

Copper axe from Hertinghausen (Kassel, Hesse, Germany), replicating a typical polished jadeite axe from the western Alpine tradition.

SKEUOMORPHS IN RITUAL PRACTICE:

MATERIAL REALITY AND THEORETICAL APPROACHES. AN INTRODUCTION TO THE BOOK

Ariane Ballmer

Daniel Neumann In this introductory essay, we explore the arts of imitation, simulation, mock-ups, and illusion, situating them within the broader framework of prehistoric archaeology. By examining the practice of pretending to be the same, while actually being different, we ask about the roles of these peculiar objects within the context of human-thing relations. The specific focus on skeuomorphs and their role in ritual practice makes it possible to discuss the means by which they are 'activated', especially their staging and their metaphorical capacity.

Skeuomorphs; ritual practice; ritual objects; staging; metaphors.

BACKGROUND

There exists ample evidence from European (pre-)history of artefacts that imitate things, while deliberately diverging from their originals. By this, we do not simply mean imitations in the sense of copies or counterfeits created to reproduce an original and make it accessible (e.g. Stockhammer, 2017). Rather, our concern here is with imitations that do not fulfil the original function of their prototype. This phenomenon manifests in various ways: through formal alterations, through making the objects significantly too small or too large, or through the selection of atypical materials that prevent the objects from serving their original purpose. While these objects strongly reference the essence of their prototypes, the differences can be pronounced – although this is not always the case.

In the past, terms such as 'icon', 'idol', and 'fetish' were applied to such objects, and scenarios involving object worship, votive offerings, symbolic currency, and token exchange have been proposed as explanations (cf. Eggert & Samida, 2016, pp. 124–126) – concepts primarily drawn from anthropological studies or ancient texts from the Mediterranean region. Although it can be challenging to further develop the interpretation of these objects, we believe that it is important to revisit this discussion. After all, despite their status as exceptional, marginal, and curious specimens in material culture, such objects are remarkably present in the archaeological record. The following selection of examples illustrates the diversity of this phenomenon.

Clearly observable as a phenomenon from the Neolithic onwards, this form of imitation first becomes particularly evident in the form of miniaturized everyday objects such as houses, furnishings, tools, animals and, especially, human figures made from clay (e.g. Bánffy, 1997; Bailey, 2005; Hansen, 2007; Mina, 2008; Becker, 2011; Meskell, 2015; Insoll, 2017). Whether they are interpreted as votive offerings or children's toys, they are clearly miniaturized imitations that were never intended to be confused with the prototypes. These miniatures do not constitute deceptive mock-ups pretending to be real, but rather they evidently function as representations of and placeholders for realia (see the chapter by Marangou in this book).

A large number of objects reference prototypes made from metal. Imitation of these objects were produced using other materials, especially stone (e.g. Frieman, 2012), a practice which is generally interpreted as evidence for people's fascination with the novel material, including its substantial properties and potential (Klassen, 2004; Kristiansen & Larsson, 2005, pp. 51–60; Hansen, 2013). The Åtte sword (Føvling Sogn, southwestern Jutland) serves as a prime example of the emulation of a weapon type originally made from metal (Kersten, 1986, pp. 67–68, no. 3924). The composite sword, with a total length of 46 cm, consists of multiple flint elements (tip, edges, and hilt), which were originally mounted on a wooden body (Fig. 1),

1 In the following, the term 'prototype' refers to the original object that served as the model.

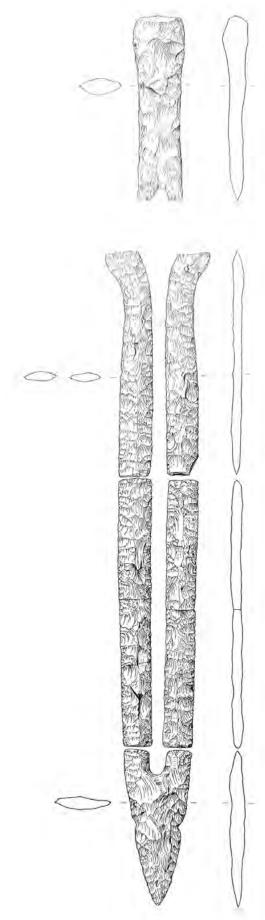


Fig. 1. Flint parts of the composite sword from Åtte (Føvling Sogn, southwestern Jutland). Total length: c. 46 cm.

imitating the shape of an Early Bronze Age short sword from the Bz A2 phase. The Atte sword is the best-preserved example of at least seventeen comparable specimens known from Denmark (Rønne, 1987, p. 87). Clearly, it did not provide its user with the same functionality as the bronze prototype, and it remains unknown whether and how it was used prior to its deposition. In any case, this example reflects a creative response to the emergence of metal objects, by adapting established technological traditions to new forms. It is generally assumed that copper and bronze objects were relatively rare when metal objects were first introduced, especially in geographically peripheral areas (e.g. Rosenstock et al., 2016; Iversen, 2017, pp. 365-366, 370-371; Klimscha & Neumann, 2022, pp. 385-391). Consequently, the Åtte sword should also be viewed as evidence of the sociocultural impact of early metal objects in Northern Europe, where fully developed metallurgy was established relatively late, around 1700 BC (Vandkilde, 2014; Iversen, 2017, pp. 368-369; Nørgaard et al., 2019). Although quite rare, there are also cases in which stone prototypes were replicated in metal. One such example is the Late Neolithic copper axe from Hertinghausen (Kassel, Hesse, Germany) (Fig. 2), which replicates a typical polished jadeite axe from the western Alpine tradition (Kibbert, 1980, p. 61, no. 18; Pétrequin et al., 2012; Görner & Sattler, 2016).



