EAZ Ethnographisch-Archaeologische Zeitschrift

Special issue
Working, Living and Learning Well Together?
Global Perspectives, Approaches and Challenges in Indigenous Archaeology and Beyond
Edited by S. B. Grimm, A. Milks, H. Piezonka, M. Porr and N. Tiwari

EAZ 59 (3), 2025–2026, e1671. DOI: https://doi.org/10.54799/BSPZ5423 • CC-BY 4.0
Submitted: 21.10.2024 | Accepted: 31.03.2026 | Published: 26.05.2026

An Ethnoarchaeology of Ontologies: Animism(s) and the Animation of Fire Among the Northern Komi and Tundra Nenets of Northwest Eurasia

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Abstract

This paper advocates for an ethnoarchaeology of ontologies, with a particular focus on new animism, proposing that a shift from epistemological to ontological perspectives could reshape ethnoarchaeology. Hence, it contributes to the current ontological discourse in archaeology and anthropology. By examining animism(s) and the animation of fire among the Northern Komi of the European and Siberian tundra and taiga, as well as the Tundra Nenets, this study explores the role of fire within their ontologies. Drawing on interviews with two Komi communities and on Indigenous Nenets knowledge contributed by one of the authors, we challenge the conventional Western bias in archaeology, including the dichotomies of 'function' and 'ritual' and 'object' and 'subject.' Our findings reveal that this separation is absent within the syncretic-animistic ontologies of these hunter-herders of northwest Eurasia. We conclude, based on relational deconstructive ethnographic analogies, that incorporating animistic perspectives is crucial for understanding human–fire relations in prehistoric hunter-gatherer contexts and should be extended more broadly within archaeological and ethnoarchaeological studies of hunter-gatherers.

Keywords:
ethnoarchaeology, theory and method, human–fire relations, new animism, relational archaeology

Аннотация

В данной научной работе отстаивается этноархеология онтологий, с особым акцентом на новом анимизме, и предлагается переход от эпистемологических к онтологическим перспективам, который мог бы перекроить этноархеологию. Таким образом, эта работа вносит вклад в современный онтологический дискурс в археологии и антропологии. Изучая анимизм(ы) и анимизм огня среди северных коми европейской и сибирской тундры и тайги, а также тундровых ненцев, данное исследование изучает роль огня в их онтологиях. Опираясь на интервью с двумя общинами коми и на знания коренных ненцев, предоставленные одним из авторов, мы оспариваем традиционные западные представления об археологии, включая дихотомии «функция» и «ритуал», а также «объект» и «субъект». Наши выводы показывают, что это разделение отсутствует в синкретически-анимистических онтологиях этих охотников-собирателей северо-западной Евразии. На основе реляционно-деконструктивистских этнографических аналогий мы приходим к выводу, что включение анимистических перспектив имеет решающее значение для понимания взаимоотношений человека и огня в доисторических контекстах охотников-собирателей и должно быть более распространено в археологических и этноархеологических исследованиях охотников-собирателей.

Ключевые слова:
этноархеология, теория и метод, отношения человека и огня, новый анимизм, реляционная археология

Introduction

During the last couple of decades, new theoretical approaches drawing on posthumanism, new materialism, the ontological turn, new animism and other relational perspectives have been applied in archaeology (e.g., Conneller 2011; Alberti et al. 2013; Harris/Cipolla 2017; Harrison-Buck/Hendon 2018; Solfeldt 2023). Although these theoretical perspectives differ in detail, they share the aim of deconstructing the Western modernist (and postmodernist) ontological and epistemological preconceptions – preconceptions that uncritically take certain key notions of Western philosophy, such as anthropocentrism, hylomorphism, Cartesian dualism and representationalism (including transcendentalism) as the foundation for theories of being, existence and reality, of knowledge and knowledge production as well as methodologies and methods (Viveiros de Castro 1998; Bird-David 1999; Ingold 2011a; 2011b; 2013; 2018; Descola 2013; 2014; for archaeology, see Conneller 2011; Harris/Cipolla 2017).

These key notions, which characterize Western secular thought and the perception of reality, can be briefly described as follows: the human being is the most significant entity, positioned hierarchically above non-human animals and plants, as well as other non-human entities (anthropocentrism) (Braidotti 2013; Harvey 2017; Coccia 2019). The perception of the human being is that they consist of a body and a mind, which are separated from each other; this extends to how the materials in the world are separated from immaterial phenomena (hylomorphism), creating a dualistic and dialectical perception of reality in which each phenomenon is defined based on its dichotomous counterpart, such as nature and culture, body and mind, human and animal, object and subject, person and thing, instinct and intentionality, etc. (Cartesian dualism) (Willerslev 2007, 13; Ingold 2011a; 2011b; 2013). What differentiates this perception is that animisms are viewed as representations of belief (representationalism) or mental states, understood as misrepresentations or failed perceptions of reality, with the Western secular perspective positioned as the true and final account of reality, inaccessible to the supposedly uneducated minds of non-Western educated persons (see Bird-David 1999; Alberti et al. 2013; Holbraad/Pedersen 2017). Materials, for example religious artefacts, are viewed as representing a god or an ancestor (transcendentalism); they are *not* the god or the ancestor (cf. immanentism) (see Solfeldt/Naglaya 2024). Furthermore, this Western modern perspective of the human tends to view capitalism and neoliberalism as the natural political condition of human existence, regardless of time and space, and not for what they are: a theory of political economy (see Harvey 2005; Ortner 2016; for further critique of the Western modernist perspective, see Viveiros de Castro 1998; Bird-David 1999; Willerslev 2007, 13–19; Ingold 2011a; 2011b; 2013; Harvey 2017; Holbraad/Pedersen 2017).

These new theoretical approaches, which have been argued to constitute a paradigm shift (Harris/Cipolla 2017), emphasize the need to rethink Western modernist and postmodernist ontological and epistemological preconceptions and in analysis, to include other ontological premises and epistemologies, often relational rather than dualistic, which form the foundation for perceiving reality and creating knowledge about it – approaches that emphasize *learning* from collaborators and informants rather than *explaining* their ways of being and perceiving reality and deeming those ways wrong or failed (cf. Viveiros de Castro 1998; Bird-David 1999; Willerslev 2007; Ingold 2008; 2011a; 2011b; 2013; 2018; Descola 2013; Harvey 2017; Coccia 2019).

We wonder, though, where ethnoarchaeology stands in relation to this new paradigm, or rather, theoretical trend. Some studies that advocate ontological and relational approaches in ethnoarchaeology are known (González-Ruibal et al. 2011; Lane 2014; Politis 2015; 2016; Lyons/David 2019), and we aim to align with their efforts. However, it seems, from a wider perspective, that ethnoarchaeological theorists abandoned ethnoarchaeology in the 1990s for the interdisciplinary field of material culture studies (e.g., Gosden 1999; Gosselain 2016; Lyons/David 2019), leaving ethnoarchaeology as a subdiscipline to those ethnoarchaeologists who focus on explaining materials and phenomena through Western ontological and epistemological frameworks, which take Western secular premises for granted, rather than engaging with other ontological perspectives.

