulf Schiefenhövel (Eds.) *The Biological Evolution of Religious Mind and Behavior*. Dordrecht, Heidelberg, New York, London: Springer, pp. 51–66.
- Fisher, S. E. et al. (1998). Localisation of a gene implicated in a severe speech and language disorder. In: *Nature Genetics* 18, pp. 168–170.
- Fossey, Dian (1983), *Gorillas in the Mist*. London: Penguin.
- Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 310–325.
- Fraser, Douglas (1962). *Primitive Art*. New York: Doubleday & Company.
- Fraser, Douglas (1966). *The Heraldic Woman. A Study in Diffusion*. In: Fraser, Douglas (ed.) *The Many Faces of Primitive Art. A Critical Anthology*. Englewood Cliffs: Prentice Hall.
- Freyer, David (1997). *Ofnet: evidence for a Mesolithic massacre*. In D. Martin and D. Freyer (eds), *Troubled times. Violence and warfare in the past*, London: Routledge, 181–216.
- Frazer, James George (1894). *The Golden Bough. A study in comparative religion*. London: Macmillan.

- Freeden, Joachim von (1993). *Malta und die Baukunst seiner Megalithtempel*, Darmstadt: Wissenschaftliche Buchgesellschaft.
- Frog (2015). *Mythology in Cultural Practice: A Methodological Framework for Historical Analysis*. In: Frog and Karina Lukin (eds.) *Between Text and Practice. Mythology, Religion and Research. The Retrospective Methods Network Newsletter No. 10*, Helsinki: University of Helsinki, pp. 33–57.
- Fry, C. H., Fry, K. & Harris, A. (1999). *Kingfishers, Bee-eaters and Rollers*. London: Christopher Helm.
- Fuhlrott, Johann Carl (1829). *Jussieu's und De Candolle's natürliche Pflanzen-Systeme, nach ihren Grundsätzen entwickelt und mit den Pflanzen Familien von Agardh, Batsch und Linné, sowie mit dem Linné'schen Sexual-System verglichen. Für Vorlesungen und zum Selbstunterricht*. Bonn: Eduard Weber.
- Fuhlrott, Johann Carl (1859). *Menschliche Ueberreste aus einer Felsengrotte des Düsselthals. Verhandlungen des naturhistorischen Vereins der preussischen Rheinlande und Westphalens*, pp. 131–153.
- Fuhlrott, Johann Carl (1865). *Der fossile Mensch aus dem Neanderthal und sein Verhältnis zum Alter des Menschengeschlechts*. Duisburg: Falk & Volmer.
- Fuiz-Szammer, Nina and Heidi Samonig (2011). *Die Bedeutung des nonverbalen Ausdrucks für den Spracherwerb*. München: Deutsches Jugendinstitut.
- Gallis, Kostas (1996). *Die Grabungen von Platia Magula Zarkou, Souphli Magula und Makrychori 2*, in: Alram-Stern, Eva, *Die Ägäische Frühzeit, Vol. 1: Das Neolithikum in Griechenland; Forschungsbericht 1975–1993*, Wien, pp. 521–528.
- Gazzaniga, Michael S. and Todd F. Heatherton (2006). *Psychological Science. 2nd Edition* New York and London: W.W. Norton & Company.
- Gebel, Hans-Georg K. (2014). *Territoriality in Early Near Eastern Sedentism. Neo-Lithics 2/14*, pp. 23–44.
- Geertz, Armin (1999). *Definition as an empirical strategy in the study of religion. Historical Reflections / Reflexions Historiques 25 (3)*, pp. 445–475.
- Geertz, Armin (2015). *Religious Belief, Evolution of*. In: James D. Wright (ed.) *International Encyclopedia of the Social & Behavioral Sciences, 2nd edition, Vol. 20*. Oxford: Elsevier, pp. 384–395.
- Georganas, Ioannis (2010). In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000 – 1000 BC)*. Oxford: Oxford University Press, pp. 305–314.
- Geus, Armin (2004). *Article "Zoologische Disziplinen"*. In: Ilse Jahn (Ed.) *Geschichte der Biologie*, pp. 324–336.
- Giacobini, Giacomo and Marcello Piperno (1991). *Taphonomic Considerations on the Circeo 1 Neandertal cranium. Comparison of the surface characteristics of the human cranium with faunal remains from the paleosurface*. In: Piperno, Marcello and Giovanni Scichilone (eds.), *Il Cranio Neandertaliano Circeo 1. Studi e Documenti*, Roma, pp. 457 - 485.
- Gimbutas, Marija (1974). *The Goddesses and Gods of Old Europe: Myths and Cult Images (6500-3500B.C.)*. London: Thames and Hudson.
- Gimbutas, Marija (1991). *The Civilization of the Goddess: The World of Old Europe*. San Francisco: Harper.
- Gimbutas, Marija (1996). *Die Zivilisation der Göttin*. Frankfurt am Main: Verlag Zweitausendeins.
- Gimbutas, Marija, Shan Win, and Daniel Shimabuku (1989). *Achilleion. A Neolithic Settlement in Thessaly, Greece, 6400 – 5600 BC*. Los Angeles: University of California.
- Glick, Thomas F. (1988). *The Comparative reception of Darwinism*. Chicago: University of Chicago Press.
- Golitko, Mark & Keeley, Lawrence H. (2007). *Beating ploughshares back into swords: warfare in the Linearbandkeramik*. *Antiquity*, 81, pp. 332–342
- Gomperz, Theodor (1996). *Griechische Denker, Vol. 1. Reprint of the 4th edition*. Frankfurt/Main: Vito von Eichborn.

- González-Prendes, A. Antonio, & Stella M. Resko (2011). Cognitive-Behavioral Theory. In: Shoshana Ringel & Jerrold Brandell (eds.) *Trauma: Contemporary Directions in Theory, Practice, and Research*. Thousand Oaks [u.a.]: SAGE Publ. pp. 14–40.
- Goodall, Jane (1986). *The Chimpanzees of Gombe: Patterns of Behavior*. The Belknap Press of Harvard University Press.
- Goodall, Jane (1990). *Through a Window. My Thirty Years with the Chimpanzees of Gombe*. Boston: Houghton Mifflin.
- Goodwyn, S. W., L.P. Acredolo and C.A. Brown (2000). Impact of Symbolic Gesturing on Early Language Development. In: *Journal of Nonverbal Behavior*, no. 24, pp. 81–103.
- Goring-Morris, A. Nigel, and Anna Belfer-Cohen (2002). Symbolic Behaviour from the Epipaleolithic and Early Neolithic of the Near East: Preliminary Observations on Continuity and Change. In: Gebel, Hans Georg K., Bo Dahl Hermansen, and Charlott Hoffman Jensen (Eds.) *Magic Practices and Ritual in the Near Eastern Neolithic. Proceedings of a Workshop held at the 2nd International Congress on the Archaeology of the Ancient Near East (ICAANE) Copenhagen University, May 2000. Studies in Early Near Eastern Production, Subsistence, and Environment 8*. Berlin: Ex Oriente, pp. 67–79.
- Gorjanović-Kramberger, Dragutin (1913). *Život i kultura diluvijalnoga čovjeka iz Krapine u Hrvatskoj : Hominis diluvialis e Krapina in Croatia vita et cultura*. Zagreb : Knjiž. Jugoslav. Akad.
- Goudswaard, A. (1865). Sivadienst in Zuid Celebes. *Mededeelingen Nederlandsch Zending-genootschap*, 25, pp. 75–100.
- Graves, Robert (1996). *The Greek Myths. Volume 1*. London: Folio Society.
- Grimm, Gebrüder (1850). *Von einem, der auszog, das Fürchten zu lernen. Kinder- und Hausmärchen, große Ausgabe, Band 1*. English Version: “The Story of the Youth Who Went Forth to Learn What Fear Was” or “The Story of a Boy Who Went Forth to Learn Fear”. <http://www.seiyaku.com/lit/grimm/en/004.html>, seen 27.8.2015.
- Grimm, Jacob (1882). *Deutsche Mythologie* 4th ed. [1875]. Trans. James Stallybrass *Grimm’s Teutonic Mythology Volume 1*.
- Grimm, Jacob and Wilhelm (1884). *Household Tales, Frau Holle (Mother Holle)* translated by Margaret Hunt.
- Groenen, Marc (2010). À l’aube de la métaphysique. Jalons pour une préhistoire de la spiritualité. Contribution au chantier « Philosophie et soins de l’âme » présenté à l’UNESCO les 17-18 novembre 2010 dans le cadre des 10e rencontres sur les Nouvelles Pratiques Philosophiques.
- Gryglewski, Ryszard W. (2002). *Medical and Religious Aspects of Mummification in Ancient Egypt (PDF)*. *Organon* 31, pp. 128–148.
- Guilaine, Jean (2015). The Neolithization of Mediterranean Europe. Mobility and Interactions from the Near East to the Iberian Peninsula. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press.
- Guthrie, Dale (2005). *The Nature of Paleolithic Art*. Chicago and London: The University of Chicago Press.
- Guthrie, S. G. (1980). A Cognitive Theory of Religion. *Current Anthropology*, 21, pp. 181–203.
- Guthrie, S. G. (1993). *Faces in the Clouds: A New Theory of Religion*. Oxford: Oxford University Press.
- Haak W, Balanovsky O, Sanchez JJ, Koshel S, Zaporozhchenko V, et al. (2010). Ancient DNA from European Early Neolithic Farmers Reveals Their Near Eastern Affinities. *PLoS Biol* 8(11): e1000536. doi:10.1371/journal.pbio.1000536
- Halley, Meghan (2012). *Negotiating sexuality. Adolescent initiation rituals and cultural change in rural southern Tanzania*. Inaugural Dissertation; Case Western Reserve University.
- Hart, Donna, and Bob Sussman (2009). *Man the Hunted: Primates, Predators, and Human Evolution*. Expanded Edition. Boulder, CO: Westview Press
- Hasenfratz, Hans-Peter (1992). *Die religiöse Welt der Germanen. Ritual, Magie, Kult, Mythus*. Freiburg: Herder.

