ORIGINS OF PICTURES

KLAUS SACHS-HOMBACH / JÖRG R. J. SCHIRRA (EDS.)

HERBERT VON HALEM VERLAG

ANTHROPOLOGICAL DISCOURSES IN IMAGE SCIENCE
Klaus Sachs-Hombach / Jörg R. J. Schirra (Eds.)

Origins of Pictures

Anthropological Discourses in Image Science

Herbert von Halem Verlag
Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists the publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at http://dnb.dnb.de.

Klaus Sachs-Hombach / Jörg R. J. Schirra (Eds.)
Origins of Pictures.
Anthropological Discourses in Image Science
Köln: Halem, 2013

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ISBN 978-3-86962-057-2

http://www.halem-verlag.de
E-Mail: info@halem-verlag.de

TYPESETTING: Herbert von Halem Verlag
PRINT: docupoint, Magdeburg
COVER DESIGN: Claudia Ott Grafischer Entwurf, Düsseldorf
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Anyone talking about pictures by necessity refers to those using pictures. It is therefore essentially the competence of using pictures that has to be considered. Such competence is not common among higher developed mammals, at least as far as we know today. This fact raises the question whether and to what extent that ability has to be conceived as a strictly anthropological one. In an interdisciplinary approach, the first international conference of the Society for Interdisciplinary Image Science (GiB) titled Origins of Pictures has taken a closer look at the role of pictures for the conditio humana.

The primary goal of the conference was to present empirical findings of the origins of picture uses, considering in particular research in paleo-anthropology, archeology, cultural anthropology, and developmental psychology. Furthermore, those findings were to be related to philosophical considerations concerning the conditions of the conceptual formation of picture competence.
TILMAN LENSSSEN-ERZ

The Dark Ages of Picturing: Does Art Originate from Caves? A Synopsis

1. Prologue

In recent years, living in the city of Cologne provided interesting cases to study the cultural and social significance of light and darkness.

In 2007, the cathedral was embellished with a new coloured window for its main southern transept. It was the last one to be put in place after the destructions of World War II. The celebrated but downright secular Cologne artist Gerhard Richter was appointed to design a window for the 113 m² window pane. Eventually, he proposed a window comprising more than 11,000 handmade glass squares in 72 colours. This erratic yet systematic colourfulness stands in stark contrast to the other windows of the cathedral showing saints and scenes from the gospel, since it is entirely abstract. Accordingly, the very conservative cardinal of Cologne objected to this proposal, but despite his hierarchical position he had no power to veto it because the »Domkapitel«, the institution exerting actual power over the cathedral, approved of it. In the ensuing public debate, a key argument of the proponents of the Richter window was the way the light plays through this window – especially if the midday sun shines through it (fig. 1). Light, it was argued, is among the basic values in many religions. Particularly Christianity, as is evidenced by the first words of the Book of Genesis, sees light as constitutive for humanity, and Jesus calls himself »the light of the world« (John 8, 12). Inspired by this significance of light,
the cycle of seven operas on the divine creation by Cologne avant-garde composer Karlheinz Stockhausen, that had its premiere in Cologne in 2011, was named »Licht« (light).

In another case, Cologne city authorities tried to use light to deter the »creatures of the night«: Over the last three years, the Brüsseler Platz (Brussels Square) in the densely populated centre of town had become a free open air party zone crowded by young folks throughout the night in summer – something Tinat (2005) describes in »The Spanish fiesta«. The residents in the vicinity of this square were bothered by the noise from up to several hundred people at night and demanded countermeasures to be taken by the city authorities. Since neither attempts at mediation nor proposals of alternative venues made the young people move somewhere else, the city eventually decided to expel them – with strong light. Several 300 W lamps that automatically switch on at 10pm were installed. This, however, to the disappointment (and anger) of the residents did not deter
the ›revellers‹. The social component of being in this square at night and the advantages of being seen there outweighed the inconvenience of the square being illuminated, even though during daytime no-one goes there for partying. Consequently, the lamps are no longer used.