Fig. 2. Copper axe from Hertinghausen (Kassel, Hesse, Germany), replicating a typical polished jadeite axe from the western Alpine tradition. Length: 12.6 cm.



Fig. 3. Miniature Fresach-type copper axes and a dagger from depositions at Pigloner Kopf, South Tyrol (Italy).

In other cases, imitations are made from the same material as their prototypes but significantly differ in size. The miniature copper axes of the Fresach-type have an average length of approximately 10 cm (Fig. 3) (Mayer, 1977, pp. 23–24; Neumann, 2015, p. 104, fig. 22). Barely functional as tools or weapons, the closest morphological parallels to them are found in Late Copper Age axes, particularly the shaft-hole axes of the Kozarac and Bányabükk/Baniabic/Vâlcele groups (Bátora, 2003; Hansen, 2009). The discovery and examination of the site at Pigloner Kopf in the Non Valley, South Tyrol (Italy) have made it possible to scientifically confirm the chronological assignment of these miniature axes through AMS dating of charcoal remains found on the artefacts' surfaces (Oberrauch, 2019; 2000; 2024).

The Bronze Age miniature swords, which are known above all from the Danish Isles, provide another striking example of the miniaturization of weapons. Although formally resembling contemporary sword types, they measure only a few centimetres in length. Interestingly, they are exclusively associated with Montelius periods IV and V of the Nordic Bronze Age (Notroff, 2015). They emerged around 1100 BC, at a time when burial practices were shifting from inhumation to cremation (Reiter et al., 2021; Sørensen & Rebay-Salisbury, 2023). This change is likely linked to a new conception of the afterlife, according to which the transition no longer required the physical integrity of the deceased or of the grave furnishings. This shift also opened the possibility of providing the deceased with placeholders for original grave goods, such as miniatures.

The extraordinary swords of the Plougrescant-Ommerschans-type are perhaps the most prominent and well-known example of the opposite approach, in which objects were supersized (see Amkreutz & Fontijn in this book). In most cases, creating giant versions of ordinary objects must have been technologically challenging, and only a few examples of this practice are known. The large Jászladány-type axe from the Early Copper Age (5th millennium BC) found in Osijek, Croatia (Fig. 4), is an impressive early example of this practice (Jovanović, 1979, pp. 40–41, pl. II). Both the axe head

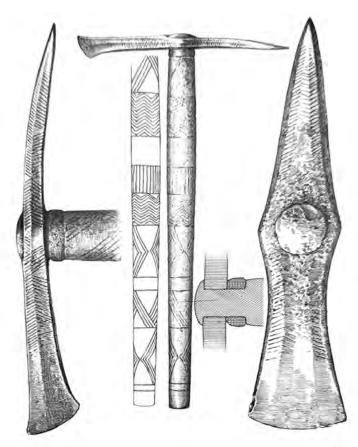


Fig. 4. Jászladány-type axe from the Early Copper Age (5th millennium BC) from Osijek, Croatia. Different scales. Height of axe with shaft: c. 76 cm; length of blade: c. 40 cm.

and shaft are solidly cast from pure copper and weigh approximately 18 kg in total. Not only must the effort involved have been considerable, but also the quantity of material resources used, enough to produce ten to twenty standard-sized shaft-hole axes.

In addition to miniaturizing and supersizing, mock-ups were also created using atypical materials, whose properties prevented the objects from fulfilling their original function. Extraordinary burials and hoards from the Late Copper and Early Bronze Ages in southeastern Europe have yielded weapons made from precious metals (Primas, 1988; Hansen, 2001; 2009). Among these are the gold daggers and silver axes from the Late Copper Age/Bronze Age tumulus at Mala Gruda on the Adriatic coast of Montenegro (Primas, 1996) and the Perşinari hoard in southern Romania (Vulpe, 1995; Popescu, 2020), which are notable examples of the practice of fashioning weapons from unusual materials. A series of miniature axes made from clay (instead of copper) from the late 4th and early 3rd millennia BC in central and southeastern Europe (Maran, 2008, pp. 178–181; Serengély, 2008a, pp. 62–63; 2008b, pp. 20–21) further illustrates that these objects can differ from their prototypes in both size and material.

IMITATIONS, SIMULATIONS, MOCK-UPS, AND ILLUSIONS: TERMINOLOGICAL AND CONCEPTUAL CONSIDERATIONS IN THE DISCUSSION OF SKEUOMORPHS

The exemplars presented above can best be categorised as skeuomorphs. Skeuomorphs (a neologism derived from the Greek $\sigma\kappa\epsilon\hat{u}$ or [skeuos] = container or tool, and $\mu\rho\rho\phi\dot{\eta}$ [morphé] = shape) are physical objects that reference the shape or style of other objects, primarily through visual similarities in form. The differences from the original or prototype are evident in the skeuomorph's size, texture, material, and method of production, although the degree of similarity or difference between the original and the skeuomorph can vary. These artefacts formally mimic prototypical objects by emphasising their specific features, yet they do not (or do not entirely) fulfil the original function (e.g. Conway, 2024; for an overview of the diverse understandings of skeuomorphism in research history, see Frieman, 2012, pp. 9–16). Despite the fact that they strongly reference existing material

culture, skeuomorphs are not perceived as 'regular' objects, unlike their prototypes. It is not uncommon for skeuomorphs to be unique pieces or to occur in very small numbers, although other skeuomorphs are found in large numbers, such as certain miniature clay figurines (Marangou in this book) or the Armorican socketed axes from the Early Iron Age (Cabanillas de la Torre & Gomez de Soto in this book).