- Heege, Elke und Andreas (1989). Die Häuser der Toten. Jungsteinzeitliche Kollektivgräber im Landkreis Northeim, Hildesheim.
- Henke, Werner and Rothe, Hartmut (1994). Paläoanthropologie. Berlin: Springer.
- Henke, Winfried (2007). Historical overview of paleoanthropological research. In: W. Henke - I. Tattersall, *Handbook of Paleoanthropology: Vol I: Principles, Methods and Approaches*. Heidelberg and Berlin: Springer.
- Henshilwood, C.S., F. d'Errico, and I. Watts (2009). Engraved ochres from the Middle Stone Age levels at Blombos Cave, South Africa. *Journal of Human Evolution* 57: pp. 27–47.
- Henshilwood, Chris, Francesco d'Errico, R. Yates, Z. Jacobs, C. Tribolo, G.A.T. Duller, N. Mercier, J.C. Sealy, H. Valladas, I. Watts, and A.G. Wintle (2002). Emergence of Modern Human Behaviour: Middle Stone Age Engravings from South Africa. *Science* 295: pp. 1278–1280.
- Hertz, Robert (1907). Contribution à une Etude sur la Représentation Collective de la Mort. In: *L'Année Sociologique* 10, Paris, pp. 48–137.
- Hesiodus. *Theogony*. Ed. and transl. by Glenn W. Most. Loeb Classical Library. Cambridge, MA: Harvard University Press, 2006.
- Hinde, Robert A. (1982). *Ethology*. New York: Fontana.
- Hinde, Robert A. (1999). *Why Gods Persist. A Scientific Approach to Religion*. London and New York: Routledge.
- Höck, Christiane (1993.) Die Frauenstatuetten des Magdalénien von Gönnersdorf und Andernach. In: *Jahrbuch des Römisch-Germanischen Zentralmuseums* 40, 1993, pp. 253–316.
- Hodder, Ian (2005). New finds and new interpretations at Çatalhöyük. Çatalhöyük 2005 Archive Report. Catalhöyük Research Project, Institute of Archaeology.
- Hodder, Ian (2006). *The Leopard's Tale: Revealing the Mysteries of Çatalhöyük*. London: Thames & Hudson.
- Hodder, Ian (2010). Probing Religion at Çatalhöyük : An interdisciplinary experiment. In: Hodder, Ian (ed.) *Religion in the emergence of Civilization. Çatalhöyük as a Case Study*. New York: Cambridge University Press, pp. 1–31.
- Hodder, Ian (2011). Çatalhöyük: A Prehistoric Settlement on the Konya Plain. In: Steadman, Sharon R. & Gregory McMahon (eds.) *The Oxford Handbook of Ancient Anatolia 10,000-323 B.C.E*. New York: Oxford University Press, pp. 934–949.
- Hodder, Ian and Peter Pels (2010). History houses. A new interpretation of architectural elaboration at Çatalhöyük. In: Hodder, Ian (ed.) *Religion in the emergence of Civilization. Çatalhöyük as a Case Study*. New York: Cambridge University Press, pp. 163–186.
- Hollan, Douglas (1995). To the Afterworld and Back: Mourning and Dreams of the Dead among the Toraja. *Ethos* 23 (4): pp. 424–436.
- Hover, Erella and Steven L. Kuhn, eds., (2006). *Transitions Before the Transition: Evolution and Stability in the Middle Paleolithic and Middle Stone Age*. New York: Springer, pp. 171–188.
- Hovers, E., S. Ilani, O. Bar-Yosef, and B. Vandermeersch (2003). An Early Case of Color Symbolism. Ochre Use by Modern Humans in Qafzeh Cave. *Current Anthropology* 44(4): pp. 491–522.
- Hultkrantz, Åke (1962a). Die Religion der Lappen. In: Ivar Paulson, Åke Hultkrantz and Karl Jettmar: *Die Religionen Nordeuropas und der amerikanischen Arktis*. Reihe Die Religionen der Menschheit, edited by Christel Matthias Schröder. Stuttgart: Kohlhammer, pp. 307–356.
- Hultkrantz, Åke (1962b). Die Religion der amerikanischen Arktis. In: Ivar Paulson, Åke Hultkrantz and Karl Jettmar: *Die Religionen Nordeuropas und der amerikanischen Arktis*. Reihe Die Religionen der Menschheit, edited by Christel Matthias Schröder. Stuttgart: Kohlhammer, pp. 357–415.
- Hultkrantz, Åke (1962c). Die Religion der Lappen. In: Ivar Paulson, Åke Hultkrantz and Karl Jettmar: *Die Religionen Nordeuropas und der amerikanischen Arktis*. Reihe Die Religionen der Menschheit, edited by Christel Matthias Schröder. Stuttgart: Kohlhammer, pp. 283–303.
- Humphrey, Nicholas (1999). Cave Art, Autism and the Human Mind, in: *Journal of Consciousness Studies* 6/1999, pp. 116–123.

- Hurford, James R. (1999). The Evolution of Language and Languages. In: Dunbar, Robin, Chris Knight, and Camilla Power (eds.) *The Evolution of Culture. An Interdisciplinary View*. New Brunswick, New Jersey: Rutgers University Press, pp. 173–193.
- Immelmann, Klaus and Colin Beer (1992). *A dictionary of ethology*. Cambridge/Mass. and London: Harvard University Press.
- Jahn, Ilse and Schmitt, Michael (2001). Carl Linnaeus (1707-1778). In: Ilse Jahn and Michael Schmitt (Eds.) *Darwin & Co. Eine Geschichte der Biologie in Portraits*. München: Beck, pp. 9–30.
- Jahn, Ilse and U. Sucker (1998). Die Herausbildung der Verhaltensbiologie. In : Jahn, I. (Ed.) *Geschichte der Biologie*. Jena: Nikol, pp. 581–600.
- James, E.O. (1960). *Religionen der Vorzeit*. Köln: Dumont Schauberg.
- Jensen, Adolf E. (1948). *Das religiöse Weltbild einer frühen Kultur*. Stuttgart: August Schröder.
- Jensen, Minna Skaftø (1999). Dividing Homer: When and How were the Iliad and the Odyssey divided into Songs?, in: *Symbolae Osloenses*, Band 74, Oslo 1999, S. 5–91
- Jettmar, Karl (1962). Die Aussage der Archäologie zur Religionsgeschichte Nordeuropas. In: Ivar Paulson, Åke Hulthkrantz and Karl Jettmar: *Die Religionen Nordeuropas und der amerikanischen Arktis*. Reihe *Die Religionen der Menschheit*, edited by Christel Matthias Schröder. Stuttgart: Kohlhammer.
- Jung, Carl Gustav (1978). [Originally published 1958 as: *Ein moderner Mythos: von Dingen, die am Himmel gesehen werden*]. *Flying Saucers: A Modern Myth of Things Seen in the Skies*. Translation by R.F.C. Hull. Princeton, NJ: Princeton University Press.
- Jung, Carl Gustav (1995). *Gesammelte Werke*, Vol. 11. Düsseldorf: Walter.
- Kalicz, N. (1983-1984). Übersicht über den Forschungsstand der Entwicklung der Lengyel-Kultur und die ältesten „Wehranlagen“ in Ungarn. *Mitt. Österr. Arbeitsgemeinschaft Ur- u. Frühgesch.* 33/34, 1983/84, pp. 271–293.
- Kappeler, Peter (2009). *Verhaltensbiologie*. 2nd edition. Heidelberg: Springer.
- Kaufmann, Dieter (1989). Kultische Äußerungen im Frühneolithikum des Elbe-Saale-Gebietes. In: Schlette, F. and D. Kaufmann (eds.) *Religion und Kult in ur- und frühgeschichtlicher Zeit*. Berlin: Akademie Verlag, pp. 111–139.
- Keane, Webb (2010). Marked, absent, habitual: Approaches to Neolithic Religion at Çatalhöyük. In : Hodder, Ian (ed.) *Religion in the emergence of Civilization. Çatalhöyük as a Case Study*. New York: Cambridge University Press, pp. 187–219.
- Kenyon, Kathleen M. (1957). *Digging up Jericho*. London: Ernest Benn.
- Kerényi, Karl (1976). *Dionysos: Archetypal Image of Indestructible Life*. Princeton: Bollingen
- Kinsley, David (1989). *The Goddesses' Mirror: Visions of the Divine from East to West*. State University of New York Press.
- Kirk, G.S. (1985). *The Iliad: A Commentary*. Volume I: books 1-4. Cambridge: Cambridge University Press. For the Homeric use of stock epithets, see also Adam Parry, *The Making of Homeric Verse, the Collected Papers of Milman Parry* (Oxford: Oxford University Press, 1971).
- Knoblauch, Hubert (1999). *Berichte aus dem Jenseits*. Freiburg: Herder.
- Koenig, Otto (1970). *Kultur und Verhaltensforschung. Einführung in die Kulturethologie*. München: DTV.
- Koenig, Otto (1975). *Urmotiv Auge*. Munich: Piper Verlag.
- Krause, J., Orlando, L., Serre, D., Bence, V., Prüfer, K., Richards, M. P., Hublin, J.-J., Hänni, C., Derwajanko, A. & e Pääbo, S. (2007). Neanderthals in central Asia and Siberia. *Nature*, 449/18, pp. 902–904.
- Krause, L. (2001). Galilee's Receding Waters Reveal Stone Age Camp. *National Geographic*. 1–4.
- Krauß, Raiko, V. Leusch, S. Zäuner (2012). Zur frühesten Metallurgie in Europa – Untersuchungen des kupferzeitlichen Gräberfeldes von Varna. *Bulgarien-Jahrbuch 2012*, pp. 64–82.
- Kravchenko, Alexander (2003). *Sign, Meaning, Knowledge. An Essay in the Cognitive Philosophy of Language*. Frankfurt am Main and others: Peter Lang.