This study aims to advocate an ethnoarchaeology of ontologies, especially drawing on new animism, that challenges the dominance of Western-biased theoretical frameworks and interpretations, which reproduce and assume the universality of Western norms (ontology and epistemology) across time and space. By applying this approach to a case study of human–fire relations within the syncretic animism(s) of the Northern Komi of the European and Siberian taiga and tundra, west and east of the Ural Mountains, and the Nenets of the Gydan tundra, east of the Gulf of Ob, we seek to propose an understanding of human–fire

relations that includes the animation of fire in various ways, and argue that such animistic relations to fire are more likely to have been the case for prehistoric hunter-gatherers rather than that they treated fire as either functional, ritual or symbolic within representational framework that presumes a distorted or failed perception of reality.

An ethnoarchaeology of ontologies

Ethnoarchaeology is most often defined as 'the ethnographic study of living cultures from archaeological perspectives' (David/Kramer 2001, 2). 'Ethnographic study' does not necessarily refer only to ethnographic in-person fieldwork, even if this is what most would think of when imagining an ethnoarchaeological research process. Other ethnographic materials can be studied from archaeological perspectives, including ethnographic literature, ethnohistory, museum ethnography, linguistics, oral traditions, ethnomusicology, ethnochoreology and visual ethnography. Any ethnographic material that anthropologists study or ethnographers produce can be used by ethnoarchaeologists. According to anthropologist Tim Ingold, anthropological and ethnographic analysis is about correspondences, and, to borrow his words: 'It [the correspondence] can be carried out anywhere, regardless of whether we might imagine ourselves to be "in the field" or out of it' (Ingold 2008, 88).

How, then, does an analysis of secondary ethnographic materials differ from regular ethnographic analogies commonly used in archaeology? It is a question of the degree of engagement with ethnographic materials. It involves studying ethnographic materials first-hand from an archaeological perspective and using analogies both to deconstruct archaeological theoretical premises and interpretations and to construct possible new ways of reasoning that are not based solely on the Western-educated researcher's own perceptions of reality. In this sense, the approach resembles ethnoarchaeological fieldwork in its emphasis on close engagement with the ethnographic material in focus (most often through participant observation), yet it differs methodologically by explicitly incorporating critique and deconstruction of Western theoretical premises that have commonly informed earlier ethnoarchaeological approaches (Binford 1978; Hodder 1982; David/Kramer 2001; for a Siberian context, see Jordan 2003; Grøn 2005; Kuznetsov 2013). It becomes a theoretical perspective and a method for integrating other perspectives on reality and learning from them – a way of producing more multivocal knowledge rather than explaining other realities from the Western-educated researcher's own perception of reality. It is an ethnoarchaeology that relates to the ontological turn (Holbraad/Pedersen 2017).

The ontological turn is a theoretical and methodological approach that emphasizes the statement above and thereby allows ethnographic realities to define themselves on their own terms and to reveal aspects of *how* and *what* relations humans can have with their environment and co-inhabitants – dimensions that would be hidden from the ethnographer if viewing the world solely through the logic of Western secular thought (Holbraad/Pedersen 2017, 1–8). Martin Holbraad and Morten A. Pedersen (2017, 5) define the ontological turn as follows:

> *(W)hat makes the ontological turn distinctive is the fact that it fundamentally recasts and radicalizes this problem [the tendency to view ethnographic realities through the lens of the Western-educated researcher's own views and assumptions] by exploring the consequences of taking it to its logical conclusion. The epistemological problem of how one sees things is turned into the ontological question of what there is to be seen in the first place.*

Thus, epistemological questions and problems cannot be separated from their ontological premises.

Holbraad and Pedersen's definition of the ontological turn, though, tends to create the impression of separate, equally existing ontologies – other ontologies alongside the dominant Western one. Although many of the studies they draw upon share this tendency, others do not. Instead, the ontological turn in anthropology should be understood as comprizing two turns (Priestley/Solfeldt 2022). The first is the acknowledgement of other perceptions of reality, reali*ties* instead of reali*ty*, ontolog*ies* instead of ontolog*y*, in line with Holbraad and Pedersen's argument (e.g., Viveiros de Castro 1998; Pedersen 2001; Willerslev 2007; Descola 2013). It is a way of deviating from the ontology into which the Western-educated researcher has most often been socialized and institutionalized since childhood, and of becoming open to the ontologies of others. However, it can only be an attempt, as the academic context in which this attempt is conducted is Western (Ingold 2011a, 6). The second is a turn away from the Western perception of reality in favour of a relational ecological reality behind the Western preconceptions of reality and of how to gain and produce knowledge about reality – a world of relations rather than structures, dualisms, binary positions and dia-

lectical relationships (e.g., Bird-David 1999; Ingold 2011a; 2011b; 2013; 2018).

Whether the first or the second view of the ontological turn is preferred, what matters is people's perceptions and relations within the local reality and environment that the Western-educated researcher aims to study. What the researcher believes or claims to be true (a truth most often based on Western ontological preconceptions) is only of importance if one's aim is to *explain* other perceptions of reality, which results in those perceptions being treated as failed ontologies and epistemologies – implying that the true reality is the Western ontological perspective and epistemology (cf. Bird-David 1999), as pointed out in the introduction. If other realities are acknowledged and studied, then ethnoarchaeology can go beyond Western-biased explanations toward ontological reconsideration. Prehistoric perceptions of reality most likely differed from those of Western-educated researchers. Thus, the study of other ontologies can broaden perspectives on what reality is and how it can be perceived – both in the past and in the present.

An ethnoarchaeology of ontologies, therefore, engages with ethnographic materials to deconstruct Western ontological preconceptions and rethink reality based on other perceptions of reality. It is about 'creating the conditions under which one can "see" things in one's ethnographic material that one would not otherwise have been able to see' (Holbraad/Pedersen 2017, 4), or, as Marilyn Strathern (1988, 20) earlier expressed in a similar formulation: 'to create the conditions for new thoughts.'

How, then, does this ontological ethnoarchaeology differ from Indigenous archaeology and collaborative archaeology? It does not necessarily have to, if one – whether a Western or Indigenous researcher – engages with Indigenous communities and with Indigenous knowledge, philosophy and ontological premises.

These subdivisions of ethnoarchaeology, collaborative archaeology and Indigenous archaeology are important, as they also address whether the researcher can have situated or non-situated knowledge and experience. Is the researcher an insider or an outsider? Both are of equal importance, as can be seen in comparative anthropology and ethnography focusing on non-Indigenous peoples. For example, an American ethnographer studying a Scandinavian socio-cultural context will differ from a Scandinavian ethnographer studying their own Scandinavian socio-cultural context. Situated and non-situated knowledge, when combined, broaden the overall perspective, as the phenomena discussed are viewed from different points of departure.

An ethnoarchaeology of new animism

While an ethnoarchaeology of ontologies can include learning from and widening theoretical perspectives and reconsiderations across ontologies and their various aspects, our focus in the following case study will be on animistic ontologies, especially the animation of fire.