2. Art in the light of darkness

When hypothesising about the origins of art, we have to tackle a cognitive problem that I want to address in my paper. It is not the widely debated problem of how the early humans got the idea to create 2D and 3D representations of real things, mainly animals. Instead I want to look at our cognitive bias of today that whenever we encounter earliest art, it is always linked to caves and darkness. The very first known systematic signs on the Blombos ochre (Henshilwood et al. 2002) were found in a cave (albeit less deep and dark than the European decorated caves), the earliest figurines from southwestern Germany were found in caves (Conard 2009), and the earliest known paintings found at Grotte Chauvet were so well hidden that they were not discovered until 1994 (Chauvet et al. 1995). In all cases, there is a cogent juncture with the darkness or at least dim light of an inner chamber, and accordingly, the beginnings of art have a ›dark connotation‹. In consequence, in public perception, prehistoric art is seen as cave art even though such prehistoric sites are only few hundred worldwide, whereas of art in the open there are hundreds of thousands of sites. The impression of darkness pervading earliest art is enhanced by photographs of the mentioned art products: While we are told that the Chauvet paintings are in a dark cave, the pictures are shown well lit in a way an ice age artist has never seen them. The Suebian figurines on their part are usually shown against a pitch dark background (e. g. Rau 2009), which of course is chosen to make them better discernible, but the subconscious connotation is darkness again. Would we understand the beginnings of art differently, if we looked at it from the ›bright side‹?

In one of the basic narrations of European political philosophy, the Allegory of the Cave in Plato’s The Republic (Plato 1997: 225 - 228), the contrast between the darkness in a cave and the light outside is used to succinctly illustrate how and why (sun)light is the source of knowing, making the cave a place where deceiving shadow-pictures make people have incorrect ideas of the real world. Whereas Plato intends to expound on the ethics of
politics, the power of the drastic picture he evokes stems from the emotions the dark lifeworld is able to stir up in his audience, because the confrontation with darkness versus light is among the few reliably universal human experiences. This paper intends to give a synoptic assessment of the parameters that characterize circumstances under which art may have been produced – both in the darkness of caves and in the light of open spaces.

Even though there are equal dimensions of dark and light, i.e., night and day in our world, evolution has made (virtually) all primates dependent on light to accomplish most of their doings. In particular, both the development of human technology and art are unthinkable in darkness. The human optical system does not include the tapetum lucidum which nocturnal animals need to boost low light (e.g. Lesiuk/Braekevelt 1983; Downey 2010) so that human vision in darkness is comparatively poor.

On the other hand, humans need darkness to maintain their biological rhythm. It is also vital for their metabolism because darkness regulates the melatonin production. The lack of entirely dark periods of time can therefore cause various human illnesses (Navara/Nelson 2007). Humans use the dark periods, i.e., nights, mainly for sleeping and the recovery thus achieved. Outside industrialized societies, as a rule, nights are not used in any considerable dimension for economic and productive processes, but, besides sleeping, largely for various kinds of social interaction (Hauser 2005; Tinat 2005), some hunting and fishing practices aside. Therefore, what has surfaced in recent years as an »anthropology of the night« (Schnepel/Ben-Ari 2005; Galienier et al. 2010) mainly studies sleep and dream while it also highlights the cultural constructedness of the concepts »night« and »sleep«.

Nonetheless, the sensual apparatus of anatomically modern humans (AMH) is adapted to activities in light whereas activities in darkness are restricted. As Schnepel and Ben-Ari (2005) and Galienier et al. (2010) have shown, darkness and night have strong emotional connotations across cultures, and often imply fear and danger. Light, by contrast, has cross cultural positive connotations with religion and, as Weightman maintains, »an inner light outweighs outer darkness« (Weightman 1996: 59). The reservation against darkness is not surprising since vision is the most vital sense for humans to obtain information about their environment. If vision is hampered, one may easily feel being betrayed by one’s other senses because darkness creates an endless space that is difficult to control since it cannot be screened visually.
Table 1 lists the differences darkness makes as opposed to light for the emotions, which always existed with the human being, and, as universals, were always influential on the motivations for any kind of activity of our species.

<table>
<thead>
<tr>
<th>In darkness – caves</th>
<th>In light – shelters, plates</th>
</tr>
</thead>
<tbody>
<tr>
<td>human senses not adapted</td>
<td>human senses well adapted</td>
</tr>
<tr>
<td>sensual deprivation</td>
<td>all senses equally stimulated</td>
</tr>
<tr>
<td>primacy of acoustic and tactile senses</td>
<td>primacy of visual sense</td>
</tr>
<tr>
<td>darkness, often with negative cultural connotation</td>
<td>light, often with positive cultural connotation</td>
</tr>
<tr>
<td>extreme locality: provides protection but also danger</td>
<td>insignificant place character: offers neither special protection nor danger</td>
</tr>
<tr>
<td>no communication with surroundings</td>
<td>unproblematic communication with surroundings</td>
</tr>
<tr>
<td>independent of daytime and season → isolated from natural cycles</td>
<td>changes with daytime and season → subject to natural cycles</td>
</tr>
<tr>
<td>introversion</td>
<td>extroversion</td>
</tr>
<tr>
<td>speciality</td>
<td>normality</td>
</tr>
<tr>
<td>part of a world with a lot of imagination</td>
<td>part of a real lifeworld</td>
</tr>
</tbody>
</table>

Tab. 1: Emotions have different characteristics whether a person sojourns in light or in darkness. Accordingly, localities with art in either surroundings influence the state of mind of a person in specific ways.

