BRIEF REPORTS

Perspective on perspective in Palaeolithic art

By JAN B. DERĘGOWSKI

It is asserted that Palaeolithic artists had a notion of pictorial space and perspective.

Figure 1a is seen as that of two overlapping triangles: the triangle on the right is behind that on the left. The figure presents a hint of pictorial space as shown below (1a'). Figures 1b, 1c and 1d show three pairs of discs *known to be equal.* Discs of pair b which are equal are seen as equidistant from the viewer. Discs within pairs c and d are drawn unequal and are therefore not seen as equidistant from the viewer. Those of pair c have the same 'spatial drift' (to the right means further away) as the triangles. The drift of those of pair d is contrary to that of the triangles. An analogous but enantiomorphic relationship would obtain if the triangle on the right overlapped that on the left.

Pictures showing such spatial concord as that between the triangles and the discs in pair c strongly suggest that the artists who created them appreciated pictorial depth and entertained a notion of perspective.

The cave of Altamira is decorated with many outstanding Palaeolithic paintings (Breuil and Obermeier 1935; Guinea 1979). On the ceiling of the hall a number of animals is depicted, of which bison (sixteen portrayals) are by far the most frequent. Some of the bison are shown in unusual curled-up poses, but the majority (twelve) are upright. Comments presented below are based on depictions of individual animals of the latter group, made by Breuil (Breuil and Obermeier 1935). All the references to plates made here are to the plates of that volume.

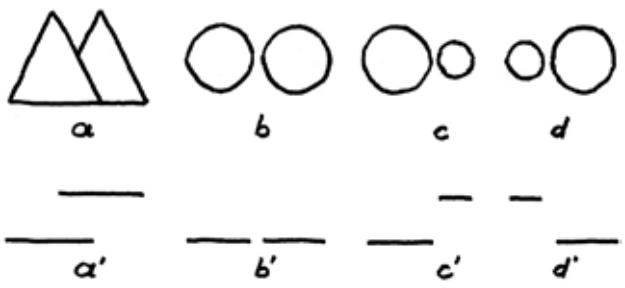

Figure 1. *Top row: views 'face on' of (a) two overlapping triangles; (b) of two identical discs at the same distances from the viewer; (c and d) of two identical discs at differing distances from the viewer. Bottom row: putative spatial deployment of a' triangles, and (b', c' and d') discs.*

Figure 2 shows a tracing of a bison's forelegs (Plate XV). The legs visibly overlap; that on the left seems closer to the viewer. The claws of each hoof are drawn unequal; those on the left are larger. The figure thus presents two instances of spatial concord. If the order of magnitude of the claws on a leg were reversed, if that on the left were drawn smaller, a spatial discord contrary to the notion that the artist entertained the notion of unified pictorial space would be present.

The pictures of upright bison were assessed on spatial concord thus measured, by examining depictions of their hooves and their relation to the depicted overlap of their legs. Pictures of four of the bison were found unsuitable for further assessment, either because they did not show clearly defined overlap (Plates XXXVI and XXXVII), or because of lack of clarity (Plates XLII and XLIV). The remaining animal images were assessed for their spatial concord. A score of one was awarded for each hoof showing spatial concord and of -1 for each hoof showing spatial discord.

Total scores were: spatial concord: 27; spatial discord: -9. Such deviation from the frequencies expected by chance is statistically so large (binomial test $p < 0.005$) that it obliges one to question any notion that perspectival foreshortening (and therefore pictorial space) was unknown to Palaeolithic artists and to question therefore the broader notion that it was unknown in pre-Greek art, defined by Schäfer (1974) as "any art which has not been affected by the adoption in Greece around 500 BCE of a method of representation that takes note of perspective, oblique views, and foreshortening" (p. XXVIII).

The depicted bison do, as Schäfer would expect, display their typical contours (Deręgowski 1995) of their spines, but they do not do so with the typical contours of their hoofs, thus finding themselves, it appears, in the good company of Lascaux bovids (Laming 1959).

The hoofs of Altamira bison are represented as seen from a stance intermediate

Figure 2. *Tracing of the forelegs of a bison from Plate XV (Breuil and Obermeier 1935).*

between that implied by the animals' spines and the *en face* view. Pictures in twisted perspective are thus created, which Breuil and Obermeier (1935: 109) thought "typical of Aurignacian and Eastern Spanish art". Twisted perspective may therefore be one of the indices of pictorial space.

It is noteworthy that the bison of Altamira were drawn from memory. Their depicted hoofs therefore were not copies of retinal projections of patiently posing models to which the artist could repeatedly refer whilst painting, but were recreations of memories of hoofs skilfully adapted to fit the requirements of the moment.

Acknowledgment

I am indebted to students of the '1880–1884 Arts Class' who donated Breuil and Obermeier's splendid volume to the University of Aberdeen Library in 1937.