Animism was first discussed by Edward B. Tylor (1869). For the Victorian unilinear evolutionist, animism represented the lowest stage of religious evolution. It was understood as a 'primitive' religion comparable to children's beliefs, which would evolve over time and ultimately culminate in the rational modern science of the Victorian era (Segal 2014). Tylor (1869, 566) described animism as 'the doctrine of all men who believe in active spiritual beings.' According to Tylor, Christianity still retained elements from this supposed religious childhood of animism (Tylor 1869, 523; Segal 2014, 58).

In the mid-1990s, anthropologists revisited the concept of animism (Harvey 2017, 20). Nurit Bird-David (1999) argued that Tylor's definition and view of animism rendered it a failed epistemology, shaped by the prevailing unilinear evolutionary view of the time. Furthermore, she proposed that animism should instead be understood as a relational epistemology, in which knowledge is produced through relations between the animist and the co-inhabitants with whom the animist shares their environment – being the human 'other' (see Solfeldt 2025), non-human animals, landscape features and both material and immaterial beings, such as spirits, gods and ancestors (Harvey 2017). The animation and subjectification of the non-human – the acknowledgement of life and soul(s) – are context-dependent processes that occur in particular situations (Bird-David 1999, 74).

Among the Nayaka, an Indigenous hunter-gatherer group in south India with whom Bird-David (1999) conducted fieldwork, an animated spirit, or *devaru*, is identified through its actions in relation to the human animist. For example, stones that appear ordinary but behave in unexpected ways – such as suddenly appearing while digging for roots – are *devaru*. Some stones are *devaru*, while others are not. This reasoning is in line with the well-known response that ethnographer Irving Hallowell received from an informant when he asked whether all stones were alive: 'No, but some are' (Hallowell 1964, 54).

Another example provided from Bird-David's fieldwork concerns *devaru* elephants. An informant told her that an elephant had walked harmlessly through a Nayaka

village during the night without destroying any huts. The same thing had happened in a neighbouring village, except that the elephant passing through their village had trampled two huts. The elephant that passed through the village where Bird-David was living was a *devaru* elephant, whereas the other was a regular elephant.

Ingold offers another definition that complements and aligns with Bird-David's (see his comments on Bird-David 1999). According to Ingold (2011a, 113), animism is

> *a complex network of reciprocal interdependence, based on the give and take of substance, care and vital force … [that] extends throughout cosmos, linking human, animal and all other forms of life.*

Anthropologist and ethnographer Laur Vallikivi (2024), drawing partly on both Bird-David and Ingold, describes animism in a Siberian context, in relation to shamanism – which is more closely aligned with this study – as 'underlying epistemological assumptions and ontological sensibilities about how seen and unseen forces act on people and how they can be acted upon' (Vallikivi 2024, 33; see also Vallikivi 2026).

It is important to note that both Bird-David's and Ingold's definitions partly overlook the potential danger posed by animated non-human beings. In a traditional Siberian ontological context, such beings can be both helpful and harmful. If one treats them well and cares for them, they may aid in reindeer herding, hunting and fishing and help keep evil spirits, sickness and death away. If treated poorly, however, they may cause bad luck, sickness and death to both reindeer and human relatives (Jordan 2016a, 32).

Approaching animisms: Relational ethnography and ethnographic analogies

Grounded in Nenets Indigenous knowledge and interviews with Komi representatives, our approach in the following case study draws on Matthew Desmond's (2014) concept of relational ethnography. Relational ethnography focuses on 'studying fields rather than places, boundaries rather than bounded groups, processes rather than processed people, and cultural conflict rather than group culture' (Desmond 2014, 574).

Our focus within the following case study will therefore be on creating a correspondence (see Ingold 2008) based on both Nenets Indigenous knowledge provided by the author Naglaya – grounded in her position and experience of belonging to a reindeer-herding family from the Gydan tundra, as well as her work as a photographer and documentarian of Nenets tundra life – and on semi-structured interviews conducted with two representatives of Komi communities: Inna Artemovna Uglova (Izhma Komi) and Alina Sergeevna Ivanova (Udorasa Komi). Prior to the interviews, both were given a questionnaire to discuss with their communities. The former represents the Izhma Komi, reindeer herders of the Ural tundra and the Longot"Yegan River, while the latter represent the Udorasa Komi, small-scale farmers and hunters from the central part of the Vashka River.

The Indigenous knowledge provided by Naglaya, Uglova and Ivanova is then set in relation to both historical and contemporary ethnographic literature – read and discussed in light of the theoretical perspective stated above – on the Tundra Nenets and the Northern Komi from the wider area, including the Nenets of the European side of the Ural Mountains and the Yamal Peninsula, and the Komi of the northern parts of the Komi Republic and northwest Siberia.

Based on the outcomes of the interviews and in relation to the ethnographic literature, we aim in the following case study to create critical and deconstructive ethnographic analogies between the past and the present that question the ontological preconceptions of Western thought – preconceptions upon which archaeological theory and interpretation tend to rest, especially within earlier paradigms such as culture-historical archaeology, processual archaeology (New Archaeology) and post-processual archaeology (Harris/Cipolla 2017).

It should be noted that there is potential for confusion between Desmond's (2014) concept of relational ethnography and relational ethnographic analogies (as opposed to formal ethnographic analogies) within the broader analogical discourse of archaeological methodology.

Formal analogies refer to cases in which similarities in form can be identified between an excavated object and a known form from a historical or contemporary context. Relational analogies, by contrast, are cases in which similarities in form are accompanied by additional correspondences, such as historical continuity, linguistic continuity, environmental similarity and similarities in subsistence and economy. Within the epistemology of analogy in philosophy, the former is considered a weak analogy, whereas the latter is stronger and can be further strengthened through additional correspondences (Wylie 1985, 94–95; Hodder 2012, 16; Hammer 2025, 106–116).

Drawing on Desmond's (2014) concept of relational ethnography as well as the geographical frame of northwest Si-

beria and the European taiga west of the Urals, we employ a relational-analogical approach in our discussion of contemporary Nenets and Komi human–fire relations, as well as those of prehistoric hunter-gatherers. In our view, it is more likely that the ontologies of prehistoric hunter-gatherers were closer to those of contemporary hunter-herders of northwest Eurasia. Although these groups have undergone significant changes and developments and are to varying degrees connected to global capitalism and neoliberalism, they have maintained lifeways involving sustained relational engagements with tundra and taiga environments and with their co-inhabitants – namely, depending on the ontology, non-human animals, spirits, gods, ancestors, landscape features and things. This stands in contrast to the ontological reasoning associated with globally connected capitalism and neoliberalism, which is grounded in anthropocentrism, hylomorphism, Cartesian dualism and representationalism. These frameworks separate the material from the immaterial and produce a transcendental view of reality that positions immanent, animist and syncretic ontologies of northwest Eurasia as failed ontologies and epistemologies (cf. Bird-David 1999).

The overarching aim of an ethnoarchaeology of ontologies is therefore aligned more closely with anthropological archaeology than archaeology in a narrower sense: to contribute to the understanding of humanity in general from a long-term perspective, rather than to understand a particular phenomenon at a specific time (A. Lemke, personal communication, email, 9 September 2024, see also Lyman 2007). In this case, the aim is to contribute to a broader understanding of human–fire relations among hunter-gatherers and hunter-herders by working across time and space, rather than focusing on a single site or period. The archaeological examples drawn upon in the case study are selected for their capacity to highlight the non-binary and complex relations between function and ritual in prehistoric uses of fire. They are intended to demonstrate a mode of reasoning that incorporates the logic of animism.