- Krech, Volkhard (2002). Opfer und Heiliger Krieg: Gewalt aus religionswissenschaftlicher Sicht, in: Heitmeyer, Wilhelm/Hagan, John (eds.): Internationales Handbuch der Gewaltforschung, Wiesbaden: Verlag für Sozialwissenschaften, pp. 1255–1275.
- Kreiting, H. (2014). Britney Spears verscheucht Piraten vor Somalia. <http://www.welt.de/121326409>.
- Kremer, William (9 October 2012). Why do we behave so oddly in lifts? BBC World Service, <http://www.bbc.com/news/magazine-19846214>; viewed on 6th October 2015.
- Kuhn, Steven L. & Mary Stiner (2007). Body Ornamentation as Information Technology: Towards an Understanding of the Significance of Early Beads. In: Mellars, Paul, Katie Boyle, Ofer Bar-Yosef & Chris Stringer: Rethinking the Human Revolution. New behavioral and biological perspectives on the origin and dispersal of modern humans. Princeton, NJ : Princeton Univ. Press, pp. 45–54.
- Kundt, Radek (2016). Contemporary Evolutionary Theories of Culture and the Study of Religion. London, Oxford, New York, New Delhi, Sydney: Bloomsbury.
- Kunkel, Otto (1955). Die Jungfernhöhle bei Tiefenellern. Eine neolithische Kultstätte auf dem Fränkischen Jura bei Bamberg. Beck, München 1955, (Münchner Beiträge zur Vor- und Frühgeschichte 5).
- Kusmierski, Rab; G. Borgia; A. Uy; R.H. Crozier (1997). Labile evolution of display traits in bowerbirds indicates reduced effects of phylogenetic constraint. *Proceedings of the Royal Society of London B* 264 (1380): 307–313.
- Lack, David (1940). Courtship Feeding in Birds. In: *The Auk* Vol. 57, No. 2 (Apr. 1940), pp. 169–178.
- Lambert, W. C. and S. B. Parker (1966). *Enûma Eliš. The Babylonian Epic of Creation*, Oxford : Oxford University Press.
- Lambert, Wilfred G. (2013). Babylonian creation myths [Online-edition]. - Winona Lake, Indiana : Eisenbrauns.
- Lang, Andrew (1907). Edward Burnett Tylor, in: Balfour, Henry et al., *Anthropological Essays Presented to Edward Burnett Tylor in Honour of his 75th Birthday Oct. 2 1907*, Oxford.
- Last, Jonathan (2015). Longhouse Lifestyles in the Central European Neolithic. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 273–289.
- Lenneis, Eva (2008). Perspectives on the beginnings of the earliest LBK in east-central Europe. In : Bailey, Douglass W., Alasdair Whittle and Daniela Homann (eds.) *Living Well Together? Settlement and Materiality in the Neolithic of South-East and Central Europe*. Oxford: Oxbow Books, pp. 164–178.
- Leroi-Gourhan, André (1981). *Die Religionen der Vorgeschichte*. Frankfurt am Main: Suhrkamp.
- Leroi-Gourhan, Arlette (1975). The Flowers found with Shanidar IV, a Neanderthal Burial in Iraq. In: *Science*. New Series 190 (No. 4214), pp. 562-564.
- Lewis-Williams, David and D. Pearce (2005). *Inside the Neolithic Mind: Consciousness, Cosmos, and the Realm of Gods*. London: Thames and Hudson.
- Lichardus, Jan (1991). Das Gräberfeld von Varna im Rahmen des Totenrituals des Kodzadermen-Gumelnita-Karanovo VI-Komplexes. In: Lichardus, Jan (ed.): *Die Kupferzeit als historische Epoche I-II. Symposium Saarbrücken und Otzenhausen 6.-13. November 1988*. Saarbrücken.
- Lichter, Clemens (2014). Temples in the Neolithic and Copper Age in Southeast Europe. 119 *Documenta Praehistorica* XLI, pp. 119–136.
- Lorblanchet, Michel (1997). *Höhlenmalerei. Ein Handbuch*. Sigmaringen: Thorbecke.
- Lucas, J. R. (1979). Wilberforce and Huxley: a legendary encounter. *The Historical Journal* 22 (2): pp. 313–330.
- Lupack, Susan (2010a). Minoan Religion. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000 – 1000 BC)*. Oxford: Oxford University Press, pp. 251–262.

- Lupack, Susan (2010b). Mycenaean Religion (Chapter 20) In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000–1000 BC)*. Oxford: Oxford University Press, pp. 263–276.
- Lyell, Charles (1830–1833). *Principles of geology, being an attempt to explain the former changes of the Earth's surface, by reference to causes now in operation*. vol. 1–3. London: John Murray.
- Lyell, Charles (1863). *The Geological Evidences of the Antiquity of Man, with remarks on theories of the origin of species by variation*. London: J.W. Childs.
- Lyman, S.M. and M.B. Scott (1967). Territoriality: a neglected sociological dimension. *Social Problems* 15: 236–248.
- Lyn Wadley, Lyn (2010). Cemented ash as a receptacle or work surface for ochre powder production at Sibudu, South Africa, 58,000 years ago. In: *Journal of Archaeological Science*, Volume 37, Issue 10, October 2010, pp. 2397–2406.
- Mackay, A. and Welz (2008). Engraved ochre from a Middle Stone Age context at Klein Kliphuis the Western Cape of South Africa. *Journal of Archaeological Science* 35: pp. 1521–1532.
- Maher LA, Richter T, Macdonald D, Jones MD, Martin L, and Stock JT. (2012). Twenty Thousand-Year-Old Huts at a Hunter-Gatherer Settlement in Eastern Jordan. *PLoS ONE* 7(2): e31447.
- Malone, Caroline und Simon Stoddart (1998). The conditions of creativity for prehistoric Maltese art, in Steven Mithen (Hg.), *Creativity in Human Evolution and Prehistory*, London / New York: Routledge, pp. 241–259.
- Malone, Caroline, Reuben Grimma, Joseph Magro-Conti, David Trump, Simon Stoddart und Holly Hardisty (2009a). The Domestic Environment, in: Malone, Caroline, Simon Stoddart, Anthony Bonanno und David Trump: *Mortuary customs in prehistoric Malta*. Cambridge: McDonald Institute Monographs.
- Malone, Caroline, Simon Stoddart, Anthony Bonanno und David Trump (2009b). *Mortuary customs in prehistoric Malta*, Cambridge: McDonald Institute Monographs.
- Maran, Joseph (2012). Ceremonial feasting equipment, social space and interculturality in Post-Palatial Tiryns. In: Joseph Maran and Philipp W. Stockhammer (eds.) *Materiality and Social Practice. Transformative Capacities of Intercultural Encounters*. Oxford and Oakville: Oxbow books, pp. 121–136.
- Maran, Joseph (2015). Tiryns and the Argolid in Mycenaean Times. New clues and interpretations. In: Schallin, Ann-Louise, and Iphiyenia Tournavitou (eds.) *Mycenaeans up to date. The archaeology of the north-eastern Peloponnese – current concepts and new directions*. *Krifter utgivna av Svenska Institutet i Athen*, 4°, 56 *Acta Instituti Atheniensis Regni Sueciae*, Series in 4°, 56. Stockholm, pp. 277–293.
- Marangou, Christina (1992). *Eidolia. Figurines et miniatures du Néolithique Récent et du Bronze Ancien en Grèce*. Oxford: BAR International.
- Maringer, Johannes (1956). *Vorgeschichtliche Religion. Religionen im steinzeitlichen Europa*. Zürich, Köln: Benziger Verlag.
- Maringer, Johannes (1960). *The Gods of Prehistoric Man*. London: Weidenfeld & Nicolson.
- Martin, Thomas R. (2013/2000). *Ancient Greece. From Prehistoric to Hellenistic Times*. New Haven & London: Yale University Press.
- Mauss, Marcel (1989). Die Gabe. Form und Funktion des Austauschs in archaischen Gesellschaften, in: ders., *Soziologie und Anthropologie* 2, Frankfurt: Fischer (Paris 1950), pp. 9–144
- Mauss, Marcel (1989/1950). Eine Kategorie des menschlichen Geistes. Der Begriff der Person und des "Ich", in: Mauss, Marcel, *Soziologie und Anthropologie* 2. Frankfurt: Fischer. (Paris 1950), pp. 221–251.
- May, Fabienne (1986). *Les Sépultures Préhistoriques*, Paris: Éd. du CNRS.
- Mayer, D.E.B.-Y., B. Vandermeersch, and O. Bar-Yosef. (2009). Shells and ochre in Middle Paleolithic Qafzeh Cave, Israel: indications for modern behavior. *Journal of Human Evolution* 56:pp. 307–314.