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RAR 34-1226

Bichoun: newfound rock art at Boroujerd, Lorestan Province, western Iran

MOUSA SABZI and ESMAIL HEMATI AZANDARYANI

A large number of petroglyphs have been identified from western Iran, including at Dare Divin Alvand (Saraf 1997), Kurdistan (Lahafian 2004, 2010), Haj Mad Farm and Moradbeig Valley (Rashidi Nejad and Zamaniyan 2009), Cheshmeh Malek and Dareh Divin (Rashidi Nejad et al 2012), Dostali Valley (Hemati Azandaryani et al 2014), Azandaryan (Hemati Azandaryani et al. 2015), Qeshlagh (Mohamadifa and Hemati Azandaryani 2015), and Arzanfoud (Arzanpoul) and Aliabad (Hemati Azandaryani et al. 2016).

During an archaeological survey in the Boroujerd area of Lorestan Province in 2016, a cluster of rock art was found in the Bichoun area, located 10 km east of Boroujerd city. The rock art of Bichoun consists of two groups of cupules and 205 motifs of other petroglyphs. The petroglyphs of Bichoun area have been located through a transect survey, and the total of 205 were dispersed over 27 single boulders. The main technique applied in producing these petroglyphs is hammering (direct percussion), sometimes rubbing and engraving. They and other rock art forms in the region occur on the rocks and flat surfaces with dense schist having formed flat panels.

Lorestan Province, an area of 28 294 km^2, is part of the Iranian highlands, where other provinces, including Hamadan and Markazi to the north, Khouzestan in the south, Isfahan to the east, and both Kermanshah and Elam to the west surround it. Climatically, Lorestan is cold during winter and mild in summer, with lush green vegetation. The city of Boroujerd is located in Lorestan Province, 105 km north-east of Khoramabad, and 58 km south-west of Malayer. The site of Bichoun is about 15 km east from Boroujerd (Fig.1).

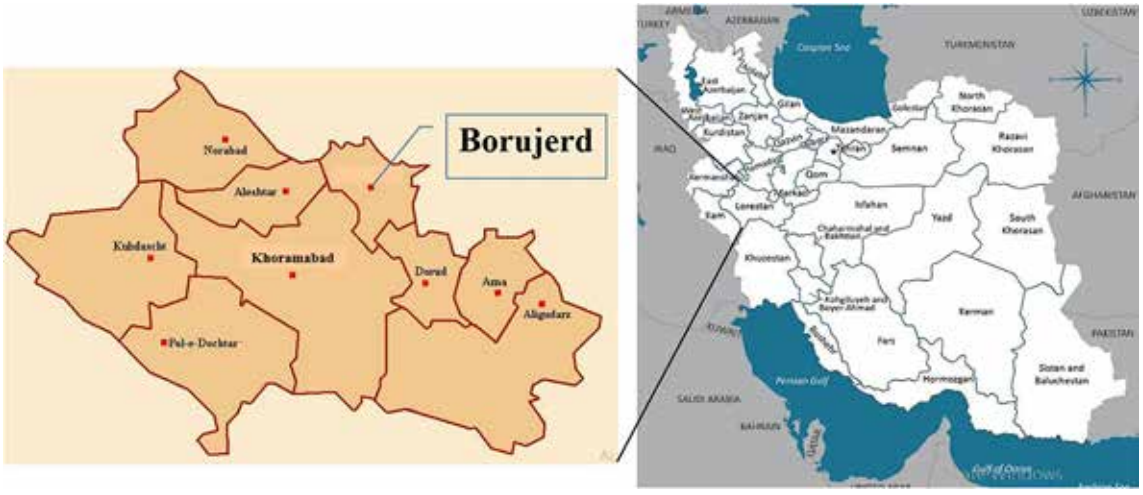

Figure 1. *The location of rock art in Bichoun area, Lorestan, Iran.*

Figure 2. *Main group of cupules on surface of boulder.*

Figure 3. *A cluster of twenty-two small cupules.*

Cupules of Bichoun

The issue of cupules is more complex than that of other petroglyphs. The cupules are not the results of natural factors, such as water or mineral solution, but of the creativity of humans during thousands of years, manifested in different places of the world in these spherical cap shapes (Bednarik 2008, 2016). In addition, there are petroglyphs among them as well as mortars. From the pre-Historic periods to sixty years ago, large mortars were used to grind cereals in Iran (Lahafian 2010). They are often remains of early people, most of whose other signs vanished so that only these features have remained (Bednarik 2007). Cupules are next to other petroglyphs at Bichoun, which seem to have been created simultaneously. Cupules vary dimensionally, and their main corpus at Bichoun is available on two slabs. The first one seems to have been removed from its original place, as a level slab that has 17 cupules of different dimensions (Fig. 2); while the latter has 22 cupules of 2–4 cm width and 0.5–1 cm depth, on a 40 × 60 cm level slab. The cupules of the second slab begin in a line and end in a three-line shape. Considering the isolation of the slab, it seems that it was also removed from its original location (Fig. 3).