Case study: Human–fire relations of the past and present

'(W)hy do you call it "man"?' I asked him in surprise. 'Water is a man,' he replied simply. 'He can cry, he can sweep, he can also play.' … 'Look,' Dersu said, pointing at the fire, 'he is also the same as man.'

(Arsenyev 2004, 39)

Fire in archaeology

The quotation above derives from Captain Vladimir Arsenyev's classic memoir and records a conversation between Arsenyev and his Indigenous Nanai (Goldi) hunter-trapper guide, Dersu Uzala. Uzala speaks from an animist point of view, while Arsenyev, from the perspective of an early 20th-century Russian geographer, attempts to make sense of this animistic reasoning – an understanding he gradually develops throughout the memoir.

The human–fire relation that Arsenyev encountered and learnt from can be argued to stand in contrast to the study of fire in archaeology across its major paradigms, including culture-historical archaeology, processual archaeology, and post-processual archaeology.

As archaeologists Dragoş Gheorghiu and George Nash (2007, 13) note,

> *(F)ire is a subject as vast as the history of humankind and paradoxically, a minor subject for the archaeological literature of the last decades of the 20th century.*

Given that fire is too vast a subject to be fully addressed within the scope of this paper, the aim of this brief research history of the archaeology of fire is instead to demonstrate that the animation of fire has largely been absent from archaeological discourse, despite successful paradigm shifts (for a similar critique, see Spikins et al. 2010).

Although archaeologists within the culture-historical paradigm primarily focused on the classification of artefacts and relative dating (Trigger 2006, 121), fire was discussed to some extent. Based on the prevailing unilinear evolutionary perspective, according to which all human groups passed through the same stages of development, archaeologists at the time argued that direct ethnographic analogies, or 'ethnographic parallels' as they were then called, were possible as prehistoric hunter-gatherers and those documented in ethnographic studies were assumed to be at the same stage of human evolution (Trigger 2006, 153). Fire was considered the greatest achievement of human intelligence, but it was treated primarily in functional terms, even when ethnographic analogies were employed (Morlot 1860; Sollas 1909; Layard 1922; Hough 1926).

It should be noted that part of Tylor's notion of animism was his attempt to demonstrate that so-called 'lower races' and 'savages' – that is, hunter-gatherers and hunter-herders – were at an early stage of religious development compared with Victorian Christian society, a proposition that

contemporary degenerationists opposed, as they argued that the condition of 'savages' was the result of degeneration rather than developmental progression (Tylor 1865; 1869; 1871; see also Segal 2014). However, even though religion – or animism – was acknowledged, the possibility of the animation of fire had not yet been considered in the terms described by Strathern (1988). Religious fires among the ancient Greeks and Romans were discussed and described as sacred, but solely from a transcendental perspective (Morlot 1860; Hough 1926).

With the emergence of the eco-functionalist paradigm of processual archaeology, the functional interpretation of fire continued to dominate. This was not due to an assumption that hunter-gatherers lacked religious thought but rather to the view that the immaterial mind of prehistoric hunter-gatherers was either inaccessible or that the archaeologists had only limited capacity to investigate it (Trigger 2006, 475–478). Ethnographic analogies were employed, with the primary focus of comparisons being the function of fire, grounded in eco-functionalism, which takes for granted the Western notions outlined above. The main topics related to fire within processual literature include the first use of fire, the need for heat, hearths, cooking, hunting, fishing, gathering and forest clearance (Iversen 1956; Oakley 1956; Sauer 1961; Clark 1967; Wertime 1973; Binford 1978).

During the structural and post-structural semiotic post-processual paradigm, in which it is argued that material culture is constructed and can be read like a text (Trigger 2006, 475–478), archaeological reasoning shifted away from eco-functionalism. However, many studies of fire published during the height of post-processualism continued to focus on its functional aspects (e.g., Sillen/Brain 1990; James 1996; Manson 2000). This may be explained by the fact that traces of fire are not considered artefacts but rather ecofacts and are therefore placed within the domain of natural science, which aligns more closely with processual archaeology than with post-processual archaeology, which drew on theoretical perspectives from the humanities (Trigger 2006, 475–478).

When fire is addressed in post-processual studies, its symbolism, meaning and role in ritual are grounded in representationalism and transcendentalism and are often separated from function in line with structuralist and constructivist arguments. Fire, or traces of fire, are treated as symbols that represent something immaterial, separate from fire and its material traces themselves (Gullöv/Appelt 2001; Gheorghiu/Nash 2007; Spikins et al. 2010). It is not approached from an immanent and animistic perspective, in which fire could be understood as animated and as actively shaping the relations that prehistoric hunter-gatherers had with their environment and co-inhabitants – potentially including the human 'other' (e.g., unknown groups of people; see Solfeldt 2025), non-human animals, landscape features and both material and immaterial beings, such as spirits, gods and ancestors.

Although these paradigms were theoretical reorientations, they fall short of a complete Kuhnian paradigm shift, as earlier paradigms remained influential and the ontological assumptions underlying epistemological change were not critically examined or questioned in the same way as in the current theoretical trend associated with the ontological turn, new materialism and relationalism (Harris/Cipolla 2017, 27).

Fire is present across archaeological paradigms and theoretical trends, yet it has consistently been interpreted through Western functional or transcendental-ritual frameworks. It has never been approached from an immanent, animistic perspective that could broaden understandings of what fire is and can be, as well as the traces it may produce when understood as animated.

More recently, in 2017, ethnoarchaeologists Carolina Mallol and Auréade Henry (Mallol/Henry 2018, 73) organized an international symposium titled *The Ethnoarchaeology of Fire*, intended to discuss anthropogenic fire traces from an ethnoarchaeological perspective. Although these studies contributed to archaeology and anthropology more broadly, as well as to the archaeology and ethnoarchaeology of fire, their main focus remained functional: fuel use, cooking technologies, combustion, site formation processes and taphonomy (Égüez/Makarewicz 2018; Friesem 2018; García-Piquer et al. 2018; Henry et al. 2018; Mallol/Henry 2018; Thoms et al. 2018) – a focus consistent with processual approaches to fire. Not only do these recent ethnoarchaeological studies of fire take dominant Western perspectives for granted, but they also reinforce the observation that ethnoarchaeology is still largely shaped by processual theoretical trends and methodologies.

Environmental historian Stephen J. Pyne (2009; 2012; 2021), in his studies of the history of fire from the Palaeolithic to the present, similarly operates within these dominant Western frameworks and avoids ontological questions about fire. He even separates natural from cultural fire to such an extent that his reasoning resembles that of the late nineteenth century and early twentieth centuries, when hunter-gatherers of the past and ethnographic

present were understood as using fire only for functional purposes, while the animation of fire was associated exclusively with ancient Mediterranean societies from a transcendental perspective (Pyne 2009, 27–38).

Even more recent studies tend to follow a similar processual pattern, focusing primarily on function and the early use of fire by humans and ancestral hominins (Sorensen 2018; McCauley et al. 2020; Halbrucker et al. 2021; Pyne 2021; Hoare et al. 2023).