We would like to integrate the terms 'imitation', 'simulation', 'mock-up', and 'illusion' into the discussion, as in some cases they may provide a more accurate description of the circumstances. While these terms are not fully congruent with the concept of skeuomorphism, they do overlap in certain areas.

Imitations (Latin imitatio = replication; mimicking) are not simply copies, in the sense of a precise reproduction of many aspects of an object, but they also include objects that deliberately pretend to be something else, while remaining consciously incomplete. The concept of imitation also encompasses joking and cynical or malicious mocking. While a skeuomorph imitates parts of a prototype, most imitations are not skeuomorphs. Rather, imitations can be fully functional replicas of originals, as is often seen in material culture (e.g. Biehl & Rassamakin, 2008). Strictly speaking, for instance, imitations of exclusive vessels (whether made from the same or different materials) are not necessarily skeuomorphs (e.g. Gill, 1986; Vickers, 1989), since these copied vessels typically retain the same functional properties as the prototypes.

The concept of **simulation** (Latin simulatio = appearance, disguise, deception) is more complex. Colloquially, the term refers to the imitation of an original process, with the aim of creating a pretence, but Jean Baudrillard's theory of simulation offers a deeper socio-philosophical perspective on this phenomenon (Baudrillard, 1981). He defines simulations as imitations of the operation of a real-world process or system, and simulacra as copies of things that never existed or that no longer have an original. In Simulacra and Simulacrum, Baudrillard distinguishes four stages in the development of the image: the first reflects a deep, generally accepted reality; the second is a recognisable copy that masks and distorts this deep reality; the third masks the absence of deep reality; and the fourth is pure simulacrum, where the simulacrum has no relation to any reality whatsoever. 'The simulacrum is never that which conceals the truth - it is the truth which conceals that there is none. The simulacrum is true' (Baudrillard, 1981, p. 9; our translation). Consequently, drawing on the example of the Atte sword mentioned earlier, Tim F. Sørensen argues that such objects should not be seen as 'copies of originals', but rather as 'original copies' (Sørensen, 2012, pp. 57-59). He claims that the composite swords made of flint do not demonstrate the inability to create bronze weapons from stone, but instead reflect attempts by Early Bronze Age manufacturers to distance themselves from both bronze craftsmanship and the formal language of the flint tradition. In this sense, Sørensen ascribes a higher degree of independence to these flint/wood swords, understanding them, in Baudrillard's terms, as simulacra – copies without an original that exist independently of the original meaning.

In contrast, a **mock-up** also pretends to be something, but is conceived from the outset as a dummy, intended to hold a place, either for the purpose of practicing something or to deceive.

Finally, an *illusion* (from the Latin *illusio* = irony, deception, or distorted imagination) is a distortion of perception, often leading to the misinterpretation of sensory information. Illusions can occur across various sensory modalities, including sight, hearing, touch, and smell, and can either be created intentionally or occur naturally. Visual illusions, for example, can make objects appear to the eye to have a different size or shape than they actually do, or they can create the illusion of movement where none exists. Certain skeuomorphs produce effects that create illusions, such as the rock art presented by Serge Cassen and Valentin Grimaud (in this book), which can indeed be understood as illusory. From our perspective, the engravings appear to depict axes, although in reality they may represent squids. It is not only the detailed research and deep analysis that has brought the squids to light, but also the second glance to that illusions typically elicit.

Deception occurs when the non-functionality of an object is not immediately apparent. We distinguish between skeuomorphs that clearly serve as references and whose non-functionality is obvious (such as the Late Neolithic/Copper Age miniature axes made from clay, as mentioned above) and those that are intentionally designed to conceal their non-functionality at first glance (such as the Early Iron Age socketed axes presented by Cabanillas de la Torre & Gomez de Soto in this book).

THE ACTIVATION OF SKEUOMORPHS AS RITUAL OBJECTS: A HYPOTHESIS AND ITS IMPLICATIONS

To explore the social context and significance of skeuomorphism, we will examine the relevant objects within their ritual contexts, drawing on insights from other disciplines, particularly ritual studies, social anthropology, and sociology.

While the production of skeuomorphs may have been motivated by various considerations and served different purposes (Frieman, 2010, pp. 36–38, tab. 1; 2012, pp. 9–16, tab. 15), this discussion focuses on their potential as ritual objects. Ritual objects are items used as utensils, devices, or implements in ceremonial rituals. They hold significance in the cognitive, emotional, and sensory experiences of the participants. In order for objects to be suitable for ritual use, they sometimes undergo an authentication process (Brosius et al., 2013, p. 13; Meier & Zotter, 2013, p. 139). Once they attain the status of ritual objects, they are permanently separated from non-ritual use. As ritual devices, they were never intrinsically effective. Instead, their meaning and 'power' resulted from the active attribution of meaning in the process of their creation and use in the context of ritual performances.