Other petroglyphs of Bichoun

Presumed ibex motifs are depicted in profile with four legs and long curved horns (Fig. 4). Some regard 'ibex' as the god of water (Schmandt-Besserat 1997). The 'ibex', in fact, has always been a conspicuous symbol for prosperity and abundance in ancient Iranian myths, bearing a strong association with water that is generally known as the source of prosperity (Samadi 1988).

In this region there are few petroglyphs that resemble deer. The head and body of this motif type is illustrated in profile, while its 'antlers' are in a full frontal view with elaborate details. This animal itself has not been reported from this region yet; incidentally, among motifs, 'deer' are regionally considered very significant. They are comparable to motifs from other areas such as Doustali valley (Hemati Aazandaryani et al. 2014), Haj Mad Farm (Rashidi Nejad and Zamaniyan 2009: 95), Arjank valley (Naserifard 2009: 65) and Khomein and Tymareh (ibid.).

Stylistically, 'dogs' are depicted elongated in single petroglyphs. Motif designations are of course subjective, and many motifs offer no iconographic clues to their meaning. As an illustration we can point to a petroglyph in Gheshlagh Dali (Hemati Aandaryani et al. 2015) with some parallels in the Historic sites of Timareh, including Tange Gharghab, Shahneshin Ashnakhour, Mour siah Farnam (Farhadi1998: 276–279) and Sofla Arges (Beik Mohammadi et al. 2012).

Figure 4. *The main group of 'ibex' motifs with exaggerated long horns.*

Figure 5. *Main group of motifs, 'ibex', anthropomorphous and other motifs.*

Anthropomorphous motifs

These are often singular, in which exiguous lines are applied. The position of legs in these anthropomorphous motifs is similar to the shape of the number 8 in Persian (^), their torso is in the form of a segment, and their head and neck looks like points. In these petroglyphs, anthropomorphous motifs are sometimes represented as horse riders and sometimes as standing figures (Fig. 5). Considering that all motifs are stylised it is difficult to realise their sex. Moreover, among the regional motifs, there are examples of contextualised scenes, some of which seem to show a story or a narration. In the 'scenes', riders are either together with ibexes or, in a few cases, accompanied by 'dogs', which might indicate hunting. There are some parallels in Historic sites of Dareh Divin (Rashidi Nejad et al. 2012: 11) and Doustali valley (Hemati Aazandaryani et al. 2014).

Conclusion

In the region of Bichoun, Boroujerd, Lorestan, motifs of cupules and petroglyphs occur in groups. These petroglyphs were made using hammering and engraving techniques. The themes include 'ibexes', 'deer', 'dogs', other 'symbolic' motifs and anthropomorphous ones. It should be noted that many petroglyphs of Bichoun are upside down and removed from their original place, where various factors threaten them, and they are unprotected. Boulders are used as building materials by the villagers, thus some of them appear upside down.

Due to the same environmental and climatic conditions, the cupules and petroglyphs are patinated and varnished variously in this region, which indicate different dates of hammering of cupules and other petroglyphs. Detailed researches on the chronology of petroglyphs have not been carried out in Iran, so we cannot suggest any date for the newfound cupules and other petroglyphs of Bichoun.

Acknowledgments

We would like to acknowledge the help of V. Teymori, M. Zarrinjoui and H. Yarmohammadi.

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RAR 34-1227

RAR REVIEW

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ORIENTATION

Developing ICRAD

ROBERT G. BEDNARIK

Introduction

Professor Tang Huisheng's decision to establish the International Centre of Rock Art Dating and Conservation, publicly announced on 18 July 2014 at the IFRAO Congress in Guiyang City (Bednarik 2016), has led to its establishment at a ceremony at Hebei Normal University in Shijiazhuang on 16 June 2016. That university already possessed facilities for AMS radiocarbon, uranium-thorium and OSL analyses. The purpose of ICRAD is essentially twofold: the institute will conduct its own research in age estimation of rock art, building on the work already undertaken in China (Tang and Gao 2004; Tang and Mei 2008; Tang 2012; Tang et al. 2014, 2017; Anni et al. 2016); and it will establish a comprehensive archive for global information on all direct rock art dating projects and results. For the latter objective it needs extensive international collaboration (see p. 116).

Therefore the new facility, headed by Tang, is to become a world repository of all relevant results. This is a feasible goal because direct dating methodology was introduced only in the early 1980s, and an apparently comprehensive record of all results announced until 1995 has already been published (Bednarik 1997). Moreover, Rowe (2012) has provided a comprehensive record of all rock art age estimation work published in English until about 2011. Therefore this goal of securing a complete archive of all published work in direct rock art dating seems quite achievable, with the help of the international community of researchers working in this field.