Across theoretical trends in archaeological and historical studies of the deep past, fire is never conceptualized as animated in accordance with immanentism or the logic of animism.

This leads us to ask what happens to the interpretation of fire traces when animation is incorporated into ethnoarchaeological analysis – an approach grounded in learning from animistic ontologies within both primary and secondary ethnographic materials and studies, rather than treating them as failed ontologies and epistemologies.

Animism(s) and human–fire relations among the Northern Komi and Tundra Nenets

The Nenets are Indigenous to the Eurasian lands stretching from the Kanin Peninsula in the west to the Yenisei River in the east (Nenets Autonomous Okrug and Yamalo-Nenets Autonomous Okrug) (Forsyth 1992, 16; Golovnev 1995, 72; Aksyanova/Vasiliev 2005, 386; Vallikivi 2024, 18). Their traditional livelihood consists of reindeer herding, hunting and fishing (Vallikivi 2024, 19). In the north, the Tundra Nenets are large-scale reindeer herders, a practice that has been documented since the beginning of the nineteenth century (Istomin 2011, 237; cf. Golovnev 1995, 51), while in the south, the Forest Nenets of the taiga engage in small-scale reindeer herding combined with a greater reliance on hunting and fishing compared with their northern kin (Golovnev/Osherenko 1999, 7–8; for a detailed ethnographic description of the Nenets, see Khomich 1966; Golovnev 1995; Aksyanova/Vasiliev 2005).

The Komi are Indigenous to the lands west of the Ural Mountains (Komi Republic) and have traditionally been hunter-fisher-gatherers (Konakov et al. 2003, 15). Some northern Komi groups, including the Izhma Komi, adopted reindeer herding from the Nenets at the end of the seventeenth century (Konakov et al. 2003, 18; Istomin 2011, 237; for a detailed ethnographic description of the Izhma Komi, see Konakov 2000), while the southern Komi-Permyaks adopted farming and cattle breeding as early as the twelfth century from their western neighbours (Konakov et al. 2003, 15).

The traditional perception of tundra and taiga environments in northwest Eurasia is ontologically animistic. These perceptions differ among Indigenous peoples, communities and groups, although certain similarities exist (Jordan 2016b). As these groups have never existed in isolation from one another during prehistoric and historic times, their animisms should therefore be understood as a form of syncretism. For example, elements of Nenets animistic perceptions of environment and reality have blended with Komi perceptions, and vice versa (Vallikivi 2024, 36), a process that began prior to the arrival of Christian missionaries in the fourteenth century (Forsyth 1992).

These syncretic forms of animism underwent further syncretization when Christian missionaries began efforts to convert the Indigenous peoples of northwest Eurasia, as part of Muscovite and Novgorodian – and later Russian (and, in part, Dutch) – colonization of the region (Forsyth 1992). Today, many people, including the Nenets and the Komi, primarily adhere to Russian Orthodoxy or Evangelical Christianity, but it is evident that traditional animistic ontologies persist within these Christian–animistic syncretisms among the Nenets and the Komi, as well as among their neighbouring Indigenous hunter-herder groups (Golovnev/Osherenko 1999; Pentikäinen/Raudalainen 1999; Jordan 2016b; Leete 2017; Vallikivi 2024).

The Komi were among the first Indigenous peoples to be converted to Russian Orthodoxy in the fourteenth century (Pentikäinen/Raudalainen 1999, 41–42; Konakov et al. 2003, 15). Between 1651 and 1658, the Russian Orthodox Church was divided as a result of Patriarch Nikon's reforms – a period known as the *Raskol* [*tr.* schism] – which brought the Church closer to the Greek and Byzantine liturgical traditions (Pentikäinen 1999, 126). Some Komi rejected these reforms and continued to adhere to older beliefs and rituals, becoming known as *staroobryadtsy* [*tr.* Old Believers] (Pentikäinen/Raudalainen 1999). Others followed the Russian Church and stayed 'new' Orthodox.

Although both Komi Old Believers (Udorasa) and the Orthodox Komi (Izhma) are Christian, elements of Komi animistic ontology remain present to varying degrees (cf. Leete 2017, 231–234). This is less pronounced than among their eastern and northern neighbours, the Nenets, whose conversion occurred later and has continued into the present (Vallikivi 2024).

Among Siberian hunter-gatherers and hunter-herders, the tundra and taiga worlds are widely understood as be-

ing divided into three realms: the upper world of benevolent gods and spirits, the middle world of humans and animals and the underworld of malevolent gods and spirits as well as deceased humans and animals (Balzer 2015; Jordan 2016b). Each realm often contains sublayers with specific functions. In the Nenets worldview, both the upper and lower worlds consist of nine layers, with the ninth layer being the home of the high gods Num and Nga – the creators of the universe. The subsequent layers are inhabited by their wives, sons and various types of spirits. Spirits from both the upper and lower worlds can travel to the middle world, where they may either assist or cause harm (Lar 1998).

As a result, the tundra and taiga are inhabited by material and immaterial, visible and invisible non-human beings and entities (Kharyuchi 2004, 161–163; Vallikivi 2024, 33). These beings and entities include *Syadeiq* – wooden-carved master spirits, referred to as idols in earlier ethnographic literature – associated with special sites. These sites and master spirits are described as 'sacred' due to Christian influence and are believed to guard the surrounding areas (see details in Vallikivi 2026). Herders and hunters must offer gifts, such as money, vodka or tobacco, to receive assistance rather than misfortune (Khomich 1981, 22; Kharyuchi 2004; Vallikivi 2024, 45, 97, 141).

There are also *Khekheq sidryangg*, or *ngytarma* (Fig. 1), ancestral images that were referred to as 'idols' in early publications. They are made from animal parts or from logs and stones taken from sacred sites, often dressed in the clothing and hair of deceased relatives (Khomich 1966, 202–206; Golovnev 1985, 45; Vallikivi 2011, 87; 2024, 136; 2026). Nenets traditionally have two souls: a breath soul and a shadow soul (Vallikivi 2011, 88; 2026). The shadow soul resides in a person's hair (cf. Vallikivi 2024, 91; 2026), and when a deceased relative's hair is attached to an ancestral image, the shadow soul is transferred to it. The ancestral image is not a representation of the deceased relative but *is* the deceased relative (Khomich 1995, 221; Vallikivi 2011, 84; 2026; cf. Castrén 1853, 197) (immanentism, not transcendentalism) – a relative that must be carefully maintained in order to remain in good relation with the ancestor, who in return provides aid in everyday life. If such an ancestral image is destroyed, the shadow soul wanders the middle world for forty days and may cause harm, especially to the person who destroyed it and their close kin (Vallikivi 2011, 88; 2026, 85–87). These ancestral images are kept and cared for as long as someone remembers them or maintains a relation to them.

Other animated non-human beings include rivers, mountains, hills, winds, sounds and various animals, particularly birds, white reindeer and bears (Kharyuchi 2004, 160).