- Mayr, Ernst (1973 [1963]). *Animal Species and Evolution*. Fifth edition. Cambridge, Mass.: The Belknap Press of Harvard University Press.
- Mayr, Ernst (1988). *Toward a New Philosophy of Biology. Observations of an Evolutionist*. Cambridge Mass. and London: The Belknap Press of Harvard University Press.
- Mayr, Ernst (1997). *Das ist Leben - die Wissenschaft vom Leben*. Heidelberg: Springer Spektrum.
- McCampbell, James M. (1987). *Effects of UFOs Upon People*. In: Evans, Hilary; Spencer, John. *UFOs, 1947-1987: The 40-year Search for an Explanation*. London: Fortean Tomes.
- McCunn, Lindsay J. (2013). *Environmental Territoriality and Me. "Hey, that's my spot!"* <https://www.psychologytoday.com/blog/ienvironment/201302/environmental-territoriality-and-me>. Posted Feb 15, 2013.
- McDougall, Ian; Brown, Francis H.; Fleagle, John G. (17 February 2005). *Stratigraphic placement and age of modern humans from Kibish, Ethiopia*. *Nature* 433 (7027), pp. 733–736.
- Mellaart, James (1961). *Hacılar: A Neolithic Village Site*. *Scientific American* 205, pp. 86–98.
- Mellaart, James (1967) *Çatalhöyük, A Neolithic Town in Anatolia*. London.
- Mellaart, James (1970a). *Excavations at Hacılar*. British Institute of Archaeology, Ankara. Occasional publications, Nr. 9.
- Mellaart, James (1970b). *Excavations at Hacılar. Plates and figures*. British Institute of Archaeology, Ankara. Occasional publications, Nr. 10.
- Mellars, Paul (2006). *Why did modern human populations disperse from Africa ca. 60,000 years ago? Proceedings of the National Academy of Sciences* 103 (25), pp. 9381–9386.
- Mendel, Gregor (1995). *Versuche über Pflanzenhybriden. Zwei Abhandlungen 1866 und 1870*, ed. by Erich von Tschermak-Seysenegg, Frankfurt am Main: Verlag Harry Deutsch.
- Meskel, Lynn (2007). *Refiguring the Corpus at Çatalhöyük*. In Renfrew, C. and Morley, I. *Material Beginnings: A Global Prehistory of Figurative Representation*. McDonald Institute Monographs, Cambridge. pp. 143–156.
- Meskel, Lynn (1998). *Twin Peaks. The Archaeology of Çatalhöyük*. In: Tringham, Ruth and Margaret Conkey (eds.), *Ancient Goddesses*, London 1998, pp. 46 - 62.
- Metcalf, Peter and Richard Huntington (1991). *Celebrations of Death. The Anthropology of Mortuary Ritual*. New York: Cambridge University Press.
- Meuli, Karl (1946). *Griechische Opferbräuche*. In: *Phyllobolia (Festschrift Peter von der Mühl)*, pp. 185–288. Basel, Switzerland; reprinted in Karl Meuli. *Gesammelte Schriften*, vol. 2. Basel, Switzerland: Schwabe, pp. 907–1021.
- Meyer, M. (2002). *Palisaded Enclosures in German Neolithic*. In: A. Gibson (eds.), *Behind wooden Walls. Neolithic palisaded enclosures in Europe*. BAR Internat. Ser. 1013, Oxford, pp. 59–92.
- Midgley, Magdalena (1992). *TRB Culture. The First Farmers of the North European Plain*. University Press, Edinburgh.
- Mithen, Steven (1999). *The Prehistory of the Mind. The cognitive Origins of Art and Science*. New York: Thames and Hudson.
- Mithen, Steven (2000). *Das Mesolithikum*. In: Barry Cunliffe, *Illustrierte Vor- und Frühgeschichte Europas*. Frankfurt/New York: Campus, pp. 93–154.
- Morgado, Nicolas, Dominique Muller, Edouard Gentaz, Richard Palluel-Germain (2011). *Close to me? The influence of affective closeness on space perception*. *Perception* 40, pp. 877–879.
- Morgenthaler, Christoph (1997). *Carl Gustav Jung (1875-1961)* In: Michaels, Axel (ed.) *Klassiker der Religionswissenschaft. Von Friedrich Schleiermacher bis Mircea Eliade*. München: Beck, pp. 234–245.
- Morphy, Howard (1977). *The social significance of schematisation in Northwest Coast American Indian Art*. In: Ucko, Peter J. *Form in indigenous art. Schematisation in the art of Aboriginal Australia and prehistoric Europe*. Canberra: Australian Institute of Aboriginal Studies, pp. 73–76.
- Morphy, Howard (1991). *Ancestral Connections. Art and an Aboriginal System of Knowledge*. Chicago, London: The University of Chicago Press.

- Morris, Alan G., Anja Heinze, Eva K.F. Chan, Andrew B. Smith, and Vanessa M. Hayes (2014). First Ancient Mitochondrial Human Genome from a Pre-Pastoralist Southern African. Published by Oxford University Press on behalf of the Society for Molecular Biology and Evolution. Open Access article <http://gbe.oxfordjournals.org/content/early/2014/09/10/gbe.evu202.full.pdf>
- Müller, Johannes (2011). *Megaliths and Funnel Beakers: Societies in Change 4100-2700 BC*, Drieëndertigste Kroon-Voordracht, Amsterdam.
- Müller, Johannes (2015). Movement of Plants, Animals, Ideas, and People in South-East Europe. In: Fowler, Chris/Jan Harding/Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 63–80.
- Müller, Johannes, et al. (2013). Landscapes as Social Spaces and Ritual Meaning: Some New Results on TRB in Northern Germany. In: Bakker, J. A., Bloo, S. C. B. and M.K. Dütting (eds.) *From Funeral Monuments to Household Pottery. Current Advances in Funnel Beaker Culture (TRB/TBK) research*. BAR International Series 2474. Oxford: Archaeopress, pp. 51–80.
- Müller-Bergström (2000). Zwerge und Riesen. In: Bächthold-Stäubli, H. / Hoffmann-Krayer, E. (eds.): *Handwörterbuch des deutschen Aberglaubens*. Vol. 9. Berlin 2000, 1008–1138
- Müller-Karpe, Hermann (1998). *Grundzüge früher Menschheitsgeschichte*. Vol. 1: Von den Anfängen bis zum 3. Jahrtausend v. Chr. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Nadel, D., Weiss, E., Simchoni, O., Tsatskin, A., Danin, A., Kislev, M. (2004). From the Cover: Stone Age Hut in Israel Yields World's Oldest Evidence of Bedding. *The National Academy of Sciences*. 101, 6821.
- Nanoglou, Stratos (2015). A Miniature World. Models and Figurines in South-East Europe. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 621–637.
- Nash, George and Dragos Gheorghiu, eds., (2009). *The Archaeology of People and Territoriality*. Budapest: Archaeolingua.
- Neumann, E. (2003 / 1957). *Die Große Mutter. Die weiblichen Gestaltungen des Unterbewußten*. 11th edition. Mannheim: Patmos.
- Neumann, Erich (1955). *The Great Mother*, New York: Princeton University Press.
- Newberg, A. B., D'Aquili, E. G. & Rause, V. (2001). *Why God Won't Go Away. Brain Science and the Biology of Belief*. New York: Ballantine Books.
- Nieszery, Norbert (1995). *Linearbandkeramische Gräberfelder in Bayern*. Espelkamp: Marie L. Leidorf.
- North, John (1996). *Stonehenge. Neolithic Man and the Cosmos*. London: Harper Collins.
- Orschied, Jörg and Haidle, M. (2006). The LBK enclosure at Herxheim: theatre of war or or ritual centre? References from osteoarchaeological investigations. *Journal of Conflict Archaeology 2*, pp. 153–167.
- Orschied, Jörg (1998). *Manipulationen an menschlichen Skelettresten. Taphonomische Prozesse, Sekundärbestattungen oder Anthropophagie ?* Rahden: Verlag Marie Leidorf .
- Orschied, Jörg (2002). *Secondary burial in the Magdalenian: The Brillenhöhle (Blaubeuren, Southwest Germany)*. *PALEO 14*, pp. 2-18.
- Orschied, Jörg (2005). *The head burials from Ofnet cave: an example of warlike conflict in the Mesolithic*. In: Mike Parker Pearson and J.J.N. Thorpe (Eds.) *Warfare, Violence, and Slavery in Prehistory. Proceedings of a Prehistoric Society. Conference at Sheffield University*. BAR International
- Orvieto, Paolo (2009). *Poliziano e l'ambiente mediceo*. Rome: Salerno.
- Otto, Walter F. (1933). *Dionysos – Mythos und Kultus*. Frankfurt am Main: Klostermann /Otto, Walter F. (1995). *Dionysus Myth and Cult*. Indiana University Press.
- Ovidius Naso, Publius (Ovid). *Metamorphoses: Books 1-8*. With an English translation by Frank Justus Miller. 2nd ed. F.J. Miller (Hg.). Loeb Classical Library. Cambridge, MA: Harvard University Press, 1960.