It is certainly striking that, in the archaeological record, skeuomorphs are rarely associated with everyday contexts. On the contrary, they are often separated from them. This separation typically manifests in spatial terms, such as the deposition of skeuomorphs in special pits, at ceremonial sites, like sanctuaries or communal gathering places, or in burials. For instance, the curious wood/flint sword from Atte was found in a burial mound, alongside a stone axe (Kersten, 1986, pp. 67-68, no. 3924). Likewise, the miniature Fresach copper axes are found exclusively in the eastern part of the Alps, mostly in the form of isolated single finds (possibly depositions) or within hoards. Interestingly, few other metal finds dating to the same period are known from the area of distribution of the miniature Fresach axes in the 3rd millennium BC (Oberrauch, 2024, p. 2, fig. 1). While there is a gap in knowledge with regard to many skeuomorphs found in unknown contexts, the majority of miniaturized and supersized weapons, as well as weapons made from precious metals, dating from the Bronze and Iron Ages, have been discovered in hoards and burials.

The deliberate and obvious separation of these objects from everyday contexts connects to Catherine Bell's ritual theory, in which the ostentatious setting apart of certain social practices plays a key role (Bell, 1992; 1997, pp. 90–91). In many cases, the special handling of the objects can be observed: from how they were manufactured to the fact that they were created in a way that made them unusable for their original purpose to the distinctive way in which they were displayed and disposed of. These special forms appear to have been subject to very specific treatment. Ritualised practices involving material culture are typically not performed with insignificant objects. Therefore, even if we run the risk of engaging in circular reasoning (i.e. the presence of skeuomorphs points to a ritual context, while the ritual context indicates that the skeuomorphs are significant objects), it is clear that we must attribute a greater social significance to the skeuomorphs in practice.

ACTIVATION THROUGH STAGING AND MISE-EN-SCÈNE

It must be assumed that skeuomorphs were displayed within ceremonial rituals, made visible by various means, brought to attention, and emphasised for inspection (Rappaport, 1999, p. 140; Coupaye, 2013, p. 278). The staging of objects in ritual performances involves the intentional arrangement and placement of various items, artefacts, or props within a ritual space. This enhances the symbolic meaning, aesthetic appeal, legitimacy, and efficacy of the ritual (Bell, 1992, pp. 74, 90). This approach is common across diverse cultural and religious traditions, and it plays a significant role in shaping the sensory experience and narrative of the ritual for both participants and observers. Through the deliberate arrangement and manipulation of ritual objects, participants and observers engage in a symbolic dialogue with both the natural and supernatural worlds, as well as the community.

The archaeological findings discussed in this book show clear signs of staging, in the sense that the relevant objects were selectively arranged within distinct frameworks – whether through the placement of figurines in specific scenes, the deposition of bronze objects in graves or hoards, or the creation of images on stone monuments. This observation is significant because it reveals the intentional handling of these objects, as well as highlighting the importance of context in the functioning of skeuomorphs. Staged within these ceremonial ritual performances, the skeuomorphs likely played a role in co-creating and conveying content related to collective identity and universal realities, such as the mythical past of a community (e.g. Ballmer, 2015, pp. 74–79).

ACTIVATION THROUGH METAPHORS: SAMENESS, DIFFERENCE, AND TENSION

Skeuomorphs should be considered material metaphors, that is, physical objects that refer to other things by means of an obvious citation of shape or style. Similarities and differences in form suggest which aspects of the original are to be interpreted via the skeuomorph (Frieman, 2012, pp. 11–13). As we have seen, the staging of objects is a crucial means for inducing individuals to inspect and consciously engage with them. In the case of skeuomorphs, staging, among other things, leads to an aesthetic experience of resemblance, i.e. the perception of similarities and redundancies (Bateson, 1973; Harman, 2018, p. 73). In rituals, the awareness of difference, in turn, plays a fundamental role in both creating cognitive tension and resolving it (Coupaye, 2013, pp. 278–284). Roy A. Rappaport (1999, p. 150) suggests that the substantial nature of the representation is as important to its success as its metaphorical characteristics are. Unlike the prototype, the metaphor has the ability to create tension.

Metaphors rely on specific knowledge of references, shaped by cultural values and material practices. Moreover, the metaphorical effect is not static, as it does not merely depend on resemblance. Instead, 'material metaphors are neither straightforward nor necessarily factually imitative; they rely on a play of similarity or distance, likeness and difference between index and prototype' (Ortman, 2000, p. 87). Thus, the metaphor unfolds its power through a dynamic process, working in an interplay of similarity and difference across various aspects between related objects. It is in this field of tension - where the experience of difference is both recognised and corrected - that cultural anthropology and ritual studies identify a kind of 'logic of magical action' (Tambiah, 1973; Taussig, 1993, p. 42; Rappaport, 1999, p. 149). Considering skeuomorphism as a specific vehicle for metaphorical relationships, the implications of its context are the most important aspect. It must be assumed that skeuomorphs were carefully conceptualised and manufactured with high awareness of their metaphorical potential and that just the right degree of resemblance and variation was applied to make the object an effective metaphor. Conversely, their discarding can be understood as the abolition of the relationship of metaphorical tension.

SKEUOMORPHS AND BEYOND. CASE STUDIES FROM PREHISTORIC EUROPE: ABOUT THE BOOK

At the beginning of this essay, we introduced a series of objects in order to exemplify the initial situation: objects that imitate originals but that cannot be used for their original purpose, primarily due to their size or the choice of material from which they are made. However, the five case studies in this book take a much freer approach and expand on the issue. They explore mock-ups of tools no longer in use, the creation of oversized weapons, miniaturized real-life scenes, objects, and creatures in clay, optical illusions in rock art, and the adoption of foreign forms as vehicles for indigenous iconographic programs. Not only do these case studies involve different material expressions and practices, but they also employ a variety of theoretical and interpretive approaches. Chronologically, the case studies span from the Neolithic to the Early Iron Age – roughly from the end of the 7th millennium to around 500 BC - and feature objects from across Europe, including the French Atlantic coast, Brittany, the Netherlands, the Alpine region, southeastern Europe, the Balkan Peninsula, and the Aegean, extending as far as Egypt.

