From Cave to CAVE.
Immersion and Emersion in the Paleocybernetic Age

Curated by Michele Cometa and Margherita Fontana.

Deadline for full articles: September 1, 2025
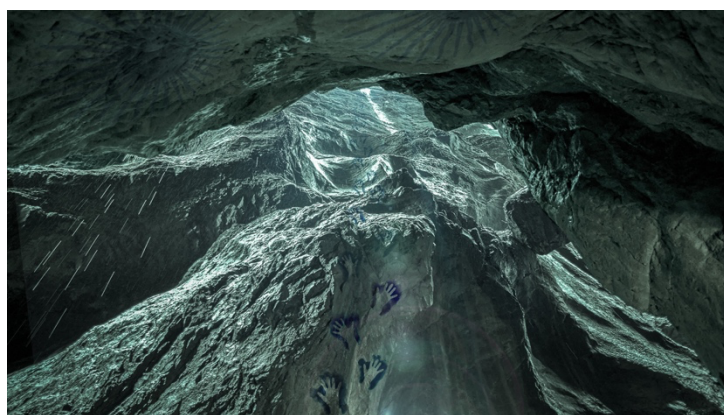

Figure 1 Frame from VR artwork "The Cave" (2022) by Adam Żądło and Jowita Guja. Courtesy the artists.

> So I call it the Paleocybernetic Age: an image of a hairy, buckskinned, barefooted atomic physicist with a brain full of mescaline and logarithms, working out the heuristics of computer-generated holograms or krypton laser interferometry. It's the dawn of man: for the first time in history we'll soon be free enough to discover who we are. (Youngblood 2000: 41).

With this striking and evocative visual metaphor contained in his groundbreaking *Expanded Cinema* (1970; 2000), Gene Youngblood articulated the prototype of the new-old humanity: disoriented yet animated by an intense, almost shamanic inner vitality, the paleo-cybernetic cavemen are hurled into the future, while returning to their "beginnings." Exploring a unique state of mind in which perception is heightened by a combination of technological devices and synthetic drugs, Youngblood envisions a complete integration between artificially and naturally constructed images. The distinction between human and technological, reality and virtuality, we would add, is to be simply out of date.

Building on this suggestion, the next issue of the journal *AN-ICON. Studies in Environmental Images* aims to explore the intersections between the deep past and hyper-technological futures, which converge on the same environmental and immersive ground. The title *From Cave to CAVE* plays on a simple pun, referencing both prehistoric caves and the advanced 360-degree viewing system curiously named CAVE, an

acronym for Cave Automatic Virtual Environment (Cruz-Neira et al., 1992).

Youngblood's work is but one of many attempts to interpret contemporary media through the lens of prehistory, which, let us not forget, is a nineteenth-century invention (Stavrinaki 2022) – and conversely, to understand prehistoric image-making through our embodied and pervasive relationship with (contemporary) media. It is also worth noting that in the aftermath of the II World War, prehistoric imagery has had a profound impact, particularly in the United States on contemporary art (Lippard 1983; Dryansky 2018) and visual culture (Mitchell 1998). Nowadays, the question raised by Palaeolithic cave "art" has become central to understanding fundamental issues in visual culture studies and aesthetics, making it possible to speak of *paleoaesthetics* – a philosophical approach that roots (prehistoric) image-making in the sensory, cognitive, and technological dimensions of human experience (Cometa 2024).

Moreover, this mirrored relationship between prehistory and modernity runs through aesthetics and media theory in the form of a fascination for the cave, which becomes a liminal zone between the philosophical allegory and the physical space (Carbone 2019). Film theory has often drawn an analogy between cinema and caves (Morin 1956; Baudry 1974), while this parallel has been revived by Werner Herzog in his 3D documentary *Cave of Forgotten Dreams* (2010) devoted to Chauvet complex (Clottes 2003). Conversely, archaeologists and palaeontologists have turned to cinema as a framework for interpreting the peculiarities of prehistoric image-making – in particular its immersive, emersive, and cinematic (Azéma 2013; 2021) qualities. Through both immersion and emersion, Homo sapiens confronts, transcends and transforms the rock surface: beyond the display and the frame, enveloping, embedded and multisensory forms of experience take shape (Sakamoto *et al.* 2020).