- Owen, James (December 5, 2006). Neanderthals Turned to Cannibalism, Bone Cave Suggests. *National Geographic News*.
- Owren, Michael J. (2003). Vocal production and perception in nonhuman primates provide clues about early and speech evolution. *ATR Symposium HIS Series*, 1, pp. 1–12.
- Özdoğan, Asli (1999). Çayönü, in Özdoğan, Mehmet and Neziha Başgelen (1999). *Neolithic in Turkey. The Cradle of Civilization. Ancient Anatolian Civilisations Series*, Vol. 3. Istanbul: Arkeoloji ve sanat Yayınları.
- Özdoğan, M. and Özdoğan, A. (1989). Çayönü, a conspectus of recent work. *Paléorient* 15, pp. 65–74.
- Özdoğan, Mehmet (2005). The Expansion of the Neolithic Way of Life: What We Know and What We Do Not Know. In: Lichter, C. (ed.) *How Did Farming Reach Europe? Anatolian-European Relations from the Second Half of the 7th Through the First Half of the 6th Millennium Cal. BC. BYZAS 2*. İstanbul: Ege Yayınları, pp. 13–27.
- Özdoğan, Mehmet (2010). Transition from the round plan to the rectangular – reconsidering the evidence of Çayönü. In: Dragos Gheorghiu (ed.) *Neolithic and Chalcolithic Archaeology in Eurasia: Building Techniques and Spatial Organisation. BAR International Series 2097*, pp. 29–34.
- Özdoğan, Mehmet (2010). Westward Expansion of the Neolithic Way of Life: Sorting the Neolithic Package into Distinct Packages. In: Matthiae, P., F. Pinnock, L. Nigro & N. Marchetti (eds.) *Near Eastern Archaeology in the Past, Present and Future. Heritage and Identity. Vol. 1. Proceedings of the 6th International Congress on the Archaeology of the Ancient Near East, May, 5th–10th 2008, Sapienza—Università di Roma. Wiesbaden: Harrassowitz Verlag*, pp. 883–97.
- Özdoğan, Mehmet (2011). Archaeological Evidence on the Westward Expansion of Farming Communities from Eastern Anatolia to the Aegean and the Balkans. *Current Anthropology*, 52 (Suppl. 4):415–30.
- Özdoğan, Mehmet and Asli Özdoğan (2002). Buildings of Cult and Cult of Buildings. In G. Arsekük, M. Mellink and W. Schirmer (eds.), *Light on Top of the Black Hill – Studies presented to Halet Çambel, Ege Yayınları, Istanbul (1998)*, pp. 581–593.
- Page, Denys (1959). *History and the Homeric Iliad*. Berkeley: University of California Press.
- Panofsky, Erwin (1972). *Studies in Iconology: Humanistic Themes in the Art of the Renaissance*. New York: Harper & Row.
- Papadatos, Yiannis (2007). The Beginning of Metallurgy in Crete: New Evidence from the FN – EM I Settlement at Kephala Petras, Siteia. In: Day, Peter M. and Roger C. P. Doonan (eds.) *Metallurgy in the Early Bronze Age Aegean. Sheffield Studies in Aegean Archaeology 7*. Oxford: Oxbow, pp. 154–167.
- Patton, Kimberley P. and Lori D. Hager (2014). „Motherbaby“: A Death in Childbirth at Çatalhöyük. In: Ian Hodder (ed.) *Religion at Work in a Neolithic Society. Vital Matters*. New York: Cambridge University Press, pp. 225–258.
- Paul, Cäcilia Sonja (1985). *Territorialität bei Jägern & Sammlern*. Tübingen: Verlag S&F.
- Peatfield, Alan (1990). Minoan Peak Sanctuaries: History and Society. *OpAth* 18, pp. 117–131.
- Perlès, Catherine: *The early Neolithic in Greece: the first farming communities in Europe*. Cambridge: Cambridge University Press 2001.
- Peschlow-Bindokat, Anneliese (2003). *Frühe Menschenbilder. Die prähistorischen Felsmalereien des Latmos-Gebirges*, Mainz: Zabern.
- Pickel, Gert (2009). Secularization as a European Fate? – Results from the Church and Religion in an Enlarged Europe Project 2006. In: Pickel, Gert and Olaf Müller: *Church and Religion in Contemporary Europe. Results from Empirical and Comparative Research*. Heidelberg: Springer, pp. 89–122.
- Pickel, Gert (2010). Säkularisierung, Individualisierung oder Marktmodell? *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* Volume 62, Issue 2, pp. 219–245.
- Pilali-Papasteriou, Angeliki (1985). *Die bronzene Tierfiguren aus Kreta. Prähistorische Bronzefunde Abteilung 1 Band 3*, München: Beck'sche Verlagsbuchhandlung.

- Plautus, T. Maccius (1912). *Aulularia, or The Concealed Treasure The Comedies of Plautus*. Henry Thomas Riley. London: G. Bell and Sons, The Prologue.
- Plinius Hist. Nat. XXXV.2.
- Podborský, Wladimír (1989). Neolithische Kultsitten der Bevölkerung im mährischen Gebiet. In: Schlette, Friedrich und Dieter Kaufmann (eds.), *Religion und Kult in Ur- und frühgeschichtlicher Zeit*. Berlin, pp. 165 – 170.
- Politis, Thea (2001). Gold and Granulation: Exploring the Social Implications of a Prestige Technology in the Bronze Age Mediterranean. In: Shortland, Andrew J. (ed.) *The Social Context of Technological Change: Egypt and the Near East, 1650-1550 BC*. Proceedings of a Conference held at St. Edmund Hall, Oxford, 12–14 September 2000. Oxford: Oxbow, pp. 161–194.
- Potonié, R. (1957). Zu Cuvier's Kataklysmtheorie. *Paläontologische Zeitschrift*, 31: 9–14. Stuttgart.
- Quack, Anton (2004). Hexer, Heiler und Schamanen. *Die Religion der Stammeskulturen*. Darmstadt: Wissenschaftliche Buchgesellschaft, pp. 44–46.
- Radovanović, Ivana (2000). Houses and Burials at Lepenski Vir. *European Journal of Archaeology* Vol. 3(3). London, Thousand Oaks, CA and New Delhi: Sage Publications pp. 330–349.
- Radovanović, Ivana (2006). Not just a Good Place for Fishing: Meso-Neolithic Contact at the Site of Lepenski Vir in View of the New AMS and Stable Isotope Evidence. In: N. Tasić/C. Grozdanov (Hrsg.), *Homage to Milutin Garašanin*. Belgrade pp. 69–77.
- Radovanović, Ivana /B. Voytek (1997). Hunters, fishers or farmers: sedentism, subsistence and social complexity in the Djerdap Mesolithic. *Analecta Praehist. Leidensia* 29, pp. 19–31.
- Rappaport, Roy (1968). *Pigs for the Ancestors*. New Haven/London: Yale University Press.
- Rayor, Diane J. (2004). *The Homeric Hymns. A Translation, with Introduction and Notes*. Berkeley, Los Angeles, London: University of California Press.
- Rendu, William, Cédric Beauval, Isabelle Crevecoeur, Priscilla Bayle, Antoine Balzeau, Thierry Bismuth, Laurence Bourguignon, Géraldine Delfour, Jean-Philippe Faivre, François Lacrampe-Cuyaubère, Carlotta Tavormina, Dominique Todisco, Alain Turq, and Bruno Maureille (2014) Evidence supporting an intentional Neandertal burial at La Chapelle-aux-Saints. In: *Proceedings of the national academy of sciences (PNAS)* 111, (1), pp. 81–86.
- Renfrew, Colin (1969). The development and chronology of early Cycladic figurines. *AJA* 73.
- Renfrew, Colin (2011/1972). *The Emergence of Civilization*. Oxford: Oxbow Books.
- Rensch, Bernhard (1965). *Homo sapiens. Vom Tier zum Halbgott*, Göttingen: Vandenhoeck & Ruprecht.
- Rensch, Bernhard (1972). Kultureller Evolutionismus. In: Ritter, Joachim (ed.), *Historisches Wörterbuch der Philosophie* 2, Darmstadt. Wissenschaftliche Buchgesellschaft, pp. 835–886.
- Rheinberg, F. and Manig, Y. (2003). Was macht Spaß am Graffiti-Sprayen? Eine induktive Anreizeanalyse. *Report Psychologie*, 4, pp. 222–234.
- Riemschneider, Margarete (1935). *Augengott und heilige Hochzeit*. Leipzig: Koehler & Amelang. <http://www.geiseltalsee.de/sehenswuerdigkeiten/608-dolmengoettin-und-eichstaedter-warte.html>, seen 3.12.2015.
- Riu, Xavier (1999). *Dionysism and Comedy*. Lanham: Rowman and Littlefield.
- Robertson-Smith, William (1889). *Lectures on the religion of the Semites. First Series: The fundamental institutions (Burnett Lectures 1888/89)*. London: Black.
- Röder, Brigitte (1998). Jungsteinzeit: Frauenzeit? - Frauen in frühen bäuerlichen Gesellschaften Mitteleuropas, in: Auffermann, Bärbel und Gerd-Christian Weniger (eds.), *Frauen - Zeiten - Spuren*, Mettmann: Neanderthal-Museum, pp. 241–269
- Rollefson, G. and Rollefson, K. (1989). The collapse of early Neolithic settlements in the southern Levant. In: Hershkovitz, I. (ed.) *People and Culture in Change*. Oxford: BAR 508, pp. 73–89.
- Rosenberg, Michael and Asli Erim Özdoğan (2011). The Neolithic in Southeastern Anatolia. In: Steadman, Sharon R. & Gregory McMahon (eds.) *The Oxford Handbook of Ancient Anatolia 10,000-323 B.C.E*. New York: Oxford University Press, pp. 125–149.