'Direct dating' of rock art refers to the estimation of its age by direct physical relationship of the petroglyph or pictogram and the dating criterion, governed by testable (falsifiable) propositions concerning that relationship (Bednarik et al. 2010). It is therefore epistemologically different from traditional archaeological approaches of seeking to determine the age of rock art (for example through excavation, stylistic claims, iconography or technique), which refer to deductive reasoning regarding untestable assumptions. To illustrate with an example: concealment of rock art by a sediment does not always provide minimum 'direct dating', because the sediment stratum may not necessarily be of the same age as the dating criterion used, such as the radiocarbon age of some charcoal found in it. It follows that direct dating claims need to comply with the rigorous requirements of science. Science expects exacting predictions for future observations about phenomena that can be measured. The regularities within these phenomena must be described as consistent patterns, explained by refutable theories cast in terms of causes and effects. Modern science favours a normative epistemic relativism and demands specific procedures of refutation and repeatability of experiments: *repetitio est mater studiorum* (repetition is the mother of science). Normative epistemic relativism concedes the lack of framework-independent facts about general veracity, but preserves the veracity of inference, justification or rationality relative to specific frameworks.

Rendering rock art age estimation scientific

In applying these fundamental principles to the age estimation of rock art it is essential that the basis of any propositions be clearly defined. One of the difficulties in archaeology is that its principal method, excavation, does not yield scientific propositions about the past. This is not because these hypotheses are necessarily false, but because much of the evidence for them has to be destroyed in the process of securing it: the excavation of a specific parcel of sediment can only be performed once, and the observations made in the process cannot be falsified. Therefore their veracity needs to be accepted on the basis of authority, which in proper science is not satisfactory; *testability* is the principal criterion of a scientific proposition.

This defines a key prerequisite in direct dating of rock art. The records made in any determination must be presented in such a way that another researcher can try to duplicate (or refute) the reported results. There are two ways of testing propositions: either using the same method, or by an alternative method. To facilitate testing in the first case the dating criterion must be described in such a way that the second researcher can re-locate it reliably. In the second case, only the rock art motif needs to remain identifiable.

These rules have to govern the nature of the records that are to be provided for direct rock art age estimates. To illustrate the practical application of these tenets, the method of microerosion is considered because in its recent applications these factors have already been taken

care of. To check the results of this method is relatively easy, provided the analyst testing the claim can re-locate the micro-wane that was measured originally. To facilitate such re-location at any future time, even centuries from now, the following data are required:

1. The site location: this can be provided by recording coordinates or access description.
2. The individual petroglyph analysed: a photograph of the motif is required on which the sampling locality is marked.
3. The precise location of the micro-wane: a microphotograph indicating the location is preferably provided.
4. Measurement of the length of the micro-wane: this information provides confirmation for the analyst that the correct feature has been re-located.
5. Sketch of micro-wane and its context: facilitating re-location of the micro-wane in the topography where the context may be morphologically complex.
6. Measurements of wane widths along the micro-wane.

The application of this protocol is still in its infancy (but it has been applied; Tang et al. 2017; Santos et al. in prep.), yet its general extrapolation to all methods used in rock art age estimation is necessary to render this discipline fully scientific. Besides the need for testability, which is the core concept of science, there is another requirement. Petroglyphs are not ephemeral phenomena; they persist through the centuries and millennia, over timespans determined by the durability of the mineral in question and by the ambient environment. The only minerals so far used in microerosion analysis, quartz and feldspar, have the potential to permit the remeasuring of their micro-wanes over long periods. Such data can then in turn be used in refining the method, because the growth of the wanes as a function of time is the central criterion of the method. The rate of wane formation can be predicted, and one of the key features of science is the predictability of phenomena and processes.

Professor Tang Huisheng, Director of ICRAD, conducting field microscopy at Jiangjunya, Jinping Hill, Jiangsu Province of China, in 2014.

This example illustrates precisely why the recording of such analytical work needs to be standardised to a protocol that will stand the test of time, and will not need to be significantly modified in the future. The same underlying principles should be applied to all other direct dating work: it needs to be repeatable and its results have to be testable. Wherever possible, the prospects of applying the same or a similar method should be encouraged by providing the information required for such re-analysis. With some methods it will suffice to record the location that was sampled; with some, such as microerosion analysis, greater resolution is likely to be required. But the primary concern of the analyst must be that the information needed to test the initial result in the future is furnished in reporting such work.

The records of ICRAD

These principles need to be applied in the way the records of ICRAD are to be organised. To begin with, each and every direct dating attempt needs to be identified by a unique code, in much the same way as radiocarbon results are distinguished by a distinctive label. This certainly applies to all future work, but perhaps it can be extended to earlier dating attempts all the way back to 1981, once these have been catalogued by ICRAD. Such a system has already been introduced in the microerosion work of China and Brazil, beginning with the successful campaign in the former country in 2014 (Tang et al. 2014; 2017). It needs to be adopted universally, and for all methods defined as 'direct dating' of rock art. Without such a system the discipline is likely to be stifled by a growing mass of uncollated and incompatible data, and a great deal of valuable and time-consuming work may fail to reach its full potential.