The immersive nature of the sensorial experience in caves makes them particularly suitable for digital adaptation using immersive technologies (Nechvatal 2009). However, it is not only the immersive quality that connects Upper Paleolithic cave art to modern modes of visibility; as noted above, virtual reality, as we know it today, emerged in the United States within a cultural context that reflected the impending dissolution of both the distant past and the near future (McKenna 1991). Painted and metaphorical caves have been reimagined in through digital media many times (Fontana, Pinotti 2022), dating back to the advent of VR, as designed by Jaron Lanier (2017). In 1995, American electronic artist Benjamin Britton presented *LASCAUX*, the first VR interpretation of the Lascaux cave. Since the "second wave" of commercial VR began in 2015, several virtual caves have been created for museological, educational, or artistic purposes. Relevant case studies are *Memoria: Stories of La Garma* (2020) by Rafael Pavon, an interactive VR experience based on the caves of the mountain La Garma in Northern Spain; *The Dawn of Art* by Pierre Zandrowicz (2020) devoted to Chauvet and enriched with an AR "Pocket Gallery (Bartalesi, Casini, Ducci 2021); and last but not least the first "digital twin" of Lascaux, presented in 2021 at the Cité de l'Architecture et du Patrimoine in Paris by Dassault Systèms. VR has also served the

scope of reinventing Plato's allegory, as it happens in *The Cave* (2022) by Adam Żądło and Jowita Guja, and in the AI-enhanced VR *I Know, We Should Have Talked About It Before* (2024) by the artist duo Bacci Moriniello.

Virtual caves represent an "immaterial" version of the many material facsimiles constructed to address the need to replicate the experience of physically being in the space, since experiencing actual cave art in person is nearly impossible due to its extreme fragility. Both "real" and "virtual" copies share the same condition of possibility, namely the creation of three-dimensional digital models that enable the design of environments open to free exploration opening up new perspectives on preservation and accessibility of this delicate culture heritage.

This call for papers for *AN-ICON. Studies in Environmental Images* invites contributions that explore the theoretical bridge between these two types of environmental images: those created at the dawn of human image-making and their contemporary counterparts. This issue welcomes contributions that investigate contemporary "caves," whether virtual – made possible by XR technologies (VR, AR, CAVEs) – or physical, as explored by artists, designers, and creators who feel the urge to revisit the prehistoric imagery.

Contributions might relate to the following topics

- **Prehistoric imagery and contemporary visual culture**: What are the possible remediations of prehistory in contemporary imagery?
- The relationship between **prehistory and modernity**: Why does prehistory emerge from modernity? What kind of images do such encounter produce?
- **Digital caves imaged by XR technology**: How can immersive new media reimagine caves? Are they products of fiction or tools of monumentalisation?
- **Physical replicas and digital twins**: What are their conditions of possibility? How do they relate to each other?
- **Cave imagery in contemporary art**: How have contemporary artists imagined immersive spaces, both IRL and virtual, that work with the idea of the cave? How is this geological fascination transformed through the hands of artists?
- **Metaphorology of the cave**: How are caves explored metaphorically? What ideas and objects do they end up symbolising?
- **Immersion and emersion in prehistoric imagery**: How did our ancestors design immersion and emersion, which are not only contemporary prerogatives?
- **Preservation of cultural heritage and immersive technologies in the case of cave art**: Can XR technology and digital tools succeed in preserving and reproducing the experience of being there?

Online Open Access Journal
"AN-ICON. Studies in Environmental Images"

Recent technologies (like virtual and augmented reality) have given new impulse to a type of images that negate themselves as such and that can therefore be named "an-icons". Traditional images are grounded in a material medium; they are separated from their context by framing devices; and they refer to something in the real world. By contrast, an-icons conceal their mediateness, ideally getting rid of any framing devices, and aim at constituting autonomous quasi-real worlds. The result is a radical "environmentalisation" of images that ask to be inhabited and experienced more than viewed and observed.

"AN-ICON. Studies in Environmental Images" is an online open access journal that investigates an-icons according to theoretical, historical, and practical perspectives.

→ **How to submit**

Full articles should be submitted by registering on *AN-ICON Studies in Environmental Images* platform. **Manuscripts that do not comply with the editorial guidelines will be desk rejected.**

Please find the submission guidelines and style sheet here: https://riviste.unimi.it/index.php/anicon/about/submissions.