- Rossano, Matt J. (2010). *Supernatural selection: How religion evolved*. New York: Oxford University Press.
- Rothenbuhler, Eric W. (1998). *Ritual Communication. From Everyday Conversation to Mediated Ceremony*. Thousand Oaks, Calif./London: Sage Publications.
- Rüpke, Jörg, Ed. (2007). *A Companion to Roman Religion*, Wiley-Blackwell.
- Rust, Alfred (1991). *Der primitive Mensch*, in: Mann, Golo und Alfred Heuß (ed.), *Propyläen Weltgeschichte Bd. 1*; Berlin, Frankfurt a.M.: Propyläen Verlag, pp. 155–226.
- Rutkowski, B. (1987). *Die Topographie des Höhenheiligtums auf Juktas, Kreta*. *Archaeologia Polona*, 25–26, 85–96.
- Ryberg, Inez S. (1955). *Rites of the State Religion in Roman Art*, *Memoirs of the American Academy in Rome*, Vol. 22, University of Michigan Press for the American Academy in Rome, pp. 10–13.
- Rzepecki, Seweryn (2011). *The Roots of Megalithism in the TRB Culture*. Łódź: Instytut Archeologii Uniwersytetu Łódzkiego.
- Sanders, Nancy K. (1968). *Prehistoric Art in Europe*. Penguin (Pelican, now Yale, History of Art).
- Sandywell, Barry (1996). *Presocratic Philosophy vol.3*. New York: Routledge.
- Santana, Jonathan, Juan José Ibáñez, Javier Velasco and Frank Braemer (2012). *Crania With Mutilated Facial Skeletons: A New Ritual Treatment in an Early Pre-Pottery Neolithic B Cranial Cache at Tell Quarassa North (South Syria)*. *American Journal of Physical Anthropology*, October 2012, pp. 205–214.
- Schachermeyr, F. (1979). *Die minoische Kultur des alten Kreta*. Stuttgart: Kohlhammer.
- Schier, Wolfram (2015). *Central and Eastern Europe*. In: Fowler, Chris/Jan Harding/Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 99–120.
- Schilling, Robert (1981, 1992). *“The Penates,” in Roman and European Mythologies*. University of Chicago Press.
- Schirmer, W. (1983). *Drei Bauten des Çayönü Tepesi*. In: R. M. Boehmer and H. Hauptmann (eds.) *Beiträge zur Altertumskunde Kleinasien: Festschrift für Kurt Bittel*. Mainz: Philipp von Zabern, pp. 463–476.
- Schlosser, Wolfhard and Jan Cierny (1996). *Sterne und Steine. Eine praktische Astronomie der Vorzeit*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Schmidt, Klaus (2000). *Zuerst kam der Tempel, dann die Stadt. Bericht zu den Grabungen am Gürcütepe und am Göbekli Tepe 1996-1999*. *Istanbuler Mitteilungen*, 50, 5–40.
- Schmidt, Klaus (2011). *Göbekli Tepe: A Neolithic Site in Southeastern Anatolia*. In: Steadman, Sharon R. & Gregory McMahon (eds.) *The Oxford Handbook of Ancient Anatolia 10,000-323 B.C.E*. New York: Oxford University Press, pp. 917–933.
- Schmidt, R. R. (1910). *Die spätpaläolithischen Bestattungen der Ofnet*. *Mannus*, 1, (Ergänzungsband), 56–63).
- Schmidt, Wilhelm, S.V.D. (1912). *Der Ursprung der Gottesidee. Eine historisch-kritische und positive Studie*. 1. Historisch-kritischer Teil. Münster: Aschendorf.
- Schmitz, Ralf W. and Peter Pieper (1992). *Schnittspuren und Kratzer. Anthropogene Veränderungen am Skelett des Urmenschenfundes aus dem Neandertal*. In: *Das Rheinische Landesmuseum Bonn: Berichte aus der Arbeit* 2, pp. 17–19.
- Schoep, Ilse (2002). *The State of the Minoan Palaces or Minoan Palace-state?* In: Driessen, Jan, Isle Schoep, and Robert Laffineur (eds.) *Monuments of Minoan. Rethinking the Minoan Palaces. Proceedings of the International Workshop “Crete of the Hundred Palaces?”* Université Catholique de Louvain-la-Neuve, 14-15 Decembre 2001. *Aegeum* 23. Liège: Université de Liège, pp. 15–33.
- Schoep, Ilse (2010). *Crete (Chapter 8)*. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000 – 1000 BC)*. Oxford: Oxford University Press, pp. 113–125.
- Schofield, Louise (2007). *The Mycenaeans*. London: The British Museum Press.
- Schoop, Ulf-Dietrich (2011). *The Chalcolithic on the Plateau*. In: Steadman, Sharaon R. & Gregory McMahon (eds.) *The Oxford Handbook of Ancient Anatolia 10,000-323 B.C.E*. New York: Oxford University Press, pp. 150–173.

- Schopf, J. William; Kudryavtsev, Anatoliy B.; Czaja, Andrew D.; Tripathi, Abhishek B. (5 October 2007). Evidence of Archean life: Stromatolites and microfossils. *Precambrian Research* (Amsterdam, the Netherlands: Elsevier) 158 (3–4): pp. 141–155.
- Schrenk, Friedemann (1997). *Die Frühzeit des Menschen. Der Weg zum Homo sapiens*. München: C. H. Beck.
- Schrenk, Friedemann, Ottmar Kullmer and Timothy Bromage (2007). The Earliest Putative Homo Fossils. In: Winfried Henke und Ian Tattersall: *Handbook of Paleoanthropology*. Berlin/Heidelberg: Springer, pp. 1611–1631.
- Schröter, E. (1989). Die “Schalkenburg” bei Quenstedt, Kreis Hettstedt, eine frühneolithische Rondellanlage. In: F. Schlette/D. Kaufmann (eds.), *Religion und Kult in ur- und frühgeschichtlicher Zeit [Kongress Halle/Saale 1985]*, Berlin, pp. 193–201.
- Schulting, Rick J. and Linda Fibiger (2014). Violence in Neolithic North-west Europe. A Population Perspective. In : Whittle, Alasdair and Penny Bickle (eds.) *Early Farmers. The View from Archaeology and Science*. Oxford: Oxford University press for The British Academy, pp. 281–306.
- Schutz, Celia E. (2006). *Women’s Religious Activity in the Roman Republic*. University of North Carolina Press.
- Schwarz (2000). Perth. In: Bächthold-Stäubli, H. / Hoffmann-Krayer, E. (eds.): *Handwörterbuch des deutschen Aberglaubens*. Vol. 6. Berlin, pp. 1478–1492.
- Sheldon, Kim (2010). Mainland Greece. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000 – 1000 BC)*. Oxford: Oxford University Press, pp. 139–148.
- Sherratt, Andrew (2000). Das Jungneolithikum und die Kupferzeit. In: Cunliffe, Barry (ed.) *Oxford illustrierte Vor- und Frühgeschichte Europas*. Frankfurt/New York: Campus, pp. 191–229.
- Simek, Rudolf (1996). *Dictionary of Northern Mythology*. Cambridge: Boydell and Brewer.
- Skeates, Robin (2015). Underground Religion in the Central Mediterranean Neolithic. In: Fowler, Chris, Jan Harding, and Daniela Hofmann (eds.) *The Oxford Handbook of Neolithic Europe*. Oxford: Oxford University Press, pp. 895–910.
- Skirms, Brian (2010). *Signals. Evolution, Learning, & Information*. Oxford: Oxford University Press.
- Smith, W. Robertson (1894). *Lectures on the religion of the Semites*. London : A. & C. Black.
- Solecki, Ralph S. (1971) Shanidar. *The First Flower People*. New York: Verlag A. Knopf.
- Solecki, Ralph S. (1975) Shanidar IV, a Neanderthal Flower Burial in Northern Iraq. In: *Science*. New Series 190 (No. 4217) pp. 880–881.
- Solyman, Toufic (1987). Einleitung. In: Moortgat, Anton. *Die Entstehung der sumerischen Hochkultur*. Tartous, Syrien: Amani Verlag.
- Sommer, J. D. (1999). The Shanidar IV ‘Flower Burial: a Re-evaluation of Neanderthal Burial Ritual. *Cambridge Archaeological Journal* 9 (1): 127–129.
- Soressi, Marie, William Rendu, Jean-Pierre Texier, Émilie Claud, Loïc Daulny, Francesco D’Errico, Véronique Laroulandie, Bruno Maureille, Marion Niclot, Steve Schwartz et Anne-Marie Tillier (2008). Pech-de-l’Azé I (Dordogne, France): nouveau regard sur un gisement moustérien de tradition acheuléenne connu depuis le XIXe siècle. In: Jaques Jobert, Jean-Guillaume Bordes and Iuminada Ortega (EDS) *Les sociétés du Paléolithique dans un Grand Sud-Ouest de la France : nouveaux gisements, nouveaux résultats, nouvelles methods*. Paris: Société Préhistorique Française, pp. 95–132.
- Spencer, Baldwin and Francis.J. Gillen (1899). *The Native Tribes of Central Australia*. London: Macmillan.
- Spencer, Herbert (1857/1915). *Progress: Its Law and Cause*. In: Herbert Spencer, *Essays: Scientific, Political, and Speculative*. Volume 1. New York: Appleton.
- Srejović, Dragoslav (1972). *Lepenski Vir: Menschenbilder einer frühen europäischen Kultur*. Mainz: Zabern.
- Srejović, Dragoslav (1973). *Lepenski Vir. Eine vorgeschichtliche Geburtsstätte europäischer Kultur*.