Serge Cassen and Valentin Grimaud explore the motif of the 'sleeved axehead,' an iconography that was widespread from the 5th millennium BC in northwestern France. Employing scientific expertise and keen insight, they challenge the optical illusion of the Neolithic everyday tool, convincingly reinterpreting it as a giant squid. Christina Marangou examines Neolithic and Early Bronze Age figurines from northern Greece and neighbouring regions, discussing their role as imitations and miniature models of humans, animals, and houses. Focusing on the archaeological context of these skeuomorphs, she emphasises the polyvalent character and significance of these figurines and models, as well as the variety of practices in their use.

Luc Amkreutz and David Fontijn present the Bronze Age hoard from Ommen (Overijssel, the Netherlands), famous for its spectacular oversized sword. This mega-sword is a representative of the Plougrescant-Ommerschans-type, which includes objects that are too large, heavy, and unwieldy to serve the same purpose as their prototypes. The symbolic significance of these objects seems obvious, especially since they were deposited in wetlands. Flemming Kaul, Karin Margarita Frei, and Samantha S. Reiter

follow the single-edged razor with a handle shaped like a horse's head, tracing its journey from the eastern Mediterranean to the Nordic Circle, where it was widely distributed during the Bronze Age. The case they examine might not be an example of skeuomorphism in the strict sense, but rather a complex simulation in which originally foreign tools were transformed into bearers of indigenous iconography - or as the authors put it 'an inventive reinterpretations or creative processes of iconographic translations'. Finally, Gadea Cabanillas de la Torre and José Gomez de Soto take us back to northwestern France, specifically to Armorica, the primary region for Early Iron Age socketed axe hoards. The axes seem to have been formally inspired by Late Bronze Age socketed axes, but lack their original functionality. In the Early Iron Age, these axes were manufactured in large quantities and carefully stored away: many have been discovered in Brittany and Normandy. While the authors acknowledge that the meaning of these objects and the practice of hoarding them remains unclear, they convincingly interpret this phenomenon as an intentional attempt by Early Iron Age peoples in Brittany and Normandy to connect with their past, at a time when change required legitimation.

CONCLUSION

It is not always clear to what extent illusory and deceptive effects were intentionally created by the manufacturers of skeuomorphs and to what extent these effects are partly a result of modern misunderstandings. This issue arises, for example, in the case of art that makes an observer think of an axe when they are looking at a picture that actually represents a squid (see Cassen & Grimaud in this book). Did the stone carvers intend to obscure the squid's true nature for reasons that remain unclear? Or were the squids clearly recognisable to the Neolithic eye, while our preconceived notions and sometimes limited imagination prevent us from identifying them? In their contribution, Gadea Cabanillas de la Torre and José Gomez de Soto wisely note that the deception by Armorican Early Iron Age axe manufacturers, who imitated Bronze Age axes, has been entirely effective to this day, as these objects have long been accepted as Late Bronze Age tools by modern archaeologists.

The essays in this book not only reveal the many facets of skeuomorphism, but also propose possible scenarios for the effectiveness of these objects within their social context. Beyond the process of manufacture itself, which would certainly have had extraordinary significance in all the cases presented, it is the objects' roles in social relations – personal, political, supernatural, and in life and the afterlife – that transformed them into highly significant vehicles of worldviews, cosmology, and the mythical past. In some cases, their appearance may have already provoked confusion, distraction, or deception – prompting observers to take a second glance. As is clear, skeuomorphs were powerful primarily through their stimulation ofmetaphorical dynamics, which reveal the complexity of object–human relationships.

BIBLIOGRAPHY

Ballmer, A. (2015). Topografie bronzezeitlicher Deponierungen. Fallstudie Alpenrheintal. Verlag Dr. Rudolf Habelt GmbH.

Bánffy, E. (1997). Cult objects of the neolithic Lenguel culture. Connections and interpretation. Archaeolingua Alapítvány.

Bateson, G. (1973). Style, Grace, and Information in Primitive Art. In A. Forge (Ed.), *Primitive Art and Society* (pp. 235–255). Oxford University Press.

Bátora, J. (2003). Kupferne Schaftlochäxte in Mittel-, Ost- und Südeuropa. (Zu Kulturkontakten und Datierung – Äneolithikum/Frühbronzezeit). Slovenská Archeológia, 51(1), 1–38.

Baudrillard, J. (1981). Simulacres et simulation. Éditions Galilée.

Bailey, D. W. (2005). Prehistoric Figurines. Representation and Corporeality in the Neolithic. Routledge. https://doi.org/10.4324/9780203392454

Becker, V. (2011). Anthropomorphe Plastik der westlichen Linearbandkeramik. Verlag Dr. Rudolf Habelt GmbH.

Bell, C. (1992). Ritual Theory, Ritual Practice. Oxford University Press.

Bell, C. (1997). Ritual. Perspectives and Dimensions. Oxford University Press. https://doi.org/10.1093/oso/9780195110517.001.0001

Biehl, P., & Rassamakin, Y. (Eds.). (2008). *Import and Imitation in Archaeology*. Verlag Beier & Beran.