The dark spaces of caves are highly suited for setting a human into a state of liminality (fig. 2; cf. LEWIS-WILLIAMS 2002, 2010b) just as when moving from day to night (e.g. STEGER 2010: 841): Between two worlds of in and out; while walking on a ground that links him/her to the real world outside, the person is lead into the inner of the world as we know it. Only special precautions with light allow humans to explore this inner world, which may also give access to the psychological interior of a person, such as expressed in the term »dreamplace« for caves (BENOZZO in press). The sensory deprivation in such interior spaces generates sensual stimuli and sets the human brain into a working mode that evokes own inner worlds (LEWIS-WILLIAMS 2002; HANDELMAN 2005: 252). In the »underworld« of a cave, few of the senses and little of the experiences of the daytime lifeworld maintain their importance, inside a cave the »rules of everyday« are not in operation. That the darkness of the night is not necessarily considered to be threatening or dangerous is evinced by the Inuit of Baffin Island, who
even appreciate it, e.g., when hunting seal at ice holes (Galinier et al. 2010). Another indicator for the relativity of darkness are the various definitions for twilight in western science, where on a late winter day at ca. 50° N the astronomical twilight differs from the nautical by more than 20 minutes and the nautical in turn differs from the ›civil twilight‹ by more than 30 minutes (cf. www.wunderground.com).

Fig. 2: As a convenience for contemporary visitors, the ice age caves (here: Bedheilac) are lit to form a magic scenery – that would not have been possible to evoke with the light sources available in the Upper Palaeolithic. Photo by the author.

Nevertheless, across many cultures darkness (of the night) carries numerous negative connotations (Schnepel/Ben-Ari 2005) due to the potential presence of dangerous creatures (real and imaginary), because senses may be deceived easily or because of a loss of control of what is happening around oneself (Galinier et al. 2010). While this relates to the darkness of the night, the darkness of deep caves has some additional characteristics. Not only is a night virtually never as dark as a cave, but the cave’s darkness is endless. Unlike darkness at night, which is part of a natural cycle and vanishes on its own, the darkness of caves has to be mastered continually. While night is part of a self-organized system that is ›automatically‹ counterbalanced by the light of the day, caves constitute an entirely separate environment that can only be counterbalanced by human technology and ingenuity. Through the spatial seclusion, which exactly defines the space of darkness, and the barring of the cave from all natural cycles
such as day and night or the seasons, and in deeper caves even from temperature fluctuation, this is a very specific world of darkness—and only of darkness. Individuals can only interact with the given properties of a cave, since there are no physical surroundings or wider contexts that could be chosen to become part of a use pattern (except some internal features such as stalagmites or stalactites). Only imagination allows widening the space. The extreme character of a cave is further underscored by the fact that on the one hand it can provide protection from attackers and from harsh weather conditions. On the other hand, it can be dangerous due to competing users (cave bears in particular) or the danger of getting lost in a labyrinth if the light extinguishes. None of these properties is present to a similar extent at sites in the open.

3. Art in interaction with space and mobility

For hunter-gatherers, whose livelihood generally depends on mobility, restrictions to their movements have special weight. Accordingly, for the Baffin Island Inuit one of the great disadvantages of the long dark winter nights is the limitation they imply for their mobility (Galinier et al. 2010: 832). In caves these limitations are even more drastic since mobility is not only particularly difficult and dangerous, but also because inside a cave there are only two options for moving: either in or out.

Usually there were few, if not only a single entrance to the decorated caves even at the time they were originally used. Thus a certain control over who enters the cave was possible (Lewis-Williams 2010a: 227–231, 2010b) (or, by means of reading tracks, who has entered the cave). Such control could be physical, e.g., the entrance could be blocked or hidden with branches. In an open landscape (fig. 3), such physical control would have been much more costly and may thus have been largely symbolic. This could have been implemented by placing a taboo or sacred restriction on certain places or regions, as is practised among Australian Aboriginals (e.g. Berndt/Berndt 1992: 141, 142). Moreover, a cave as a comprehensive spatial array will always remain hidden and invisible; unlike an open air site, it is impossible to see a cave in its entirety. Accordingly, in all likelihood the mental map of a cave will differ even more from individual to individual than with space in the open. Thus a cave will always remain a particular enigma and mystery for which, again, everyone construes his or her own interpretation, based on the individual mental map. Once one has entered
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### Tab. 2: Space and mobility are also subject to specific restrictions in the dark as opposed to light, and provide only few if any new options that increase agency.

