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LAYING THE CÔA CONTROVERSY TO REST

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Abstract. Thirty years after the Côa controversy began, it remains unresolved, and today's different viewpoints remain incompatible. This paper attempts to explain the issue historically and to account for the vastly different perspectives expressed by protagonists. It suggests ethnocentric beliefs about the relative importance of archaeological evidence and an underlying political discourse are the core causes of the issue, as well as the belief of some Pleistocene archaeologists to be able to determine the age of rock art from its purported style. These issues are examined, and the role of the Côa controversy as the world's first major campaign for preserving rock art is also discussed, together with its effects on world rock art protection.

Introduction

On the occasion of the thirtieth anniversary of the Côa controversy, it may be timely to present a review of what has, in retrospect, become a turning point in the history of the scientific study of rock art and the effectiveness of advocates for rock art preservation. The effects of this event in 1995 laid bare specific issues and difficulties that have had far-reaching consequences for the discipline—some of which may still have to become fully apparent. The immediate effects were momentous enough, including the fall of a national government over a rock art protection issue, the epistemological split between what can perhaps conveniently be defined as the 'archaeological' and the 'scientific' approaches to the study of rock art, and a restructure of the archaeological agencies in Portugal. Because of the complex but defining secondary effects of these developments, it is not just opportune, but also essential to offer a permanent record and analysis of them. This paper will attempt to present a neutral account of the history of the Côa controversy and its effects as they have become evident during the past thirty years.

This task will be challenging for the author because he was one of the protagonists in the controversy, and his judgment will likely be influenced accordingly. The reader must assess this account, based on the agreed facts and a judicious consideration of the arguments presented. However, the Côa issue needs to be seen in its greater historical context: the tendency of archaeology, especially Pleistocene archaeology, to be captive to fads of interpretation and its historical susceptibility to errors. For its entire duration, the discipline has experienced the promotion of flawed or false models, interpretations or hypotheses, which in practically all cases were eventually resolved by the sciences rather

than archaeology. The perhaps most consequential discoveries in Pleistocene archaeology were, in historical sequence, the discovery that such a discipline was even possible (Boucher de Perthes 1846); the first formal pronouncement of human remains as being of the 'Diluvium' (the Pleistocene; Fuhlrott 1859); the proposal that Pleistocene hominins have created palaeoart (Sautuola 1880); the finding of what was proposed to be a 'missing link' between apes and humans (Dubois 1894); and the discovery of the australopithecines (Dart 1925). The entire discipline rejected or ignored each of these momentous proposals for several decades before they were grudgingly accepted as being essentially correct. Each of them, and many others like them, was contributed by a non-archaeologist, and non-archaeologists eventually resolved each of them. For instance the existence of hominins in the Pleistocene was tested and confirmed by geologists (e.g. Prestwich 1859); the identification of a fossil human, bitterly disputed for decades, was eventually proven by outsiders; several non-archaeologists demonstrated the existence of Pleistocene rock art before being accepted by the authorities of archaeology (including Cartailhac 1902); the existence of *Homo erectus* was demonstrated after decades of acrimonious debate by physical anthropologists (Weidenreich 1946); and the reality of the australopithecines was gradually accepted after the intervention of anatomist colleagues of Dart. In the meantime, however, mainstream archaeology had embraced fakes such as the Piltdown hoax with great enthusiasm, which was the main factor in ignoring Dart's South African evidence. It needs to be appreciated that archaeologists not only opposed the crucial new material offered by non-archaeologists; they did so with displays of indignation, and in some cases, they sought to destroy the reputations of the 'heretics'.

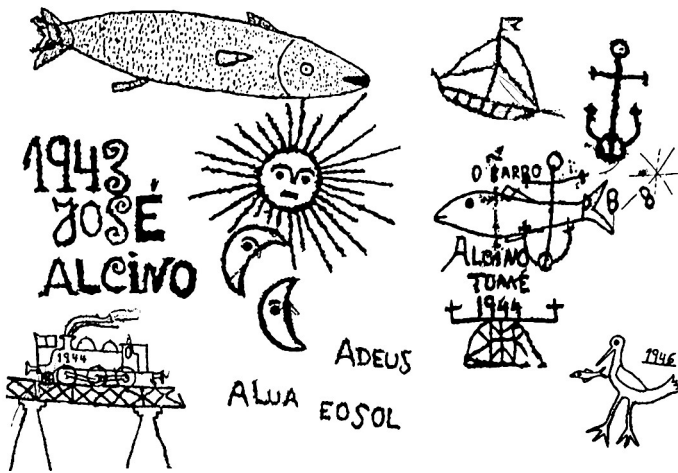


Figure 1. Rock art of the lower Côa valley: (top) Ribeira dos Piscos, use of mirror in microscopy of equine percussion petroglyph; (bottom) recordings of images and inscriptions from various Côa sites.