The following numbering system has been adopted in the case of microerosion analyses. The unique code of each attempt begins with the name of the country the site is located in, followed by the name of the site and the number of the motif (sampled motifs are numbered consecutively, commencing with 1 for each site; a 'site' is defined as a concentration of rock art motifs separated from other such assemblages by a distance of 50 m or more in every direction). If two or more samples are determined from one motif, these are identified in alphabetical order, beginning with lower case 'a'. Next come two capital letters, either 'EQ' or 'EF'. They stand for 'erosion analysis of quartz' and 'erosion analysis of feldspar', respectively. The identification code then ends with the date of the initial analysis, in the order of day, month and year. For instance the second micro-wane measured on Petroglyph No. 3 of the Helanshan site complex in Ningxia Province, China, has the code 'China-Helanshan3b-EQ-6/7/2014'. This means that the micro-wane is on a fractured quartz crystal and the

initial micro-wane width measurements were taken on 6 July 2014.

Obviously this means that ICRAD also needs to establish a register of all the sites listed in its catalogue. The site register must contain information about the precise location of the sites, essential details of their nature, and of any publications relevant to the dating attempts. But whereas the direct dating register will be made available publicly, so that it is accessible to all researchers, the site register will be of restricted access. It is the policy of the International Federation of Rock Art Organisations (IFRAO) not to make rock art site locations publicly available because this would endanger them and expose them to uncontrolled visitation, which leads at least to degradation of the rock art, and sometimes to its destruction. However, the direct dating register can list the contact details of the person or agency responsible for the site in question, to whom applications of access need to be directed. It should also list publications relating to the specific dating attempts.

The ICRAD catalogue should later attempt to apply a similarly coded identification system to all direct rock art dating techniques, which would currently include radiocarbon analyses of carbonate (which could be identified by 'RCC'), oxalate ('RCO'), charcoal ('RCH'), organic matter ('RCOR') and ferromanganese accretions ('RCF'); and such methods as uranium-series analysis of carbonate ('UC') or ferromanganese deposits ('UF'); optically-stimulated luminescence ('OSL'); cosmogenic radiation products analysis ('CR'); lichenometric analysis ('LA') and so forth. These codes will have the considerable benefit of their potential to be used in digital searches of the catalogue. In other words, in the setting up of the catalogue, the nature of its potential uses in the future needs to be anticipated, so as to obviate the need for any future changes to the system.

Summary

Tang's establishment of ICRAD is a major achievement in the scientific study of rock art that is bound to enhance the effectiveness of the discipline. It is therefore important that the system of its global archive of direct dating work be designed anticipating future developments in the field and foreseeing the ways this resource will be utilised by the world's rock art scientists. It will need to comprise two registers: the catalogue of all rock art direct dating results, and the register of all sites featuring in it. The first catalogue will eventually be placed on the Internet, where any researcher can search its pages for customised information, such as the compilation of a list of rock art datings by method, by region, or by results — the three variables that are likely to be of the greatest interest to scholars. This catalogue will also need to feature a comprehensive bibliography of all publications that have ever appeared on the topic of the scientific dating of rock art.

The ICRAD catalogue needs to be organised by a unique numbering system, and the coding system established by microerosion dating projects conducted in China in 2014 and 2015 is suggested to provide a suitable structure. It lends itself to broadening to comprise all other scientific methods used in this pursuit — those applied in the past as well as those that can reasonably be expected to be developed in the future. The effect of this standardisation will be to outpace the reigning routine of opportunistic forays into rock art dating, which are often sensationalised, and to replace them with a systematic regime of data acquisition. It is obvious that such a well-organised data bank will bring order into chaos and help a good deal in assessing the performance of individual methods. It will very effectively facilitate the development of methods that are likely to thrive from taking such a broadly based approach. During the pioneering phase of any field, reference points tend to be isolated and somewhat exploratory; it is with the maturing of a discipline that more methodical practices become possible, and that systematic acquisition of knowledge occurs. In the field of rock art dating, ICRAD will usher in this phase.

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RAR 34-1228

Call for support

It is evident from the above proposal to develop ICRAD (the International Centre of Rock Art Dating and Conservation), and to establish a comprehensive archive of global information on all direct rock art dating projects and results, that extensive international collaboration will be needed. This is a call for help, directed to those who have an interest in, or commitment to, the age estimation of rock art. Please support ICRAD by providing your lists of publications about direct rock art dating projects, your off-prints or PDFs of such papers, other relevant information, or your suggestions for improving the operation of ICRAD. Without broad international support the establishment of the archive of ICRAD would be very challenging, and we will all benefit from it becoming as comprehensive as possible. The ultimate goal is to provide the discipline with an all-inclusive, wide-ranging world archive of all published work in direct rock art dating.

Thank you for your support. Please send your contributions to:

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IFRAO Report No. 57

Second International Rock Art and Ethnography Conference

14 to 18 August 2017, Cusco, Peru

Asociación Peruana de Arte Rupestre (APAR) and Asociación de Estudios del Arte Rupestre de Cochabamba (AEARC)

Introduction

IFRAO member Peruvian Rock Art Association (APAR) will host the Second International Rock Art and Ethnography Conference in the third week of August 2017, under the aegis of IFRAO. This event follows the first conference of its type, conducted in Cochabamba, Bolivia, in 2014, where the importance and scope of ethnography for art research were discussed, with emphasis in the Andes and Amazonia. The conference will be chaired by Dr (c) Gori Tumi Echevarría López, the IFRAO Representative of APAR, and by Lic. Alfredo Mormontoy, from Universidad San Antonio Abad del Cusco.