<table>
<thead>
<tr>
<th>In darkness – caves</th>
<th>In light – shelters, plates</th>
</tr>
</thead>
<tbody>
<tr>
<td>enclosure – access control</td>
<td>openness – little access control</td>
</tr>
<tr>
<td>physical access control</td>
<td>predominantly symbolic access control</td>
</tr>
<tr>
<td>hidden, invisible</td>
<td>visible</td>
</tr>
<tr>
<td>few alternatives to the choice of place (there is not an endless number of accessible caves)</td>
<td>many alternatives to the choice of place (normally a region will provide many suitable shelters, etc.)</td>
</tr>
<tr>
<td>competing users (cave bear, cave hyena, perhaps cave lion)</td>
<td>no competing users per se</td>
</tr>
<tr>
<td>restricted use options</td>
<td>diverse use options</td>
</tr>
<tr>
<td>restricted access to natural infrastructure</td>
<td>unrestricted access to natural infrastructure</td>
</tr>
<tr>
<td>little (if any) interaction with the landscape</td>
<td>strong interaction with the landscape</td>
</tr>
<tr>
<td>forms a micro-landscape of its own</td>
<td>always a small section of a larger landscape</td>
</tr>
<tr>
<td>goal: ultimate point of mobility, from here there is only a way back</td>
<td>stage: a station during mobility—from here one moves on (not necessarily back)</td>
</tr>
</tbody>
</table>

Into a cave, the spatial phenomenon it represents dominates human agency. There are restricted use options due to lack of light and the restricted access to natural resources (only water will usually be rather safely available). The inner landscape of the cave allows only a relatively narrow spectrum of interaction, including art production with parietal figures or clay figures, wedging rocks or bone splinters in crevices and fissures and the deliberate presentation of animal skulls (BÉGOUËN et al. 2009), breaking of stalagmites or making sounds in places with suitable acoustics. Only as an exception from a rule would people spend time in dark caves for mundane activities. (BÉGOUËN et al. 2009). Usually, a cave would be a place for mobility that was punctuated by ritual and/or artistic activities (cf. LEWIS-WILLIAMS 2010b).

Accordingly, decorated caves were the ultimate goal of special moves which by their indispensable logistic precautions (e.g. provision of fuel for light) alone required different mental preparation than any other move in the open landscape. Every visit to a decorated cave that we can reconstruct today, certainly was not the coincidental result of an ad hoc decision on passing by but rather the implementation of a plan by someone who had a goal firmly in mind. And as if to corroborate the ultimacy of the location, often places for presumed ritual use are at the point farthest away from the entrance to
a cave (at least in Magdalenien sites; Arias 2009). Visits to caves therefore were to carry out acts that would not have had the same meaning had they been done in the open.

This scenario would still meet with Lewis-Williams’ (2002) postulate that the beginnings of art (at least in southwestern Europe) are by necessity linked to the use of caves where people, who had had visions, tried to fix these visions on the walls to harness their powers. According to his research, there is a cogent link between the origins of pictorial art and the darkness of caves. But is it indeed likely that beginnings of such a complex system of communication should by necessity be linked to the restrictions placed upon the human being as in darkness? Would we believe that the origins of language or music have developed under most restrictive conditions? Could they have been ›invented‹ under any other condition than the full capacity of the human potential that, as it comes to eye-hand coordination, only unfolds in the open and in light – as suggested by the technological development?

4. Creations in the dark

From the lower Palaeolithic, our human ancestors created tools which have strict formal characteristics, e.g. a three-axial symmetry of handaxes that
requires a great degree of skill, experience and practice to be shaped from a natural rock. For producing such tools, very clear vision is necessary since each strike with the hammer stone needs to be carried out with great precision. The long development of tools from earliest cleavers which evolved into handaxes and finally progressed through to a Solutrean laurel leaf shows how conceptions, skills and abilities grew as humankind matured. Hand in hand with this development grew the visual control of manual processes, i.e. eye-hand coordination became more and more sophisticated. A similar course of development has to be presupposed for the evolution of art: Despite the lack of any archaeological evidence for early and imperfect attempts, it is inconceivable that pictures such as those of Grotte Chauvet should have come into being without any preliminary practice. The skills for art production must have been trained under advantageous conditions which entail adequate space, light and access to various resources. With the exception of space, none of these conditions are present in a cave. Moreover, there are of course significant differences for art production if one eventually works in darkness instead of light.