Like the Nenets, the Komi traditionally viewed the world as divided into three layers: the upper world of God (Dzen, the bird god in the traditional animistic pantheon), the middle world of humans and animals and the lower world of Oməl, which has now merged with the Christian concept of hell and Satan (Konakov 2000; Konakov et al. 2003, 42, 58). Based on interviews with Uglova and Ivanova, both described the belief in a three-tiered cosmos as belonging to the past and not incorporated into present-day animistic-syncretic ontologies in the same way as among the Nenets. When referring to the other world or the upper world, they instead speak of heaven as the home of the Christian God.

According to Ivanova, Udorasa Komi Old Believers tend to value older traditions highly, resulting in the preservation of traditional clothing, architecture, folklore and even practices labelled as witchcraft, despite the efforts of missionaries and colonizers. Although animisms and Christianity are often described as conflicting (see Valliki-

Figure 1: Anna Naglaya's ancestral images from the Gydan tundra. Photo: A. Naglaya.

vi 2011), this is not necessarily the case within the animistic–Old Believer syncretism of the Udorasa Komi (Pentikäinen/Raudalainen 1999, 53). Nor does such a conflict appear strongly among Orthodox Izhma Komi, although they tend to interpret their animistic practices as 'tradition' rather than as part of their Christian Orthodox belief system, according to Uglova.

Although Orthodox priests and missionaries historically cut down animated trees and destroyed Komi villages and local animated sites in attempts to fully convert the population, many such sites remain and are still used today (Pentikäinen/Raudalainen 1999, 42). Ivanova described the three 'sacred' sites in her village (note that the term 'sacred' reflects Christian influence; the same applies to the Nenets): the clock tower, a site where three crosses were placed in the ground to prevent fire from spreading and a spring just outside the village.

The sacred spring is associated with Saint George, and on his day, the sixth of May, villagers gather at the spring to say prayers – prayers led by elders, most often female elders who know the old traditions, rather than by priests. Among the Nenets, it is often claimed that the time of the shaman is gone; however, in their absence, elders with a higher degree of spiritual sensibility have partly taken on this responsibility (L. Vallikivi, personal communication, conference discussion, ISARS, 5–8 June 2024; further confirmed by A. Naglaya's father in an interview on 4 September 2024). Ivanova stated:

> *Four people in my village are people with special powers; they are not shamans or sorcerers, but they know incantations and prayers that help achieve desired outcomes.*

Visits to the sacred spring can also be made informally by villagers, who collect sacred water in exchange for coin offerings (Fig. 2).

Sacred sites, or, as the Izhma Komi call them, 'marked places' (potentially because they are associated with tradition rather than religion; see Uglova's reasoning above compared with Ivanova's use of the term 'sacred'), are still used along reindeer-herding migration routes. Uglova described a marked place in a forest where broken things are deposited. Although belief in a lower world is absent in the contemporary animistic–Orthodox ontology of the Izhma Komi, this practice of placing or offering broken items may nevertheless relate to ideas associated with a lower world. Among the Nenets, the lower world is inhabited by deceased humans who herd mammoth, and whose

Figure 2: The sacred spring near an Udorasa Komi village. Photo: A. Ivanova.

possessions are broken – sleighs, clothing, hunting and fishing tools and other items received from relatives in the middle world during burial rituals or when relatives later visit graves and offer vodka and broken cigarettes (Donner 1922, 133; Lar 1998, 18–20). Both Naglaya and Uglova described how their fathers break cigarettes to share with the spirits of the marked places or with ancestors at graves.

Ivanova also described the different kinds of spirits inhabiting and sharing the middle world with Udorasa Komi. Spirits are said to roam forests, lakes and rivers, while within villages different spirits are associated with particular buildings, such as saunas and barns, often linked to their thresholds. Uglova described a water spirit named Vasa and warned that one risks being taken by Vasa when approaching lakes or rivers late at night. There is also a forest spirit known as Vörsa; according to Uglova, 'food is offered to the forest spirit to ensure a successful hunt, but people believe less in the forest spirit nowadays' (for detailed discussion, see Leete 2017).

When asked whether animals can be spirits or have souls, Ivanova stated: 'No. We do not give animals souls, as we eat them. Only *osh* [Komi, *tr*. bears] have souls.' The Udorasa Komi consider that humans have two souls, sim-

ilar to the Nenets: *lov*, an inner soul, and *ort*, a shadow soul. The inner soul is life itself, and upon death it leaves the body and ascends to the upper world. The shadow soul is a person's double, which accompanies them and signals impending illness or death through signs, such as wind appearing suddenly out of nowhere, cups tipping over without anyone touching them or footsteps being heard when no one is present. The shadow soul may also appear in the form of a bird entering the house, which is considered an omen indicating that death is approaching. This corresponds to Bird-David's (1999, 74) definition of animation as 'particular things happening in particular situations.'

Some Komi also have a triple soul. This third soul is said to reside in the forest. It is associated with a tree that can only be found with the help of Vörsa, the forest spirit. Once located, parts of the tree may be cut and used to make animated objects, such as tableware used for special occasions (Konakov et al. 2003, 91). This idea is potentially comparable to ancestral images made from trees at sacred sites among neighbouring peoples, such as the Enets, Nganasan, Selkup, Kets and Khanty (Eidlitz Kuoljok 1993, 81–83; Jordan 2003, 141; Maloney 2016, 126–129; Vajda 2016, 302–303).

Uglova, on the other hand, stated:

> *No. We just have one soul that lives forever. When you die, the soul goes to the upper world, like for all Orthodox believers. But the soul can show signs of death approaching.*

This single-soul model among the Izhma Komi shows similarities with the shadow soul of the Udorasa Komi and the shadow soul of the Nenets, as Uglova further explained:

> *Once, my uncle saw three reindeer walking towards him in a row, lined up. It was his soul coming to warn him that death was approaching. And if a bird flies into the house, or chum, it is a sign from the soul that death is approaching.*

Although older written sources on pre-Christian Komi mythology state that all animals possess souls equal to those of humans, this does not appear to be the case in the animistic–Old Belief syncretism of the Udorasa Komi. Only the bear is considered to possess souls equal to those of humans, as it is regarded as a relative of the Komi. Ivanova explained that bears are believed to understand human speech, and therefore so the Udorasa Komi hunters must address them carefully and ask for forgiveness before killing them as part of the hunt. The hunters may wear bear teeth as protection against evil spirits. This type of human–bear relations is also found among the Khanty hunter-herders east of the Ural Mountains (Jordan 2003, 103–104).

Uglova stated that she was unsure whether animals have souls, noting that some 'friend-reindeer' may have one. A friend-reindeer is a calf that has been specifically cared for, for example because it is sick. Uglova explained: 'When they are small, they live in the chum, and you cannot eat them – not even when they grow old and die.'

The Izhma Komi partly herd their reindeer and hunt on shared lands with the Nenets, and occasionally encounter Nenets sacred sites and above-ground burials. These are, however, viewed by some as dangerous and best avoided due to their non-Christian origin and association (Habeck 2016, 288). Uglova reports that, for her and her relatives, it does not matter whether a marked place is of Nenets or Komi origin; offerings in the form of broken cigarettes and bread are still required by the spirits or ancestors. In this context, Uglova stated: 'It is what you do – tradition.'