Brosius, C., Michaels, A., & Schrode, P. (2013). Ritualforschung heute – ein Überblick. In C. Brosius, A. Michaels, & P. Schrode (Eds.), Ritual und Ritualdynamik. Schlüsselbegriffe, Theorien, Diskussionen (pp. 9–24). Vandenhoeck & Ruprecht. Conway, S. (2024). Insights from

obsolescence: The interpretive potential of skeuomorphs. *Journal of Material Culture*, 29(2), 141–157. https://doi.org/10.1177/13591835241248322

Coupaye, L. (2013). Growing artefacts, displaying relationships: yams, art and technology amongst the Nyamikum Abelam of Papua New Guinea. Berghahn Books. https://doi.org/10.3167/9780857457332

D'Alleva, A. (2001). Captivation, Representation, and the Limits of Cognition. Metaphor and metonymy in Tahitian tamau. In C. Pinney & N. Thomas (Eds.), Beyond aesthetics. Art and the technologies of enchantment (pp. 79–96). Routledge. https://doi.org/10.4324/9781003084808-5

Eggert, M. K. H., & Samida, S. (2016). Mensch und Dinge. Anmerkungen zum Materialitätsdiskurs. In H. Kalthoff, T. Cress, & T. Röhl (Eds.), Materialiät. Herausforderungen für die Sozial- und Kulturwissenschaften (pp. 123–140). Wilhelm Fink Verlag. https://doi.org/10.30965/9783846757048_008

Frieman, C. (2010). Imitation, identity and communication: The presence and problems of skeuomorphs in the Metal Ages. In: B. V. Eriksen (Ed.), *Lithic technology in metal using societies*. Proceedings of a UISPP Workshop, Lisbon, September 2006 (pp. 33–44). Jutland Archaeological Society; Aarhus University Press.

Frieman, C. (2012). Innovation and Imitation: Stone Skeuomorphs of Metal from 4th–2nd Millennia BC Northwest Europe. BAR Publishing. https://doi.org/10.30861/9781407309521

Gill, D. (1986). Classical Greek Fictile Imitations of Precious Metal Vases. In M. J. Vickers (Ed.), Pots and pans: A Colloquium on Precious Metals and Ceramics in the Muslim, Chinese, and Graeco-Roman Worlds, Oxford 1985 (pp. 9–30). Oxford University Press.

Görner, I., & Sattler, A. (2016). Frühes Kupfer in Hessen – Ein Kupferbeil aus Hertingshausen. In Museumslandschaft Hessen Kassel (Ed.), *Unter unseren* Füßen. Altsteinzeit bis Frühmittelalter (pp. 54–55). Michael Imhof Verlag.

Hansen, S. (2001). Waffen aus Gold und Silber während des 3. und frühen 2. Jahrtausends v. Chr. in Europa und Vorderasien. In H. Born & S. Hansen (Eds.), *Helme* und Waffen Alteuropas (pp. 11–59). Verlag Sammlung Guttmann bei P. von Zabern.

Hansen, S. (2007). Bilder vom Menschen der Steinzeit. Untersuchungen zur anthropomorphen Plastik der Jungsteinzeit und Kupferzeit in Südosteuropa. Philipp von Zabern Verlag.

Hansen, S. (2009). Kupferzeitliche Äxte zwischen dem 5. und dem 3. Jahrtausend in Südosteuropa. *Analele Banatului*, 17, 141–160.

Hansen, S. (2013). Innovative Metals: Copper, Gold and Silver in the Black Sea Region and the Carpathian Basin during the 5th and 4th Millennium BC. In St. Burmeister, S. Hansen, M. Kunst, & N. Müller-Scheeßel (Eds.), Metal Matters. Innovative Technologies and Social Change in Prehistory and Antiquity (pp. 137–170). Verlag Marie Leidorf GmbH.

Harman, G. (2018). Object-Oriented Ontology. *A New Theory of Everything*. Pelican Books.

Insoll, T. (Ed.). (2017). The Oxford Handbook of Prehistoric Figurines. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199675616.001.0001

Jovanović, B. (1979). Rudarstvo i metalurgija eneolititskog perioda Jugoslavije. In Đ. Basler, A. Benac, S. Gabrovec, M. Garašanin, N. Tasić, & K. Vinski-Gasparini (Eds.), *Praistorija Jugoslavenskih Zemalja. III, Eneolitsko Doba* (pp. 27–54). Akademija Nauka i Umjetnosti Bosne i Hercegovine.

Iversen, R. (2017). Big-Men and Small Chiefs: The Creation of Bronze Age Societies. *Open Archaeology* 3(1), 361–375. https://doi.org/10.1515/opar-2017-0023

Kersten, K. (1986). Die Funde der älteren Bronzezeit des nordischen Kreises in Dänemark, Schleswig-Holstein und Niedersachsen. Bd. 8: Ribe Amt. Karl Wachholtz Verlag.

Kibbert, K. (1980). Die Äxte und Beile im mittleren Westdeutschland I. Prähistorische Bronzefunde IX(10). Verlag C. H. Beck.

Kiernan, P. (2009). Miniature Votive Offerings in the Roman North-West. Verlag Franz Philipp Rutzen.

Klassen, L. (2004). Jade und Kupfer. Untersuchungen zum Neolithisierungsprozess im westlichen Ostseeraum unter besonderer Berücksichtigung der Kulturentwicklung Europas 5500–3500 BC. Aarhus University Press.