<table>
<thead>
<tr>
<th>In darkness – caves</th>
<th>In light – shelters, plates</th>
</tr>
</thead>
<tbody>
<tr>
<td>visits require planning in advance</td>
<td>ad-hoc visits are an option</td>
</tr>
<tr>
<td>time of day and season are irrelevant</td>
<td>time of day and seasons change conditions and options</td>
</tr>
<tr>
<td>context unchanged (normally over decades and longer)</td>
<td>context changes at least on seasonal level</td>
</tr>
<tr>
<td>sudden disturbances unlikely</td>
<td>sudden disturbances possible at any time</td>
</tr>
<tr>
<td>possible time pressure due to fuel restriction</td>
<td>no resource related time pressure</td>
</tr>
<tr>
<td>acoustic signal production enhanced to some extent</td>
<td>signal enhancement rare</td>
</tr>
</tbody>
</table>

Tab. 3: There are still significant differences between art production in dark caves and daylight, even if the problem of illuminating the cave is solved.

For the beginnings of producing pictorial art, i.e. for its ›invention‹, it did not suffice for an early AMH to simply decide to fix visions on a surface (Lewis-Williams 2002, 2010b). In particular, paintings (and the oldest two-dimensional pictures we know are paintings; cf. Grotte Chauvet) require a rather complex technological process to acquire all the necessary tools and resources (fig. 4). It is inconceivable how anyone should have prepared pigments, colours and brushes, etc. and ventured into a dark and danger-
ous cave with a torch without knowing what he or she would eventually do and create with these means. The fixation of visions as postulated by Lewis-Williams must not be questioned in general, but it can only have taken place when skills and resources were already fully developed; they were not the beginnings of art.

![Fig. 4: In many regions across the world (here a sample from Daureb/Brandberg, Namibia) it is rather easy to find rocks of haematite and ochre that can provide strong pigments, but it is much more difficult to mix it with adequate liquids to obtain paint that stays on the rock for millennia. Photo by the author.](image)

Furthermore, particularly the aesthetic and stylistic perfection of the earliest parietal art in Chauvet has led observers to doubt its ancientness (e.g. Züchner 1998), and hardly anyone would believe that these pictures were the very first attempt to try and depict those famed animals – according to the critics of the early chronology, it would have required millennia of previous practice. The long chronology for the Grotte Chauvet paintings is widely accepted today, and accordingly, it has to be considered that those who created these works of art more than 30,000 years ago (same as those who painted the so-called »Apollo 11« slabs in Namibia shortly afterwards; fig. 5; Wendt 1976; Vogelsang et al. 2010) were in full command of the knowledge, abilities and dexterity required. Such skills are hardly developed without preliminary practice. This would have occurred in light as they are based on sophisticated eye-hand coordination. Extended periods of experimentation and testing must have preceded the creation of pieces of art such as the »Venus« of Hohle Fels (Conard 2009), the paintings of Grotte Chauvet (Chauvet et al. 1995) or the sculptured bisons of Tuc d’Audoubert (Bégouën et al. 2009). Only in a few
places, there is evidence that productive processes or »everyday« life around a campfire took place in dark caves (such as in Tuc d’Audoubert or Enlène; BÉGOUËN et al. 2009;ARÍAS 2009: 277) or that carved objects, engraved slabs or half finished pendants of teeth and bone were made there (such as in La Garma; ARÍAS 2009: 249). These are clear exceptions, restricted to the Magdalénien.

Further evidence for the origins of art in light may be that the subjects are mainly diurnal animals and thus part of an illuminated world. The cave bear, with which the humans in part had to »share« the caves, is not an exception, as it hibernated in the caves but did not lead its wake life there. So it may be seen as a corroboration for the daylight association of the art that the engraved owl in Grotte Chauvet (CHAUVEt et al. 1995: 41) and those in Les Trois Frères (e. g. LEWIS-WILLIAMS 2010), typical animals of the dark, are absolutely exceptional motifs in Palaeolithic art. Interestingly, today, across many European and African cultures, owls are typically associated with death, thus giving the darkness in which it becomes active an additional frightening notion.