Material and immaterial, visible and invisible spirits must be engaged with in everyday life. Particular things happening in particular situations are understood as meaningful within a framework of underlying epistemological assumptions and ontological sensibilities that presuppose reciprocal interdependence in the form of the exchange of substance, care and vital forces – manifested in offerings made to ancestors, spirits and gods.

Among these various kinds of spirits, or non-human animated subjects, is fire.

The Komi traditionally maintained relations with fire that ethnographers have described as a 'fire cult.' This involved a fire master spirit known as Gurańka, a mistress of the fireplace. She is associated both with the stove-fire in houses, chums and hunting lodges, and with sauna fires. Hunters would feed the fire at midnight before departing for the hunt the following morning. In return, the fire master spirit was believed to protect hunters from fire, water and dangerous animals, such as wolves and bears, as well as from harmful people, during their time in the forest (Konakov et al. 2003, 241–243).

The stove and stove-fire were also somehow associated with life. Midwives advised pregnant women not to enter houses or chums where a stove was under construction, as this could harm or even kill the unborn child. Similarly, dreaming of the destruction of a stove was interpreted as a sign of impending death of someone close (Konakov et al. 2003, 242).

When fishers experienced failure or bad luck, they would light a large fire on the riverbank, offer scraps of cloth to it, and then jump through or over the fire. This ritual was believed to end misfortune. Heated stones from the fire were also thought to protect against evil spirits and were placed in locations where such spirits were believed to appear (Konakov et al. 2003, 241, 327–328).

When asked about a fire spirit or whether fire could have a soul, or souls, Ivanova replied:

> *No. No fire souls and no fire spirit. Fire should be taken care of and dealt with carefully, though. Fire is sacred but also dangerous. It can destroy a whole village.*

Although fire spirits are not explicitly recognized in contemporary Udorasa Komi ontology, the Udorasa Komi–fire relation is governed by a set of rules and regulations. Ivanova stated: 'One must not spit or urinate on fire, nor stamp it out with one's feet. It should be extinguished with water.' She also recalled that when houses in the village caught fire, burning buildings were surrounded with Orthodox icons and prayers were recited to prevent the fire from spreading further. Ivanova added: '(T)he fire hears the prayers and will burn upwards instead of sideways.'

One of the sacred sites in Ivanova's village, marked with crosses, was established following such an event, when icons and prayers were used in an attempt to stop a fire from spreading. Subsequently, crosses were placed at the site, designating it as sacred (Fig. 3).

Fire is also used in connection with prayer and cleansing among the Udorasa Komi. The smoke from fire is used to cleanse food consumed during special occasions, such as funerals or visits to relatives' graves (Fig. 4). Burning coals are moved around in a frying pan to purify graves and food offerings.

Uglova also described how one should not spit into fire. This is considered improper, but beyond this there is nothing particularly special about fire, except that 'if the stove in chum turns red [from heat], it means that it will be windy, or that a storm will come. Fire can predict the weather.'

Naglaya also recalls her aunt's reaction to the sounds made by the fire in the chum stove. Whenever a particular kind of loud spark occurs, it is understood that the fire is predicting that someone will visit in the near future. Different kinds of sparks are associated with different predictions.

Nenets linguist and ethnographer Roza Laptander (2023, 99) describes the same phenomenon:

> *(T)undra people pay special attention to any sound by the fire. Thus, any unusual sound of the fire in the hearth is always interpreted as an omen which warns people about possible danger in the future, which can be caused by spirits of the tundra or even by humans.*

Figure 3:
One of the crosses marking the sacred site in the village, established after a fire was prevented from spreading.
Photo: A. Ivanova.

Figure 4: Food offerings on an Udorasa Komi grave, cleansed with smoking coals. Photo: A. Ivanova.

In Nenets legends, women have a special relation with the stove-fire of the chum. Women could talk to the fire and listen to what it had to say. Its sparks and crackles announce the approach of enemies (humans, spirits, wolves and bears) or guests from other worlds (Golovnev 1995, 212–213; Golovnev/Osherenko 1999, 32; Vallikivi 2024, 171, 189).

The fire spirit inhabiting the chum stove, or the open fire within the chum, is known as Tu khada and is believed to safeguard the people living in the chum. However, like any other spirit, it must be properly cared for and is traditionally fed with meat and vodka (Vallikivi 2024, 155; see also Laptander 2023, 99–100). Within the chum, it is considered inappropriate to circle the stove-fire or open fire, which is located at the centre of the chum (Haakanson/Jordan 2011, 169). The fire spirit of the chum plays a central role in regulating movement within the dwelling according to gender and age (see Haakanson/Jordan 2011; Skvirskaja 2012). If the fire spirit is not dealt with properly, it may destroy the camp of chums and kill the people within it.

The chum-fire differs, however, from the fires in the tundra used for cooking and tea-making while herding. Vallikivi (2011; 2024, 155) observed a process of conversion among a group of European Tundra Nenets from animist–Orthodox syncretism to Evangelical Christianity. The Evangelical priest leading the conversion advocated burning the family ancestral images, *Khekheq sidryangg* (Fig. 1), as a final step in the conversion process. The younger family members, who were more receptive to the conversion, had no objection to this, but the elder family member, the father, did. Although he agreed to burn the ancestral images, he refused to do so in the chum stove and instead preferred to burn them in an open fire in the tundra. He told the priest that they did not fit the stove, but the real reason was his concern that the fire or the Nenets deities may take revenge, as fire should not be fed with *Khekheq* (for details, see Vallikivi 2011; 2024).

When electricity reached Siberian tundra villages and the Nenets established winter camps there for trading, they referred to electric light as ‘cold fire.’ This ‘cold fire’ was also treated carefully and ‘fed’ with vodka, as with any other chum fire. The vodka was offered to the lamp by pouring it over it (Golovnev/Osherenko 1999, 80).

This ‘fire-speaking’ has led to the use of fire in most Nenets animistic practices, as it is regarded as a universal language understood by both humans and non-humans (Golovnev 1995, 215; Golovnev/Osherenko 1999, 36; Laptander 2023, 99). It is especially used in reindeer offerings conducted at Nenets sacred sites in the tundra and in sacred glades of taiga. A specific zone within these sacred sites is designated for the fire that is lit as part of reindeer offerings (Kharyuchi 2013, 18–25).

To conclude, neither the Nenets nor the Komi maintain exclusively functional or exclusively ritual relations to fire. Fire, like any relation to an animated non-human being, is both functional and ritual at the same time. Function and ritual are not separate binary categories, nor are they dialectically opposed; rather, they are inseparable, in the same way that material spirits and ancestral images are both object and subject (Solfeldt/Naglaya 2024). Christian

terminology, such as labelling something as 'sacred,' may appear to impose a binary distinction between sacred and secular, or between functional domains. In practice, however, these boundaries are often fluid, as places, things and beings may simultaneously hold practical, social and relational significance, reflecting engagements that recognize the subjectification and animation of non-human entities.