Following this trend, the Peruvian Rock Art Association is stressing the need of rock art research considering the native notions of material recognition, using primarily the terms *quilcas*, *t'oqos* or *ushcus*, that identify not only all the types of graphic forms in the Andes but also cupules. These cultural expressions are present in the whole Andean region, having been used from the most remote times until the Inka epoch, even to present times. The revival of indigenous terminology to understand the past, with either the ethnography, ethnology, toponomy or anthropology, helps in the reincorporation of ancient graphic forms, as 'rock art', to the social context with which it is historically linked.

The Peruvian Rock Art Association (APAR) invites all native savants, indigenous researchers, academics in traditional cognition, professional archaeologists and *quilcas* or rock art specialists of the world to participate in this Second International Rock Art and Ethnography Conference, to be hosted in the city of Cusco in August 2017. We are sure that the participation of all these researchers will bring new knowledge and will help to change the paradigms of rock art research.

Objetives

- Gather native savants, persons and indigenes with traditional knowledge, and specialists in native cognition from different places of the world to talk about rock art and sacred sites.
- Highlight the value of the ethnographic and ethnological studies in contemporaneous rock art research.
- Value the indigenous knowledge about the rock art in the Andes, Amazonia and from other parts of the world.
- Use the indigenous knowledge about rock art and sacred sites to improve the research and interpretations of this cultural phenomenon.

Sessions

This event is planned to include five days of conferences, presentations and discussions. For this, five sessions were programmed, according to the following topics:

Session 1: 'Ethnographic evidence of rock art production around the world', chaired by Robert G. Bednarik and Jesús E. Cabrera

While traditionally the most comprehensive information about the ethnography of rock art has been reported from Australia, recent developments in other countries have suggested that knowledge about the meaning and production of rock art may be available from various other parts of the world. This session of the Second International Rock Art and Ethnography Conference is intended to provide a global overview of the surviving understanding of both rock art and mobiliary art. Proposals of presentations addressing this topic are invited from the various continents, with particular attention to be given to South American, Asian and Australian evidence. Such evidence can be in one of three forms: (1) knowledge about the original meaning or production of traditional rock art secured from the indigenous producers or their cultural peers; (2) information about meanings imposed by recent indigenes on pre-existing rock art not produced by them; and (3) scientifically acquired evidence demonstrating that ancient rock art sites were being re-used recently or currently, perhaps for purposes different from their original meanings. Therefore the underlying purpose of the session is to establish a sound knowledge base for information about indigenous ideas, practices or interpretations concerning palaeoart.

Proposals should provide the title, name(s) of author(s) and their e-mail addresses, and an abstract of approximately 100 words, outlining the contents of the presentation in neutral terms, to Robert G. Bednarik (*robertbednarik@hotmail.com*) or Jesús E. Cabrera

(j*esuscab33@cs.com*), before 30 June 2017.

Session 2: 'Research in ethnographic rock art around the world', chaired by Nino Del-Solar-Velarde and José Bastante

The ethnographically recorded rock art in the world offers a remarkable opportunity to understand, at first hand, the ideological, social and cultural motives of the producers of these works. In addition, it allows us to understand the technical or technological nature of the production itself, revealing the material conditions of the manufacture and the relation between technique and physical work. All this knowledge can also be interpolated to understand this phenomenon in the past.

We invite all the researchers in ethnographic rock art to send us their contribution to this session, sending us the title, author names and abstract (100 to 150 words) of the presentation to Nino Del-Solar-Velarde (*ninodelsolar@gmail.com*) or to José Bastante (*jose.bastante@gmail.com*), before 30 June 2017.

Session 3: 'Rock art sites as sacral spaces', chaired by Roy Querejazu Lewis

In the Andean region and on other zones of the world we call 'sacral spaces' those sites (in this case with rock art) that are still venerated by extant communities, which consider that these sites possess 'force' or 'power' that could provoke a positive or negative (malefic) action. These sites are generally subject to re-use by means of offerings, rituals or festivities. What remains is the sacred character, because the local inhabitants in most of the cases do not participate in the production of the rock art. We invite rock art specialists with research experiences on this topic to send the title and abstract of proposed presentations (between 100 and 150 words) to the chairperson of this session, Roy Querejazu (*aearcb@gmail.com*), before 30 June 2017.