However, once a place in a cave was chosen to be embellished with pictures, an unparalleled focus on the act itself was possible – provided the fuel for light sufficed. The clear seclusion of the place, its absolute protection from any external influences and the ever unchanging surroundings would have created a sense of exceptional concentration. In this atmosphere, the creation of parietal art (or sculptures in mud) would bring about the only
actual change to this otherwise extremely static environment, and thus become even more powerful. In addition, it has been pointed out that the peculiar acoustics of many locations with cave art may have contributed to the power of the visual art in a way not to be achieved in open air sites (e.g. Reznikoff/Dauvois 1988; Waller 1993). By fusioning visual and acoustic stimuli in an environment that sparks imagination, cave art becomes a sophisticated multi-media invention. Its single components, i.e. the pictures and sounds, probably had their own previous evolution, arguably in different context.

The likely starting point for such creative »inventions« could have been everyday situations without a predefined frame with discourses that can touch upon any topic and in which there is no control over who participates or who is entitled to contribute. They originate at a mundane place (a campsite), and any member of the group, irrespective of age and sex, could have participated. Such discourses can be the background to routine activities, which is why they are unpredictable and open-ended. This is to say that the production of pictures and sounds (most pregnant in the Aurignacien bone and ivory flutes from Swabia; Conard et al. 2009) very likely had their respective origins in informal gatherings of people in their everyday life during which – by experimentation and coincidences – innovations such as colours, pictures or flutes were »invented«. Only when they were well established and well mastered in everyday life were they chosen to adorn the probably sacred space of the caves. I argue that it is the informal mundane gatherings around a fire, where a high potential of creativity is set free (Lenssen-erz 2008).

5. Grasping darkness

Even though the optimum conditions for the production of art are the same as for optimum »consumption«, the restrictions that darkness imposes on a producer and on a consumer have different consequences. Viewing pictures in a perpetually dark environment with insufficient and unreliable light sources makes viewing an active process in which more than in daylight the imagination of the viewer constantly »re-formulates« what is being perceived.

The synopsis in table 4 summarizes the specific impact art in a dark cave has on a viewer. As Lewis-Williams (2002: 220 - 223) has pointed out, lighting effects make pictures »come alive« and may bestow images with a special
In darkness – caves | In light – shelters, plates
---|---
artificial light | natural light sources
light effects | no light effects, light is predictable
pictures appear and disappear with light | pictures can be seen continuously
→ pictures are »alive«, dynamic | → pictures are »static«
→ pictures are less reminiscent of artefacts | → pictures are more easily accepted as artefacts
colours may be weak in the dim light of a lamp or torch | colours are strong in daylight
art-»consumption« regulated | art-»consumption« unregulated
very little redundant visual information is perceived | much redundant visual information is perceived
→ no pre-defined context | → clearly pre-defined context
no encounters of routine hunter-gatherer activities | possible encounters of routine hunter-gatherer activities
all senses are required/at high alert/challenged | senses in everyday mode → creativity
→ a push for creativity at a normal level
light is a necessity for survival but requires human interference | if it falls dark, light comes back on its own, no need for human interference
light is of utmost importance but most unreliable | light is the most reliable element because it cannot disappear forever

Tab. 4: Differences of art perception in dark and in well lit environments. It is only at this juncture where darkness generates fields of relevance that are hardly accessible in daylight. This may be an important raison d’être for cave art.

power that may be relevant for the viewer. This synopsis also shows that at the level of perception only, darkness may add further qualities that would seem to be an enrichment not accessible in open air sites. Even the fact that colours may appear to be less bright in the dim light of a torch or lamp may be part of the dynamics that the pictures in caves gain as colours become brighter if the light moves closer. At the same time perception is restricted due to the remote location of the art panels so that each viewing can be carefully orchestrated. Finally, light is significant not only because of its effect on the pictures but also because of its indispensability and vulnerability. This also emphasizes the significance of the human agency that becomes manifest through mastering this element. Two factors of dependency in particular intensify for those venturing into a deep cave: first, their »unproblematic interaction« with those supernatural forces that they most certainly associated with the cave (Lewis-Williams 2002), and secondly, the ability to make
and control fire. In the open, this significance of fire as a light source is not as pervasive since it never takes more than a few hours of waiting before natural light returns.

The challenge for human senses implied by a visit to a cave amplifies attention to perceived stimuli. This alertness may prompt higher levels of creativity, and even though it was argued above that, for the ›invention‹ of art, the creativity of a group in informal gatherings may have been constitutive, in a cave, the creativity of the individual may be activated in a particular way. Thus, from the ›invention‹ in a group-process in everyday context of producing just any kind of 2D-picture of some 3D-object, the cave environment enabled the ›cave artist‹ particularly creative works of art, elaborated individually on the initial invention.