- Staal, Frits (1989). *Rules Without Meaning: Ritual, Mantras, and the Human Sciences*. New York: Lang.
- Stahl, Michael (2003). *Gesellschaft und Staat bei den Griechen: Archaische Zeit*. Paderborn/München/Wien/Zürich: Schöningh.
- Stein, J. (2002). *Cercopithecus neglectus*. *Animal Diversity Web*. Retrieved 2012-04-30.
- Steinfeld, Peter (February 28, 2009). *Scandinavian Nonbelievers, Which Is Not to Say Atheists*. In: *New York Times*, New York edition, p. A16.
- Stenberg, Leo (1905). *Die Religion der Giljaken*. In: *Archiv für Religionswissenschaft* 8, Leipzig, pp. 244 – 274.
- Stöckl, Horst (2002). *Hatten bandkeramische Gefäßverzierungen eine symbolische Bedeutung im Bereich des Kultes?* In: *Varia Neolithica Bd. II, Weißbach*, pp. 63 - 97.
- Stoddart, Simon, Anthony Bonanno, Tancred Gouder, Caroline Malone und David Trump (1993). *Cult in an Island Society: Prehistoric Malta in the Tarxien Period*, in: *Cambridge Archaeological Journal* 3:1 / 1993, pp. 3 – 19.
- Stöhr, Waldemar (1965). *Die Religionen der Altvölker Indonesiens und der Philippinen*. In: Stöhr, Waldemar, and Piet Zoetmulder: *Die Religionen Indonesiens*. Stuttgart: Kohlhammer, pp. 191–192.
- Stöhr, Waldemar (1991). *Totem, Traumzeit, Tjunruna. Die australischen Religionen*. In: *Eliade, M. Geschichte der religiösen Ideen 3/2*. Freiburg: Herder, 184–207.
- Streib, Heinz und Hood, Ralph W. (2011). *“Spirituality” as Privatized Experience-Oriented Religion: Empirical and Conceptual Perspectives*”, in: *Implicit Religion* 14.4, pp. 433 – 453.
- Strien, Hans-Christoph, Joachim Wahl und Christina Jacob (2014). *Talheim – Ein Gewaltverbrechen am Ende der Bandkeramik / Talheim – A Violent Crime at the End of the Linear Pottery Culture*. In: Thomas Link und Heidi Peter-Röcher (eds.) *Gewalt und Gesellschaft. Dimensionen der Gewalt in ur- und frühgeschichtlicher Zeit / Violence and Society. Dimensions of violence in pre- and protohistoric times*. Internationale Tagung an der Julius-Maximilians-Universität Würzburg 14. – 16. März 2013. Bonn: Verlag Dr. Rudolf Habelt GmbH, pp. 247 – 256.
- Stuart, Hilary (1979). *Looking at Indian Art of the Northwest Coast*, Douglas & McIntyre, Vancouver-Toronto: Univ. of Washington Press.
- Talalay, Lauren E. (1993). *Deities, Dolls, and Devices. Neolithic Figurines from Franchthi Cave, Greece. Bloomington and Indianapolis: Indiana University Press*.
- Tattersall, Ian (1996). *The Last Neanderthal: The Rise, Success, and Mysterious Extinction of Our Closest Human Relatives*. Macmillan Publishing Company.
- Tattersall, Ian (2012). *Masters of the Planet. The Search for Our Human Origins*. New York: Palgrave Macmillan.
- Tattersall, Ian and Jeffrey Schwartz (2001). *Extinct Humans*. Boulder, Colorado: Westview/Perseus.
- Teilhard de Chardin, Pierre (1959). *The Phenomenon of Man*. New York: Harper & Row.
- Thieme, Hartmut (2007). *Der große Wurf von Schöningen: Das neue Bild zur Kultur des frühen Menschen*. In: Thieme H. (ed.) *Die Schöninger Speere – Mensch und Jagd vor 400 000 Jahren*. Stuttgart: Konrad Theiss Verlag, pp. 224–228.
- Thieme, Hartmut (1997). *Lower Palaeolithic hunting spears from Germany*. In: *Nature*. Band 385, pp. 807–810.
- Tillmann, Andreas (2006). *Die Jungfernhöhle*. In: Sommer, C. Sebastian (ed.) *Archäologie in Bayern – Fenster zur Vergangenheit*. Regensburg: Pustet.
- Timm, Erika (2003). *Frau Holle, Frau Percht und verwandte Gestalten: 160 Jahre nach Grimm aus germanistischer Sicht betrachtet*. Stuttgart: S. Hirzel Verlag.
- Tomasello, Michael (1999). *The cultural origins of human cognition*. London/Cambridge, Mass: Harvard University Press.
- Tomasello, Michael (2010). *Origins of Human Communication*. Cambridge, Mass.: The MIT Press.

- Tomkins, Peter (2010). Neolithic Antecedents. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000 – 1000 BC)*. Oxford: Oxford University Press, pp. 31–49.
- Tomkins, Peter, and Ilse Schoep (2010). Crete. In: Cline, Eric H. (ed.) *The Oxford Handbook of The Bronze Age in the Aegean (ca. 3000 – 1000 BC)*. Oxford: Oxford University Press, pp. 66–82.
- Trinkaus, Erik (1985). Cannibalism and burial at Krapina, in: *Journal of Human Evolution* 14/2, pp. 203 – 216.
- Trinkaus, Erik (1993). Femoral neck-shaft angles of the Qafzeh-Skhul early modern humans, and activity levels among immature near eastern Middle Paleolithic hominids. *Journal of Human Evolution (INIST-CNRS)* 25 (5), pp. 393–416.
- Trinkaus, Erik (2010). Commentary, in: *National Geographic News*, Thursday, October 28, 2010: Neandertals Turned to Cannibalism, Bone Cave Suggests.
- Trinkaus, Erik, Alexandra P. Buzhilova, Maria B. Bednikova, Maria V. Dobrovolskaya (2014). *The People of Sungir. Burials, Bodies, and Behavior in the Earlier Upper Paleolithic*. New York: Oxford University Press, pp. 14–33.
- Tschumi (2000/1935). Article *Megalithbauten*. In: *Handwörterbuch des deutschen Aberglaubens* Vol. 6, pp.78–89.
- Turnbull, Colin M. (1963). *Molimi. Drei Jahre bei den Pygmäen*. Köln: Kiepenheuer & Witsch.
- Turner, Victor (1967). *Betwixt and between: the liminal period in rites de passage. A Forest of symbols: aspects of the Ndembu ritual*. Ithaca: Cornell UP. pp. 23–59.
- Turner, Victor W. (1957). *Schism and Continuity in an African Society. A Study of Ndembu Village Life*. Manchester: University of Manchester Press.
- Turner, Victor W. (1967). *The Forest of Symbols. Aspects of Ndembu Ritual*. Ithaca and London: Cornell University Press.
- Turner, Victor Witter (1974). *Social Dramas and Ritual Metaphors*. In: Turner, V.W.: *Dramas, Fields, and Metaphors. Symbolic Action in Human Society*. Ithaca and London: Cornell University Press, pp. 23–59.
- Tylor, Edward Burnett (1871). *The Origins of Culture*, Cloucester, Mass. 1970 (1958), originally published under the title *Primitive Culture*, Kapitel I - X, London: John Murray, p. 16.
- Ucko, Peter J. (1977). *Form in indigenous art. Schematization in the art of Aboriginal Australia and prehistoric Europe*, Australian Institute of Aboriginal Studies, Canberra.
- Uher, Johanna (1994). *Die Macht der Augen*. In: Max Liedtke (ed.) *Kulturrethologie. Über die Grundlagen kultureller Entwicklung*. München: Realis.
- V. Soden, Hans (1927). Article *Credo quia absurdum*. In: *Religion in Geschichte und Gegenwart*, 2nd edition, Vol.1. Tübingen: Mohr, p. 1741.
- Vaitl, Dieter (2006). *Blick ins Gehirn: Wie Emotionen entstehen*. Giessener Universitätsblätter 39; pp. 17–24.
- Valla, F. R. (1988). *Aspects du sol de l'abri 131 de Mallaha (Eynan)*. *Paéorient* 14, pp. 283–296.
- Vallois, H. V. (1961). *La Crane humaine magdalénien du Mas d'Azil*. In: *L'Anthropologie*, Vol 65, pp. 21–45.
- Van Gennep, Arnold (1909). *Les rites de passage : étude systématique des rites de la porte et du seuil, de l'hospitalité, de l'adoption, de la grossesse et de l'accouchement, de la naissance, de l'enfance, de la puberté, de l'initiation, de l'ordination, du couronnement, des fiançailles et du mariage, des funérailles, des saisons, etc.*, Paris: Nourry.
- Van Gennep, Arnold (1960). *The Rites of Passage*, Chicago: The University of Chicago Press, 1960.
- Vasari, Giorgio (1550). *Le Vite de' più eccellenti architetti, pittori, et scultori italiani, da Cimabue infino a' tempi nostri: descritte in lingua toscana da Giorgio Vasari, pittore arentino – Con una sua utile et necessaria introduzione a le arti loro*. Firenze: L. Torrentino.
- Verhoeven, Marc (2002). *Ritual and its Investigation in Prehistory*. In: Gebel, Hans Georg K., Bo Dahl Hermansen, and Charlott Hoffman Jensen (Eds.) *Magic Practices and Ritual in the Near Eastern Neolithic. Proceedings of a Workshop held at the 2nd International Congress on*