Discussion and conclusion: Fire in prehistoric hunter-gatherer ontologies

Although we do not argue against the functional aspects of fire, which both archaeological and ethnoarchaeological studies tend to emphasize, the ethnographic analysis above demonstrates that these functional aspects cannot be separated from its ritual dimensions (as previously argued for decorated tools made and used by Mesolithic hunter-gatherers; Solfeldt 2023). The prehistoric ontological understandings of fire and its effects on both material and immaterial phenomena were certainly not grounded in Western perceptions of reality and Western epistemology. In our view, it is likely that prehistoric hunter-gatherers, in various ways, subjectified and animated fire, as seen in ethnographic materials and in the animistic-syncretic ontologies of northwest Eurasia. This subjectification or animation may have included the attribution of a fire soul, or souls, analogous to those of prehistoric humans, or the presence of fire spirits.

Just as different animistic syncretisms vary across northwest Eurasia and have done so over time – even prior to colonization and Christianization – there could not have been a single, unified animism among all prehistoric hunter-gatherers. By adding *-ism* to *anime* (animation), we risk reifying animism as a unified system (cf. Harvey 2003, 17–18). Instead, there were likely multiple, diverse animisms (see Solfeldt 2026), including variations within archaeologically defined Palaeolithic, Mesolithic and sub-Neolithic hunter-gatherer groups, such as Gravettian, Ertebølle and Comb Ceramic traditions. This diversity is particularly significant given the vast temporal depth involved, especially in comparison to the relatively short time spans reflected in ethnographic materials. Yet, certain key elements may serve as basic premises for understanding animism(s), including the animation of non-human beings, the ontological understandings of particular things happening in particular situations and the involvement of prehistoric hunter-gatherers in complex networks of reciprocal interdependence. In this sense, it is reasonable to suggest that *culture existed before nature*.

The separation of nature and culture, and object and subject, is characteristic of Western thought (Viveiros de Castro 1998; Ingold 2011a, 42; Descola 2013; for further discussion, see Tacey 2018, 10–15). What characterizes animistic ontologies, by contrast, is the absence of such separation (Ingold 2011b, 63). It is therefore likely, culture and the subjectification of the environment and its human and non-human co-inhabitants preceded the separation of humans from nature and the non-human – a division that characterizes a much later, modern Western understanding of reality. Such reasoning opens up the possibility for archaeological interpretations informed by relational, animistic ontologies and epistemologies.

At the Palaeolithic reindeer-hunter site of Pincevent (Seine-et-Marne, France), where exceptionally well-preserved camp structures have been identified – such as designated lithic knapping areas, clearly defined hearths and potential locations of skin tents – some flint flakes were found within the hearths (Karlin/Julien 2019). These may, of course, have entered the fire accidentally, for example through knapping activities conducted near the hearth or through the intentional heating of flint to improve its flaking properties. However, when these flint flakes and the fire are considered within a prehistoric animistic ontology – where functional and ritual dimensions cannot be separated – it becomes reasonable to explore other interpretations. The fire may be understood as 'demanding' some of the flakes as part of the flint knapping and tool-making process, or the flint core may be seen as acting non-core-like by 'sending' flakes into the fire, in a manner comparable to how *devaru* stones of the Nayaka act non-stone-like. If we were able to ask the Palaeolithic flint knappers at Pincevent whether the cores were alive, they may have answered: 'No, but some are.'

A similar argument can be made for the earliest ceramic figurines from the Palaeolithic site of Dolní Věstonice (South Moravia, Czech Republic). The ontological understanding of what fire did to these clay figurines was certainly not based on a Western epistemological framework. While the effects of fire in drying and hardening the clay are evident, it has been argued that the thermal shock – which caused the figurines to explode and sometimes eject fragments from the fire – was intentional on the part of the Palaeolithic figurine makers (Vandiver et al. 1989, 1007–1008). This behaviour of the clay in relation to fire, combined with Vandiver et al.'s (1989, 1007–1008) argument that the purpose of figurine-making was not solely the final product but also the process itself, including the

thermal shock, suggests that the clay may have been subjectified or animated, reflecting aspects of a prehistoric animistic ontology.

Furthermore, Vandiver et al. (1989, 1008) argue that these clay-burning practises took place away from the settlement, potentially involving a distinct, smaller group. This pattern may be compared, for example, to ethnographic accounts of Nenets sacred sites, where access is often restricted, typically to men (for details, see Kharyuchi 2004). Vandiver et al. (1989, 1007), however, also note that the prehistoric figurine makers may have been 'awfully bad potters by modern standards.' It is more likely, though, that they were fully aware of their actions, as some figurines are well made and comparable to examples from other sites and materials (see Dolní Věstonice Venus figurine, Vandiver et al. 1989, fig. 2a).

While these lead to a form of relativism, it is a relativism that must be considered, as functional explanations cannot be proven to be inherently of more validity than animistic ones. A potentially clearer example is provided by the earliest forms of cremation among European hunter-gatherers.

Burials may be functional in that they remove the decomposing body and its taphonomic processes from the immediate environment, but they are rarely separable from their ontological 'ritual' dimensions. There is no separation here between function and ritual.

In her paper 'Cremation Burials of Stone Age Hunter-Gatherers on the European Plain,' archaeologist Karolina Bugajska (2021) presents an overview of 21 sites and 54 cremation burials comprizing 89 individuals from the European Plain and south Scandinavia. She concludes that cremation was practised from the Early to the Late Mesolithic alongside inhumation, and that cremation customs arose independently across various areas and sites, as evidenced by their variability. In some contexts, grave goods accompany the individual, while in others they are sparse or absent. At the site of Dudka in northeast Poland, cremation formed part of a multi-stage burial process in which bones were cleaned of soft tissue, divided, selected, curated and used within the settlement before eventual burial. In contrast, at Skateholm I and II in south Sweden, only one cremation burial is known among 87 graves, suggesting that the cremated individual was distinguished in some way from those interred.

Such variation between cremation and inhumation practices points to underlying ontological differences in human–fire relations – that is, to different animisms across time and space. Although it is impossible to determine precisely how fire understood to act upon the bodies, souls or spirits of the deceased, it is reasonable to suggest that these practices involved forms of animation and subjectification within prehistoric animistic ontologies that structured the perception of reality.

We therefore conclude this discussion on animisms and the animation of fire among both present and past hunter-gatherers and hunter-herders by suggesting that animistic ontological perception of reality should be incorporated into archaeological research, particularly in the interpretation of fire in prehistoric hunter-gatherer contexts. Such perspectives enable archaeologists to 'see' aspects of the material record that one would not otherwise have been able to notice (cf. Holbraad/Pedersen 2017, 4), or, as Marilyn Strathern puts it, 'to create the conditions for new thoughts' (Strathern 1988, 20). These conditions for new thoughts derive from an ethnography of ontologies – making it an ethnoarchaeology of ontologies.

Acknowledgement

First and foremost, we would like to thank Alina Sergeevna Ivanova and Inna Artemovna Uglova (pseudonymized), as well as their communities, for sharing their updated versions of their perceptions and thoughts on reality, which have contributed greatly to the arguments presented in this paper. We would also like to thank Ivanova for granting permission to use her photographs. We further thank our supervisors, Professor Andrew Jones and Professor Peter Jordan, as well as the peer reviewers for their valuable feedback and comments. Finally, we thank the EAZ editorial board, especially Professor Henny Piezonka, for the invitation.

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