All these special features would seem to be sufficiently significant to push Upper Palaeolithic people to use their abilities for picturing in dark caves and to maintain this tradition until the end of the Ice Ages. The reasons for the abandonment of the caves for purposes of art production are still a matter of speculation. Taking into account the apparent significance that the painted caves must have had, it is likely that grave reasons as well as powerful compensation by other ritual means caused the abandonment.

In view of the question of the origins of art, the ancientness of art in the open needs to be addressed. Up to now only engravings (petroglyphs) have been discovered from the Pleistocene and none of these have been dated to the earliest period of art production, the Aurignacien, but mainly to Gravetien and Solutreen (LORBLANCHET 1997: 29 - 36; ZILHAO 1998). Thus they are several thousand and even more than ten thousand years younger than the oldest art. However, this does not proof that no painted art in the open was made earlier than that (e.g. as early as Chauvet) since paintings would in all likelihood not have withstood weathering in the open over more than 30,000 years (including the last glacial maximum). Also the oldest African pictorial art, the slabs of the so-called Apollo 11 grotto in southern Namibia (fig. 5; WENDT 1976), dated safely to the latest Middle Stone Age of around 30,000 years ago (VOGELSANG et al. 2010: 214), must have been created in the open, because there are no natural caves in this region. These are drawings in which pigment was used as a crayon. This would actually make colours even more vulnerable since pigments do not intrude into the porous rock texture (as is the case with liquid paint that stains the rock substance). The colours, however, were protected in the deposits of a shelter. All other painted prehistoric art of Namibia is parietal art from the middle to late Holocene (LENSSEN-ERZ
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2001). At any rate, the earliest pictorial art in Africa dates from around the same time as the earliest European art at Grotte Chauvet, and few would postulate a mutual influence. Only recently a synoptic study of the signs in ice age caves (Von Petzinger 2009) was used to claim, reaching a wide audience, that a common human alphabet spread from Africa around the world (Ravilious 2010). However, this claim can be dismissed, since – beyond the similarities of geometric signs all over the world – it ignores all temporal sequences of the appearance of these signs and suggests a uniform sign set for all the different languages on earth. Most contradictory to all we know about the spread of AMH from Africa today, there is no justification to state: »Does this suggest that these symbols travelled with prehistoric tribes as they migrated from Africa? Von Petzinger and Nowell think so« (Ravilious 2010: 34). Rather than sufficiently explaining the co-occurrence on all continents of certain signs or of human art production (which cannot be understood independently of the signs), it evokes a biblical migration story. Therefore the early European and the similarly early African pictorial art traditions can be accepted as independent regional developments evincing a certain stage of development in the human race. As there are hardly any caves in southwestern Africa, the scenario of Lewis-Williams (2002) for the origins and genesis of European art in caves does not apply here (which he does not claim).

6. Conclusion

This paper does not expound on the physical, neurological and psychological preconditions necessary for the earliest anatomically modern humans in Europe to start art production. Instead, it focuses on the contextual conditions of the surroundings that can be reliably reconstructed and are linked to the use of deep caves, on the one hand, and the ordinary lifeworld in the open landscape on the other.

Pictures in daylight are usually present in the run-of-the-mill of everyday as they are found amidst the real lifeworld. This makes them part of the everyday realities and causalities – notwithstanding their non-utilitarian function – and they could have been encountered and viewed within the context of day-to-day routines and activities, e.g. while hunting or gathering. Accordingly, pictures in daylight were closer to the people and had a greater presence in normal life. Cave art, on the other hand, is distanced from these everyday realities. Due to the hidden and dangerous location, cave art was
nothing that one coincidentally would come upon, such as during hunting or gathering. Without specific preparations and precautions, no-one could go into a deep cave.

Moreover, open air art could not be forgotten such as art in a cave, whose entrance could vanish by natural processes (overgrowing, landslide etc.) or could be forgotten when those who knew about it moved on or died. In view of the small scale societies that inhabited Europe until the end of the ice ages and in view of the hidden character of many of the caves, there may have been only rather small numbers of people at any one time who knew about the location and significance of the art, thus making this knowledge particularly vulnerable. Could this be one of the reasons why art in daylight was practiced over millennia, while cave art ceased with the end of the Pleistocene? It cannot be pure coincidence that many of the decorated caves fell to oblivion for millennia until they were rediscovered in the 19th and 20th centuries, first by coincidence and later through systematic and dedicated research.