They accused them of all kinds of improprieties and, in one case, even succeeded in driving the proposer into his premature death.

Thus, a defining factor of archaeology is its history of the treatment of non-archaeologist dissenters when their finds or propositions contradicted dominant models of mainstream archaeology. Although history offers many instances of this trend, one of the best examples is the case of Glozel, a site in France (Bednarik 2013). In this instance, the discoverer of a significant archaeological complex, a teenage 'peasant' named Émile Fradin, was accused of

having perpetrated an extremely elaborate fraud, involving the construction of underground tombs in a field, the production of clay tablets and a new writing system, and the placement of thousands of artefacts ranging in age from the Palaeolithic to medieval times. Fradin was beaten up by police searching his home, and influential scholars of the time in France made every effort to defame him simply because the finds he had discovered in his father's field contradicted their theories and challenged their authority. It took him eight years to secure a defamation ruling in his favour. However, Glozel remains a subject that has been avoided, even though scientists have, in more recent decades, demonstrated the authenticity of the finds.

All of this, however, is only of incidental interest here. The main issue is that to discredit the site, prominent archaeologists sought to 'salt' it (i.e. they placed objects in the stratigraphy that would discredit the finds). According to one archaeologist, it had to be done 'to save the reputation of the discipline' (Bednarik 2013). In other words, preserving the authority of archaeology in interpreting the human past is more important than the veracity of its claims. In order to appreciate this convoluted reasoning, it needs to be remembered that archaeology is an internally unfalsifiable discipline and, therefore, relies heavily on its authority to maintain the stability of its models. The relevance of this point is that the responses and objections raised by archaeologists in the Glozel affair were also applied to the Côa case, the topic of this paper. There, the initial scholarly dispute was primarily about the perception of Palaeolithic 'art' specialists that their ability to estimate the age of rock art, particularly its 'Palaeolithic-ness', by simply eyeballing it was being challenged. It is primarily this perception that precipitated the scholarly aspects of the Côa controversy.

In an epistemological sense, this is particularly interesting for various reasons. Firstly, modern archaeology could only function with its frequent consultation of the sciences. Indeed, without archaeometry, it would be wholly superseded as a discipline. Secondly, as argued above, the errors of archaeology are usually corrected by non-archaeologists. Therefore, ignoring well-founded counterpoints from outside the discipline would seem careless: history tends to be 'repeated'. Thirdly, the archaeological determination of Palaeolithic rock art is based on what is usually termed 'stylistic dating'. However, some commentators opposed to 'stylistic dating' prior to the reports of the Côa rock art (e.g. Lorblanchet and Bahn 1993) then effectively renounced their conviction and insisted on the purely stylistic dating of that corpus. Indeed, some of those who

introduced the 'post-stylistic dating of rock art' eventually rejected the direct dating of one of the best-dated rock art sites in the world, Chauvet Cave in France, to the Aurignacian technocomplex. They proposed placing it in the Magdalenian instead, essentially on stylistic arguments (Pettitt and Bahn 2003).

By pure coincidence, Freeman (1994) had published only a few months before the first Côa announcements his view that the process of the authentication of Palaeolithic rock art follows patterns that are amazingly similar to those determining the confirmation of religious sites and shrines, notably by the Roman Catholic Church. Here, it will be considered how the 'High Priesthood' (a term first applied to high-ranking archaeologists by Thompson 2014) of Palaeolithic 'art' determined the Pleistocene age of the Côa petroglyphs, how it sought to defend it, and the short-term and long-term effects of the significant controversy that developed from its mode of discourse.

The history of the Côa rock art discovery

The Côa valley is formed by a southern tributary of the Douro River as the latter crosses northern Portugal to discharge into the Atlantic. The Côa River rises in the granites to the south, where the relief of its valley is relatively shallow until it reaches the schists of its lower course, where the quartz sands and cobbles from upstream have scoured the valley several hundred metres deep into the soft metamorphic facies during the Pleistocene. The valley is a very recent geological feature, as indicated by the typical V-shaped section, the steep and unstable slopes, and the young terraces along the valley floor, which are of the final Holocene. The lower Côa valley features a series of rock art sites, mostly of petroglyphs, as well as numerous engraved inscriptions. Most of both occur close to the valley's present thalweg (Fig. 1).