Session 4: 'Ceremonial use of rock art sites, past and present', chaired by Gori Tumi Echevarría López and Luz Marina Monrroy

Except for a few ethnographic examples, the use of rock art sites in the world is still unknown and we have not a defined idea about its role and function in ancient societies. This becomes complicated when we corroborate, from an ethnographic or archaeological point of view, that even in cases or formal and technical similarity, the use could have been different. Within this panorama one of the most common aspects to understand rock art has been the proposition of its relation with ceremonial uses, which are common in the ethnographic record of many sites in the world. The objective of this session is the determination of the use of the rock art sites, past and present, with emphasis on the sacred and ritualistic aspects of this use and evidence of sacred uses. What we seek is to expose in a technical and scientific way the function of rock art sites and their ideological connotations.

Potential participants to this session should consider sending the title, names and abstract (100 to 150 words) of the presentation to Gori Tumi Echevarría López (*goritumi@gmail.com*) or Luz Marina Monrroy (*ibrachu333@hotmail.com*), before 30 June 2017.

Session 5: 'Traditional interpretations of sites with rock art', chaired by Raoni Valle

This session intends to create preferential space to indigenes, aborigines, natives, originals or traditional people to express their direct perspectives in terms of rock art knowledge or knowledge on *quilcas* (graphic phenomena in Quechua language family and cognition). That is, this session is committed to embrace non-Western/non-Eurocentric perspectives, not necessarily in line with scientific archaeology. Therefore, communications of that scope and spirit are invited to be presented and respective connoisseurs are encouraged to submit their proposals from everywhere in the world and present them directly. Intercultural communications proposed by multiple authors from different knowledge systems, granted that at least one of the authors comes from indigenous/traditional origin, will be also considered if submitted. Notwithstanding, preference will be given to proposals presented by indigenous/traditional/native/aboriginal representatives themselves, and, if possible, in their original language, with or without simultaneous translation.

People with traditional knowledge on rock art or *quilcas*, native researchers and rock art specialists are welcome to send propositions to this session, including the title, names and abstract (100 to 150 words), to Raoni Valle (*figueiradoinferno@hotmail.com*), before 30 June 2017.

Participation

Potential participants to the Second International Rock Art and Ethnography Conference may communicate their inscription to the e-mail *raecusco@gmail.com* or directly during the event. Those who consider contributing presentations to one or more of these sessions must provide their proposed paper title, abstract and author names to *raecusco@gmail.com* or to one of the above chairpersons, before 30 June 2017.

Participation costs are:
Attendees: 50.00 US$ (special rate for students)
Presenters: 100.00 US$

Field trips

The conference is considering two field trips to rock art sites in the Cusco and Machupicchu regions. The schedule and cost of the trips will be informed later. The visits are to be conducted based on the number of persons that are interested in each field trip.

Contact and communication: *raecusco@gmail.com*
Facebook: *https://web.facebook.com/Segunda-Conferencia-Internacional-de-Arte-Rupestre-y-Etnograf%C3%ADa-183642092101185/*
Web site: *https://sites.google.com/view/2raec-cusco/p%C3%A1gina-principal?authuser=0*

Neanderthal man. Painting by Mauro Cutrona, by courtesy of Marco Paresani.

International conference under aegis of IFRAO

Is there palaeoart before modern humans?

Did Neanderthals or other early humans create 'art'?

Conference to be held at the University of Turin, Italy, from 23 to 27 August 2018

This conference will be held by IFRAO member Centro Studi e Museo d'Arte Preistorica (CeSMAP) immediately before the great IFRAO 2018 Congress in Valcamonica.

Academic sessions will be from 23 to 25 August 2018, followed by field trips to Neanderthal sites on 26 and 27 August. The following day, 28 August, is reserved for delegates to travel the short distance from Turin to Darfo-Boario Terme (230 km; 3 hrs by car or train), where the IFRAO Rock Art Congress will commence on 29 August.

The three sessions of the CeSMAP conference are:

1. Changes in the utilitarian and non-utilitarian productions in two million years of human history.
2. Changes in environment and human adaptations.
3. The dawn of art-like productions.

Alternative suggestions are invited, as well as expressions of interest in organising specific sessions or symposia. Further announcements will be made progressively. Interested researchers are encouraged to submit preliminary proposals by e-mail to:

dario.seglie@alice.it

IFRAO 2018

Standing on the shoulders of giants
Sulle spalle dei giganti

IFRAO 2018

INTERNATIONAL ROCK ART CONGRESS

Darfo Boario Terme (BS), Valcamonica, Italy

29 August – 2 September 2018

At its meeting of 4 September 2015 in Caceres, Spain, the IFRAO committee chose Valcamonica as the location for the next IFRAO Congress, naming IFRAO members Centro Camuno di Studi Preistorici (Camunian Centre for Prehistoric Studies) and Cooperativa Archeologica 'Le Orme dell'Uomo' (Archaeological Cooperative 'The Footsteps of Man') as the organisers of the event.

Valcamonica was chosen because it was the first rock art site in the world (together with the Vallée de la Vézère in France) to be entered in the UNESCO World Heritage List. In subsequent years a further twenty-three rock art areas were added to the list, making Valcamonica a pioneering choice that brought this fundamental manifestation of the human mind (previously considered a mere curiosity) to world attention as a founding moment of human culture.