- the Archaeology of the Ancient Near East (ICAANE) Copenhagen University, May 2000. *Studies in Early Near Eastern Production, Subsistence, and Environment* 8. Berlin: Ex Oriente, pp. 5–40.
- Vlček, Emanuel (1993). *Forschungsgeschichte*. In: Vlček, Emanuel (Ed.), *Fossile Menschenfunde Weimar-Ehringsdorf*, Stuttgart: Theiss, pp. 56–63.
- Von den Steinen, Karl (1925). *Die Marquesaner und ihre Kunst: Studien über die Entwicklung primitiver Südseeornamentik nach eigenen Reiseergebnissen und dem Material der Museen. Vol. 1 Tatauierung: mit einer Geschichte der Inselgruppe und einer vergleichenden Einleitung über den polynesischen Brauch*. Berlin: Reimer.
- Von Hoegen, Jesko (2007). *Der Held von Tannenberg. Genese und Funktion des Hindenburg-Mythos (1914–1934)*. Köln: Böhlau.
- Wagner, Andreas (1996). *Gattung und „Sitz im Leben“*. Zur Bedeutung der formgeschichtlichen Arbeit Hermann Gunkels (1862–1932) für das Verstehen der sprachlichen Größe „Text“. In: Susanne Michaelis, Doris Tophinke (eds.): *Texte – Konstitution, Verarbeitung, Typik (= Edition Linguistik. Bd. 13)*. München et al.: LINCOM Europa, pp. 117–129.
- Wahl, J. and H. G. König (1987/1988). *Anthropologisch-traumatologische Untersuchung der menschlichen Skelettreste aus dem bandkeramischen Massengrab bei Thalheim, Kr. Heilbronn*. Fundber. Baden-Württemberg 12.
- Waites, Margaret C. (1920). *The Nature of the Lares and Their Representation in Roman Art*, *American Journal of Archaeology*, Vol. 24, No. 3 (July - Sept.), pp. 241 – 261.
- Walker, Benjamin F. (2004). *Graffiti Psychology: Why Vandals Strike*. <http://www.cleanlink.com/cp/article/Graffiti-Psychology-Why-Vandals-Strike-1131> posted on: 2/1/2004
- Walker, Mike, Sigfus Johnson, Sune Olander Rasmussen, Trevor Popp, Jørgen-Peder Steffensen, Phil Gibbard, Wim Hoek, John Lowe, John Andrews, Svante Björck, Les C. Cwynar, Konrad Hughen, Peter Kershaw, Bernd Kromer, Thomas Litt, David J. Lowe, Takeshi Nakagawa, Rewi Newnham und Jakob Schwander (2008). *Formal definition and dating of the GSSP (Global Stratotype Section and Point) for the base of the Holocene using the Greenland NGRIP ice core, and selected auxiliary records*. *Journal of Quaternary Science*, 24(1), pp. 3–17.
- Wallace, Alfred Russel (1858). *On the Tendency of Varieties to Depart Indefinitely from the Original Type*, In Darwin, Charles und Alfred Russel Wallace, *On the tendency of species to form varieties; and on the perpetuation of varieties and species by natural means of selection*. J. Proc. Linn. Soc. London, Zoology 3, pp. 53–62.
- Warburg, Aby (1939). *A Lecture on Serpent Ritual*. In: *Journal of the Warburg Institute* Vol. 2, No. 4 (Apr., 1939), pp. 277–292.
- Warburg, Aby M. (2010). *Manet's Déjeuner sur L'Herbe. Die vorprägende Funktion heidnischer Elementargottheiten für die Entwicklung modernen Naturgefühls*. In: *Werke in einem Band*. Berlin: Suhrkamp, p. 655 (pp. 647–659).
- Wason, Paul (2010). *The Neolithic cosmos of Çatalhöyük*. In: Hodder, Ian (ed.) *Religion in the emergence of Civilization. Çatalhöyük as a Case Study*. New York: Cambridge University Press, pp. 268–299.
- Watkins, Trevor (2002). *Memes, Memplexes and the Emergence of Religion in the Neolithic*. In: Gebel, Hans Georg K., Bo Dahl Hermansen, and Charlott Hoffman Jensen (eds.) *Magic Practices and Ritual in the Near Eastern Neolithic. Proceedings of a Workshop held at the 2nd International Congress on the Archaeology of the Ancient Near East (ICAANE) Copenhagen University, May 2000. Studies in Early Near Eastern Production, Subsistence, and Environment* 8. Berlin: Ex Oriente, pp. 41–47.
- Weingarten, Judith (1990). *Three Upheavals in Minoan Sealing Administration: Evidence for Radical Change*. In: *Aegean Seals*, pp. 105–114.
- Weiser (2000/1927). *Essay Berg*. In: *Handwörterbuch des deutschen Aberglaubens* Bd. 1. Berlin: Walter de Gruyter, pp. 1043–1056.
- Weismann, August (1892). *Aufsätze über Vererbung und verwandte Fragen*. Jena: Fischer.
- Wernert, Paul (1948). *Le culte des crânes à l'époque Paléolithique*. *Histoire Générale des Religions*, edited by M. Gorce and R. Mortier, Vol. 1, Paris: Quillet.

- White, Tim (2005). Cut marks on the Bodo cranium: a case of prehistoric defleshing. *American Journal of Physical Anthropology* 69: pp. 503–10.
- White, Tim D. (September 15, 2006). Once were Cannibals. *Evolution: A Scientific American Reader*. Chicago and London: The University of Chicago Press, pp. 308–346
- White, Tim D., Asfaw, B., DeGusta, D., Gilbert, H.; Richards, G. D., Suwa, G., Howell, F. C. (2003). Pleistocene *Homo sapiens* from Middle Awash, Ethiopia. *Nature* 423 (6491), pp. 742–747.
- Whittle, Alasdair (2000). Die ersten Bauern. In: Cunliffe, Bary (ed.) *Illustrierte Vor- und Frühgeschichte Europas*. Frankfurt/New York: Campus, pp. 159–160.
- Wiesemüller, Bernhard, Hartmut Rothe, Winfried Henke (2003). *Phylogenetische Systematik. Eine Einführung*. Berlin: Springer.
- Wilkins, J. (2010). Style, Symboling, and Interaction in Middle Stone Age Societies. *vis-à-vis: Explorations in Anthropology* 10(1): pp. 102–125.
- Willcock, M.M. (2003). Homer, in Hornblower, Simon, and Anthony Spawforth (eds.), *The Oxford Classical Dictionary*. Third Revised Edition. Oxford: Oxford University Press, 2003, pp.718–720.
- William Ewart Gladstone (1858). *Studies on Homer and the Homeric Age* (3 vols). London: Oxford University Press.
- William Ewart Gladstone (1870). *Juventus Mundi – The gods and men of ‘the heroic’ age* (2nd edition, revised). London: Macmillan and Co.
- Winckelmann, Johann Joachim (1756). *Von der Nachahmung der griechischen Werke in der Malerey und Bildhauer-Kunst, Zweyte vermehrte Auflage*. Dresden und Leipzig: Walther.
- Winckelmann, Johann Joachim (1764). *Geschichte der Kunst des Alterthums*. Dresden: Walther. English edition: *The history of ancient art (1849-73) translated by Giles Henry Lodge*. Boston, J.R. Osgood.
- Witzel, Michael (2012). *The Origins of the World’s Mythologies*. New York: Oxford University Press.
- Wong, Kate (April 15, 2015). Archaeologists Take Wrong Turn, Find World’s Oldest Stone Tools. *Scientific American*. Retrieved April 18, 2015.
- Wunn, Ina (1999). Bärenkult in urgeschichtlicher Zeit. Zur religiösen Deutung mittelpaläolithischer Bärenfossilien. *ZfR* 7/1999, pp. 3–23.
- Wunn, Ina (2002). *Die Evolution der Religionen*. Habilitationsschrift, UB/TIB Hannover. <http://edok01.tib.uni-hannover.de/edoks/e01dh04/473535297.pdf>
- Wunn, Ina (2005a). Aby Warburg. In: *The Encyclopedia of Religion*, Second Edition, pp. 9689–9691.
- Wunn, Ina (2005b). *Die Religionen in vorgeschichtlicher Zeit*. Stuttgart: Kohlhammer.
- Wunn, Ina (2008). Emil Bächler und der angebliche Höhlenbär-Kult. Über wissenschaftstheoretische Paradigmen und ihren Einfluss auf die Forschung. *Stalactite. Zeitschrift der Schweizerischen Gesellschaft für Höhlenforschung* 58/2, pp. 81–83.
- Wunn, Ina (2014a). Die Entstehung anthropomorpher Gottesvorstellungen. In: Andreas Wagner (ed.) *Göttliche Körper – Göttliche Gefühle. Was leisten anthropomorphe und anthropopathische Götterkonzepte im Alten Orient und Alten Testament?* Göttingen: Vandenhoeck & Ruprecht.
- Wunn, Ina (2014b). *Feldforschungen in Ostafrika*. Manuscript.
- Wunn, Ina (2016). The Crux of a Darwinian Approach on Evolution: What is Evolution, and what did evolve? In: Gerald Hartung/Matthias Herrgen (Eds.) *Interdisziplinäre Anthropologie, Jahrbuch 03/2015: Religion*. Wiesbaden Springer: pp. 83–98.
- Wunn, Ina and Davina Grojnowski (2013). The Religion of Ancient Malta – an Evolutionary Approach, in: G. Sfameni Gasparro, A. Cosentino, M. Monaca (Hg.), *Religion in the History of European Culture. Proceedings of the 9th EASR Conference and IAHR Special Conference, 14-17 September 2009, Messina, Biblioteca dell’Officina di Studi Medievali* 16. 1/2, Palermo 2013

- Zervos, C. (1935). *L' Art de la Mesopotamie de la fin du quatrieme millenaire au XVc siècle avant notre ere*, Paris, 1935.
- Zohary, M. (1973). *Geobotanical Foundations of the Middle East*. Stuttgart: Spinger
- Zrzavý, Jan, Hynek Burda, David Storch, Sabine Begall und Stanislav Mihulka (2009). *Evolution. Ein Lese-Lehrbuch*. Heidelberg: Springer Spektrum.
- Züchner, Christian (2000). *Felsbildkunst und Prähistorische Archäologie. Überlegungen zu einer verkannten Quellengattung*. Onlinepublikation des Institutes für Ur- und Frühgeschichte der Universität Erlangen. [http://www.uf.uni-erlangen.de/?page\\_id=1158](http://www.uf.uni-erlangen.de/?page_id=1158); seen on 2.1.2016.
- Züchner, Christian (1998) *Kulturhistorische Überlegungen zu den Felsbildern von Oukaimeden und Yagour im Hohen Atlas (Marokko)*. *Beiträge zur Allgemeinen und Vergleichenden Archäologie* 18, pp. 297–315.

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