Klimscha F., & Neumann, D. (2022). A longue durée perspective on technical innovations in the Late Mesolithic and Early Neolithic of the North European Plain. In F. Klimscha, T. Terberger, D. Raemaekers, M. Heumüller, & H. Peeters (Eds.), Stone Age Borderland Experience. Neolithic and Late Mesolithic Parallel Societies in the North European Plain (pp. 377–401). Verlag Marie Leidorf GmbH. https://doi.org/10.11588/diglit.66745.28

Kristiansen, K., & Larsson, T. B. (2005). The Rise of Bronze Age Society. Travels, Transmissions and Transformations. Cambridge University Press. https://doi.org/10.5860/choice.43-6621

Maran, J. (2008). Zur Zeitstellung und Deutung der Kupferäxte vom Typ Eschollbrücken. In F. Falkenstein, S. Schade-Lindig, & A. Zeeb (Eds.), Kumpf, Kalotte und Pfeilschaftglätter. Zwei Leben für die Archäologie. Gedenkschrift für Annemarie Häußer und Helmut Spatz. (pp. 173–187). Verlag Marie Leidorf GmbH. Mayer, E. F. (1977). Die Äxte und Beile in Österreich. Prähistorische Bronzefunde IX(9). Verlag C. H. Beck.

Meier, T., & Zotter, A. (2013). Ritualgegenstände und Materialität. In C. Brosius, A. Michaels, & P. Schrode (Eds.), Ritual und Ritualdynamik. Schlüsselbegriffe, Theorien, Diskussionen (pp. 135–143). Vandenhoeck & Ruprecht. https://www.utb.de/doi/epdf/10.36198/9783838538549-135-143

Meskell, L. (2015). A society of things: animal figurines and material scales at Neolithic Çatalhöyük. In L. Foxhall & S. Barfoed (Eds.), Miniaturization. *World Archaeology*, 47(1), 6–19. https://doi.org/10.1080/00438243.2014.991800

Mina, M. (2008). Anthropomorphic figurines from the Neolithic and Early Bronze Age Aegean. Gender dynamics and implications for the understanding of Early Aegean Prehistory. BAR Publishing. https://doi.org/10.30861/9781407302416

Neumann, D. (2015). Landschaften der Ritualisierung. Die Fundplätze kupferund bronzezeitlicher Metalldeponierungen zwischen Donau und Po. DeGruyter. https://doi.org/10.1515/9783110311235

Nørgaard H. W., Pernicka E., & Vandkilde H. (2019). On the trail of Scandinavia's early metallurgy: Provenance, transfer and mixing. *PLoS ONE*, 14(7), Article e0219574. https://doi.org/10.1371/journal.pone.0219574

Notroff, J. (2015). The differentiation of identity: A hierarchy of symbols? Initial thoughts on the informative potential of the Nordic Bronze Age miniature swords. In P. Suchowska-Ducke, S. Scott Reiter, & H. Vandkilde (Eds.), Forging Identities. The Mobility of Culture in Bronze Age Europe. Report from a Marie Curie Project 2009–2012 with Concluding Conference at Aarhus University, Moesgaard 2012. Volume 1 (pp. 93–99). BAR Publishing. https://doi.org/10.30861/9781407314334

Oberrauch, H. (2019). Zum Ursprung der Brandopferplätze. In S. Hye & U. Töchterle (Eds.), *UPIKU:TAUKE. Festschrift für Gerhard Tomedi zum 65. Geburtstag* (pp. 435–456). Verlag Dr. Rudolf Habelt GmbH.

Oberrauch, H. (2000). Ein Depotfund von vier Kupferäxten am Pigloner Kopf (Südtirol). Archäologisches Korrespondenzblatt, 30(4), 481–498.

Oberrauch, H. (2024). Copper Age Metallurgy in the south-eastern Alps. The production, trading, and ritual offering of miniaturised copper shaft-hole axes. *Der Anschnitt, Beiheft, 53,* 1–26.

Ortman, S. G. (2000). Conceptual Metaphor in the Archaeological Record: Methods and an Example from the American Southwest. *American Antiquity*, *65*(4), 613–645. https://doi.org/10.2307/2694419

Pétrequin, P., Cassen, S., Errera, M., Klassen, L., Sheridan, A., & Pétrequin, A. M. (Eds.). (2012). Jade: Grandes haches alpines du Néolithique européen: Ve au IVe millénaires av. J.-C. Presses Universitaires de Franche-Comté.

Popescu, A.-D. (2020). Prestige Artefacts during the Bronze Age: The Perşinari Hoard and the Precious Metal Weapons in the Area between the Middle Danube and Mesopotamia. In J. Maran, R. Bǎjenaru, S.-C. Ailincǎi, A.-D. Popescu, & S. Hansen (Eds.), Objects, Ideas and Travelers. Contacts between the Balkans, the Aegean and Western Anatolia during the Bronze and Early Iron Age. Volume to the memory of Alexandru Vulpe. Proceedings of the Conference in Tulcea, 10–13 November, 2017 (pp. 221–250). Verlag Dr. Rudolf Habelt GmbH.

Primas, M. (1988). Waffen aus Edelmetall. Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz, 35(1), 161–185. https://doi.org/10.11588/jrgzm.1988.1.83145 Primas, M. (1996). Velika Gruda I. Hügelgräber des frühen

3. Jahrtausends v. Chr. im Adriagebiet – Velika Gruda, Mala Gruda und ihr Kontext. Verlag Dr. Rudolf Habelt GmbH.

Rønne, P. (1987). Flintægsværd fra bronzealderen. Aarbøger for Nordisk Oldkyndighed og Historie, 85–96.