Due to their open character, pictures in daylight can shape communication among humans. For this discourse the concepts, signs and powers of the »supernatural« were used as a device and had their place among the subjects and rituals of art production. The audience of art in the open was to a certain extent other people, whether intended or not, who could visit the pictures at any time, without further preparation, guidance or control. Communication could have been delayed – a delay may even have been implied intentionally since the pictures are so durable – and this added sophistication and new options to the exchange of information among individuals.

By contrast, pictures in caves may much more have been a dialogue between humans and the »supernatural«, led by people with extraordinary faculties and in an extraordinary mode (cf. lewis-williams 2002, 2010a). In order to lead this dialogue, people moved beyond the experiences of everyday to a place that was visited exclusively in order to fulfil this intentional, well planned and clearly preconceived act. Whoever wanted to refer to this dialogue later on, needed to accomplish a similarly well thought-over act, involving similar preparations and precautions. But it would not be possible to relate directly to this former dialogue with the supernatural out of normal behaviour of everyday. Caves were the ultimate goal of unidirectional mobility, where important loci are often in the deepest parts, farthest from the entrance (e.g. arias 2009). Moreover, caves obviously allow and require strict control over who enters and when.
Because of these restrictions, cave art production, as part of very special ritual behaviour (Lewis-Williams 2002, 2010a, 2010b), may only have been a development out of daylight ritual and art, a derivation from behaviour that was not as other-worldly since it was interwoven with the places of everyday life. This is corroborated by the character of rock art sites in daylight that are stations in a continuum of landscape and in the flow of life. In the open, the immediate interaction between pictures, the site and the natural surroundings transform the landscape into a more tangible ingredient of the meaning of the art. The changes in the landscape during the day, throughout the seasons and the changing climate allowed direct interaction with the art production. Additionally, pictures in daylight could be produced more spontaneously at any point in time so that those who were present at the moment of production may more likely have been a coincidental choice than in a cave. Art in the open would have enabled to satisfy any ad-hoc need for ritual or ceremony, e.g. healing or mediation of social conflict within a shorter time frame. This made art more useful for social management because it could be implemented any time at any place to influence social relations. Art in natural light would not only be at the beginning of artistic creations, but in a sense, this art was also more democratic (Lenssen-Erz 2004: 12). Ever since art was with the AMH, it was with and amidst people, as is evidenced by vast amounts of mobile art objects, and this means for parietal art in the open daylight that this, too, may always have been there, and, as the saying goes, for this art we must not take the absence of evidence as evidence of its absence. To the same extent as swimming cannot have been invented (learned) on dry land, art cannot have developed in the dark – art needs light in as much as swimming needs water. Accordingly, the origins of art were not the dark ages of picturing but instead a bright time for really bright people.

References


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Liberating the concept of immersion from the technical and digitally-orientated rubrics under which it is often thought, What does a Chameleon Look Like? indicates the concept’s applicability throughout the humanities. It assembles recent interdisciplinary work on immersion as technique and cultural topos: While the human-machine relationship has long been one of fascination and utopian positivism, the advent of visual technologies such as television in the 1960s created a certain uneasiness towards immersion, or indeed an outright fear of it. As our societies become increasingly technologically determined immersion has become a pervasive phenomenon. In the 1990s the notion of immersion merged with discussions on artificiality and the aestheticization of everyday life. Not technology per se, but rather the consumer worlds that it constructs were the focus of this critique of the spectacle and a ›society of immersion‹. Likewise, technology has become conceptualized as a second nature, albeit one that is both internal and external. Subsequently, debates around human-computer-relationships (HCI) returned – although this time with a focus on immersion as a basic human capability.

What does a Chameleon Look Like? explores the concept of immersion as extending far beyond the remit of virtual reality. This volume provides enquiries into the historical and contemporary significance of immersion and offers new perspectives on aesthetics, technology and ethics.
Enacting Images is devoted to images as they can mobilize cognition and theorizing. Though we can speak of a pictorial turn now that images have become a distinct and full-fledged topic of investigation, some may continue to cling to the impression that images should still be considered within a fundamentally representationalist framework.

As an alternative, the enactive approach provides a conceptual setup within which images, beyond their informational, immersive, and aesthetical power, can be considered as being the manifestations of a new epistemic access to the world. The present volume is a collection of essays that reflectively investigate the theoretical prerequisites, scope, and limits of enactive approach.