For preliminary inquiries, please contact the journal staff at an-icon-journal@unimi.it

Bibliography

Azéma, Marc, and Florent Rivère. 2013. "Animation in Paleolithic Art: Recent Observations." *Palethnologie. Archéologie et sciences humaines* 5 (2013): 57–73. https://doi.org/10.4000/palethnologie.2094.

Azéma, Marc. "Prehistoric cave art: from image to graphic narration." *Paragraph* 44.3 (2021): 379–393. https://doi.org/10.3366/para.2021.0377.

Bartalesi, Valentina, Tommaso Casini, and Annamaria Ducci. 2021. "La grotta immersiva: Multimedialità del paleostorico tra disegno, fotografia, cinema e 3D." *Piano b. Arti e culture visive* 6, no. 1 (2021): 1–40. https://doi.org/10.6092/issn.2531-9876/14293.

Baudry, Jean-Louis, and Alan Williams. "Ideological Effects of the Basic Cinematographic Apparatus." *Film Quarterly* 28, no. 2 (1974): 39–47. https://doi.org/10.2307/1211632.

Carbone, Mauro, and Marta Nijhuis. 2019. *Philosophy-Screens: From Cinema to Digital Revolution*. Albany (N.Y.): State University of New York Press.

Clottes, Jean, ed. 2003. *Return to Chauvet Cave : Excavating the Birthplace of Art : The First Full*. Translated by Paul G. Bahn. London: Thames & Hudson.

Cometa, Michele. *Paleoestetica: Alle origini della cultura visuale*. Milano: Cortina, 2024.

Cruz-Neira, Carolina, Daniel J. Sandin, Thomas A. DeFanti, Robert V. Kenyon, and John C. Hart. "The CAVE: Audio Visual Experience Automatic Virtual Environment." *Communications of the ACM* 35, no. 6 (June 1992): 64–72. https://doi.org/10.1145/129888.129892.

Dryansky, Larisa. "Technology and the Prehistoric Imaginary in American Art of the 1960s and 1970s." *Res* 69–70 (Spring–Autumn 2018): 173–188. https://doi.org/10.1086/700413.

Fontana, M., and A. Pinotti. 2022. "From Cave to CAVE: Immersive Environments in the Paleocybernetic Age." In *Atti del convegno "Art Before Art. L'Uomo cosciente e l'arte delle origini. Con e dopo Carlo Ludovico Ragghianti"*, 107–121. Edited by Tommaso Casini, Annamaria Ducci, Fabio Martini. Lucca: Edizioni Fondazione Ragghianti.

Lanier, Jaron. 2017. *Dawn of the New Everything: Encounters with Reality and Virtual Reality*. New York: Picador/Henry Holt and Company.

Lippard, Lucy R. 1983. *Overlay Contemporary Art and the Art of Prehistory*. New York, N.Y: Pantheon Books.

McKenna, Terence. *The Archaic Revival: Speculations on Psychedelic Mushrooms, the Amazon, Virtual Reality, UFOs, Evolution, Shamanism, the Rebirth of the Goddess, and the End of History*. San Francisco: HarperCollins, 1991.

Mitchell, W. J. Thomas. 1998. *The Last Dinosaur Book: The Life and Times of a Cultural Icon*. Chicago: The University of Chicago Press.

Morin, Edgar. 1956; 2005. *The Cinema, or, the Imaginary Man*. Minneapolis: University of Minnesota Press.

Nechvatal, Joseph. *Immersive Ideals / Critical Distances: A Study of the Affinity Between Artistic Ideologies Based in Virtual Reality and Previous Immersive Idioms*. Saarbrücken: Lambert Academic Publishing, 2009.

Sakamoto, T., P. Pettitt, and R. Ontañon-Peredo. "Upper Palaeolithic Installation Art: Topography, Distortion, Animation and Participation in the Production and Experience of Cantabrian Cave Art." *Cambridge Archaeological Journal* 30, no. 4 (2020): 665–688. https://doi.org/10.1017/S0959774320000153.

Stavrinaki, Maria. *Transfixed by Prehistory: An Inquiry into Modern Art and Time.* Translated by Jane Marie Todd. New York: Zone Books, 2022.

Youngblood, Gene. *Expanded Cinema*. Fiftieth Anniversary Edition. 1970. New York: P. Dutton & Co, 2020.