Rappaport, R. A. (1999). Ritual and religion in the making of humanity. Cambridge University Press. https://doi.org/10.1017/CBO9780511814686

Reiter, S. S., Møller, N. A., Nielsen, B. H., Bech, J.-H., Olsen, A.-L. H., Jørkov, M. L. S., Kaul, F., Mannering, U., & Frei, K. M. (2021). Into the fire: Investigating the introduction of cremation to Nordic Bronze Age Denmark: A comparative study between different regions applying strontium isotope analyses and archaeological methods. *PloS One*, *16*(5), Article e0249476. https://doi.org/10.1371/journal.pone.0249476

Rosenstock, E., Scharl, S., & Schier, W. (2016). Ex oriente lux? – Ein Diskussionsbeitrag zur Stellung der frühen Kupfermetallurgie Südosteuropas. In M. Bartelheim, B. Horejs, & R. Krauß (Eds.), Von Baden bis Troia. Ressourcennutzung, Metallurgie und Wissenstransfer. Eine Jubiläumsschrift für Ernst Pernicka (pp. 59–122). Verlag Marie Leidorf GmbH.

Serengély, T. (2008a). Endneolithische Siedlungsstrukturen in Oberfranken I. Wattendorf-Motzenstein: eine schnurkeramische Siedlung auf der Nördlichen Frankenalb. Studien zum dritten vorchristlichen Jahrtausend in Nordostbayern. Verlag Dr. Rudolf Habelt GmbH.

Serengély, T. (2008b). Die Grabungskampagnen 2005–2006 am Motzenstein bei Wattendorf – ein zusammenfassender Überblick der Ergebnisse. In J. Müller & T. Serengély (Eds.), Endneolithische Siedlungsstrukturen in Oberfranken II. Wattendorf-Motzenstein: eine schnurkeramische Siedlung auf der Nördlichen Frankenalb. Naturwissenschaftliche Ergebnisse und Rekonstruktion des schnurkeramischen

Siedlungswesens in Mitteleuropa (pp. 11–27). Verlag Dr. Rudolf Habelt GmbH.

Sørensen, T. F. (2012). Original copies: seriality, similarity and the simulacrum in the Early Bronze Age. *Danish Journal of Archaeology*, 1(1), 45–61. https://doi.org/10.1080/21662282.2012.750446

Sørensen, M. L. S., & Rebay-Salisbury, K. (2023). Death and the body in Bronze age Europe: From inhumation to cremation. Cambridge University Press. https://doi.org/10.1017/9781009247429

Stockhammer, P. W. (2017). The Dawn of the Copy in the Bronze Age. In C. Forberg & P. W. Stockhammer (Eds.), *The Transformative Power of the Copy: A Transcultural and Interdisciplinary Approach* (pp. 169–189). Heidelberg University Publishing. https://doi.org/10.17885/heiup.195. c1634

Tambiah, S. J. (1973), Form and meaning of magical acts: A point of view. In R. Horton & R. Finnegan (Eds.), Modes of Thought. Essays on Thinking in Western and non-Western Societies. Faber & Faber.

Taussig, M. (1993). Mimesis and Alterity: A Particular History of the Senses. Routlege. https://doi.org/10.4324/9781315021409

Vandkilde, H. (2014). Breakthrough of the Nordic Bronze Age: Transcultural Warriorhood and a Carpathian Crossroad in the Sixteenth Century BC. European Journal of Archaeology, 17(4), 602–633. https://doi.org/10.1179/1461957114y.00000000064

Vickers, M. (1989). The Cultural Context of Ancient Greek Ceramics: An Essay in Skeuomorphism. In: P. E. McGovern, M. D. Notis, & W. D. Kingery (Eds.), Cross-craft and Cross-cultural Interactions in Ceramics (pp. 45–63). The American Ceramic Society, Inc.

Vulpe, A. (1995). Der Schatz von Perşinari in Südrumänien. In: A. Jockenhövel (Ed.), Festschrift für Hermann Müller-Karpe zum 70. Geburtstag (pp. 43–62). Verlag Dr. Rudolf Habelt GmbH

LIST OF ILLUSTRATIONS

Frontis piece: Hesse Kassel Heritage.

Fig. 1: Kiel University.

Fig. 2: Hesse Kassel Heritage.

Fig. 3: P. Chistè.

Fig. 4: S. Čerkez, Academy of Sciences and Arts of Bosnia and Herzegovina, Centre for Balkanological Research.

ABOUT THE AUTHORS

ARIANE BALLMER

Switzerland

https://orcid.org/0000-0001-8210-7837

Ariane Ballmer is an independent researcher based in Switzerland, specialising in European Prehistoric Archaeology. She received her PhD from the University of Zurich in 2012, with a thesis on the Bronze Age ritual landscape in the Swiss Alps. Subsequently, she worked as a researcher and lecturer at the École Normale Supérieure, and the Universities of Heidelberg and Bern. Ariane Ballmer's main fields of interest are settlement archaeology, social and ritual archaeology, and human-environment relations.

DANIEL NEUMANN

Lower Saxony State Museum Hanover, Hanover, Germany

https://orcid.org/0000-0002-3533-7987

Daniel Neumann received his doctorate from the Free University of Berlin. As research associate at the Eurasia Department and the Romano-Germanic Commission of the German Archaeological Institute he conducted research and published widely on selective depositions, settlements and fortifications during the Metal Ages in Central and Southeastern Europe and the Caucasus. In 2018, he became curator at the Lower Saxony State Museum Hanover. Subsequently, his focus has expanded to archaeological sources of the Iron Age to the Early Middle Ages of Northwestern Europe.