The theme this year — *Standing on the shoulders of giants / Sulle spalle dei giganti* — truly expresses the idea that palaeoart with its endless symbolism and archetypes might form a major resource for modern man, allowing him to look beyond and above current cultures.

The International Federation of Rock Art Organisations (IFRAO) was created in Darwin (Australia) on 3 September 1988 by nine organisations dedicated to the study of pre-Historic rock art. Its purpose was to act as a democratic advisory body promoting actions in support of the research activities of member organisations bringing about a synergistic vision of the study of rock art. In the course of the last 29 years, the number of member organisations has risen to 58, from all over the world, making IFRAO the largest organisation in the world bringing together specialists in the disciplines linked to the study of rock art. The first goal of IFRAO was the standardisation of various aspects of the discipline, essential for effective collaboration and communication. Over time, this aim was supplemented with activity in the field of the protection and conservation of rock art: the federation has become the principal

international body pursuing the conservation of pre-Historic rock art.

The Centro Camuno di Studi Preistorici and the Cooperativa Archeologica 'Le Orme dell'Uomo' have brought the rock art of Valcamonica (and many other sites around the world) to international attention through research, promotion and dissemination activities including exhibitions, conferences, publications and the Valcamonica Symposium.

There have been 18 IFRAO World Conferences since 1988, taking place in all continents except Antarctica. The next meeting, in Valcamonica, will see between 800 and 1200 participants from these continents, streaming links with universities, parallel presentation sessions, round tables on the origins of rock art and visits to rock art sites and exhibitions. It will also be an opportunity to present to the world the archaeological heritage of Valcamonica in all its territorial expansiveness and unique chronology, the innovative scientific research being undertaken, approaches to data management and ways of presenting rock art themes in museums.

The Call for Sessions opened on 15 September 2016 (see *AURA Newsletter* 33/2, October 2016). The International Scientific Committee of the event comprises:
Secretariat and coordinators of the Scientific Committee: Mila Simoes de Abreu, Andrea Arcà
General secretariat: Angelo Fossati
General coordinator: Tiziana Cittadini
Secretary: Uffici CCSP, Nives Pezzoni
Editing: Federico Troletti and ValeriaDamioli
Logistic and reception: Medici Paolo and DMO
Ceremonial and relation with the international organisations: Roberta Alberotanza
Communication: Roberta Alberotanza, Valeria Damioli with the support of Explora

Centro Camuno di Studi Preistorici
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New members of IFRAO

The **Bangudae Forum** (BF) of South Korea, which applied for membership with IFRAO in August 2016, has been accepted as the fifty-seventh member. Founded in Ulsan in February 2013, this organisation has approximately 500 members and is governed by an elected executive committee headed by President Prof. Talhee Lee (Director of the Institute of Public Policy Studies, University of Ulsan) and Vice-Presidents Prof. Mae Ja Kim (President of Ulsan Cultural Academy), Prof. Hong Myoung Kim (former Dean of College of Design, University of Ulsan), Prof. Jae Sung Kim (former Vice President of University of Ulsan), Maeng Gon Hong (former President of Ulsan Cultural Art Association) and Eui Hwan Cha (Vice President of Ulsan Chamber of Commerce). A key role of the BF is to protect the Daegokcheon Stream Petroglyphs, listed on the Tentative World Heritage List of UNESCO since 2010. This 3 km long rock art complex includes the Bangudae Petroglyphs in Daegokri (National Treasure No. 285) and the Petroglyphs in Cheonjeonri (National Treasure No. 147). The BF hosted the first National Exhibition of Bangudae Petroglyphs, under the aegis of the Cultural Heritage Administration of Korea, in the University of Ulsan in 2013. The BF has also been responsible for hosting the Bangudae Cultural Festival in recent years.

The IFRAO Representative of Bangudae Forum is Prof. Talhee Lee, President of the Bangudae Forum, University of Ulsan, P.O. Box 18, 680-749 Ulsan, Republic of South Korea; Tel. +82-52-259-1247, Mob. 010-8971-2195; e-mail *daladara@hotmail.com*.

The **Negev Rock Art Center** (NRAC) in Israel has applied for IFRAO membership in September 2016. It has been accepted as IFRAO's fifty-eighth member. Founded in 2012 by its present Chairperson, Razy Yahel, it comprises representatives of seven governmental organisations, in addition to academics and interested members of the public. There is no subscription charge to join the group and none of its members are paid a salary by the Center. NRAC is active in education (led by Dr Noa Avni, Yigal Granot and Lior Schwimer), eco-tourism development (led by Razy Yahel) and rock art research (led by Dr Liora Kolska Horwitz). In 2014 it held the 'First International Conference on Rock Art in the Negev Desert and Beyond'. A series of publications is being produced and rock art surveys are conducted in the Negev Desert, southern Israel. Field trips are undertaken and rock art workshops are held regularly. The most recent workshops took place in May 2016, attended by more than seventy people, and again in November 2016.

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