Contrary to archaeological claims about the timing of their discovery, the rock art has long been known to local residents and was even mentioned in print long ago (e.g. Andrade 1940). Others who reported rock art from the lower Côa valley before archaeologists became aware of it were Adriano Ferreira, the then Mayor of Muxagata, Mr Antonio, and Jose Constancio Pilerio. Local knowledge about the rock art is not surprising; the valley has seen much economic activity in recent centuries, including the construction and regular use of dozens of water mills in suitable locations, the quarrying of schist for building blocks, the operation of vineyards and almond orchards, and the grazing of livestock. Although there were apparently no villages located in the valley, because of its narrowness and steepness, it



Figure 2. The petroglyph site Mazouco, above the confluence of the Douro and Côa Rivers.

would have been practically impossible for the many people working there not to notice the rock art, and the numerous inscriptions among it confirm this amply.

In the late 1980s, the Electricidade de Portugal (EDP) decided to dam the water of the Côa a short distance upstream from its confluence with the Douro. An archaeological impact study was commissioned to assess the cultural heritage resources of the valley, conducted by a specialist of Roman period sites. He located some Roman building remains in the valley to be inundated but did not mention the prominent and numerous petroglyph sites in the area proposed to be flooded. He did, however, recommend that a team of archaeologists be employed during the dam's construction period to record all archaeological resources in the lower Côa valley. This was led by Nelson Rebanda of the Instituto Português do Património Arquitectónico e Arqueológico (IPPAR), who in 1992 'discovered' rock art. He decided to record it and publish it as a book *after* the dam was completed so as not to impede the project. His reason for this course of action was that, having previously rediscovered the very small nearby petroglyph site Mazouco (Fig. 2), his colleagues excluded his name from the paper's authors in their publication (Jorge et al. 1981). As the cofferdams on both sides of the dam site were being built, their water levels began to submerge some of the rock art sites, and it occurred to Rebanda that to credibly publish his finds, he needed the authentication of outsider researchers before the rock art disappeared forever. In December 1994, as the cofferdam reservoir levels were lowered, he asked two representatives of IFRAO (International Federation of Rock Art Organisations), Dr Mila Simões de Abreu and Ludwig Jaffe, to view his sites and confirm his 'discoveries'. They advised Rebanda that the dam's construction would have to be halted to preserve the rock art. According to Abreu and Jaffe, this led to an emotional outburst by Rebanda, who, as a servant of the dam-constructing authority (EDP), realised that he was endangering the dam project.

Abreu immediately contacted the Convener of IFRAO, and the federation set about establishing a global campaign, under Abreu's inspiring leadership, to stop the construction of the main dam. It took the government by surprise, which reacted with denial and subterfuge. Having abandoned the Salazar dictatorship as recently as 1974, Portugal still had a government used to getting its way, and the nation's President declared that neither NGOs nor world opinion would dictate to the republic. However, while publicly declaring its defiance, the government secretly worked on possible solutions, including searching for an alternative site for the dam. Cancelling the C \hat{o} a dam would involve a loss of around \$200 million and a loss of face politically. As the campaign gained rapid public support in Portugal and beyond, the nation's media especially became critical of the state's clandestine operation and archaeological collusion in destroying cultural heritage, a long-standing tradition in Portugal. Numerous other dams had been constructed across the country, many of which had involved destroying rock art sites—with the acquiescence of archaeologists. As this corrupt system of impact assessment was exposed to public scrutiny, a crisis of confidence developed in Portuguese archaeology, and the claims that the C \hat{o} a rock art was of the Upper Palaeolithic and in the order of 26,000 years old became the subject of review. Assuming that the ancient age claim determined the importance of the cultural heritage, the government pinned its hope on a potential refutation of the Pleistocene proposal and invited four international rock art dating specialists to attempt to estimate the age of the petroglyphs. They were Ronald Dorn and Fred Phillips from the United States and Alan Watchman and the author from Australia. Their analytical work was conducted as a blind test during May and June 1995: each scientist was instructed not to communicate with the others for the period of the experiment and had to submit their findings directly to the government's authority (Bednarik 1995a). The media announced the results in early July 1995 (e.g. S \acute{a} and Ferreira 1995; Salema 1995). All four results were essentially in agreement: the rock art was very young, mostly just a few centuries old, but there were small numbers of motifs that could be up to Neolithic age.

This prompted the media to describe the archaeologists' Palaeolithic claims as 'fraudulent', and although their position on the matter seemed increasingly untenable, they now turned against the rock art scientists with unprecedented ferocity. Especially the two Australians, who were publishing their findings (Bednarik 1995a, 1995b; Watchman 1995, 1996), became the targets of personal attacks of such ferocity that Dorn (1996, 1997) recanted all his results, and declared his belief that the C \hat{o} a rock art is of the Palaeolithic. Phillips, who had given the maximum age of 3000 years for the Canada do Inferno main panel's rock exposure (Zilh \hat{a} o 1995: 885), changed his mind even more dramatically in the following year, now

providing exposure dates of up to 355,000 years bp for rocks at the base of the valley (Phillips 1997: Table 1), increasing his estimates more than hundredfold. This result is a physical impossibility because a terrace remnant 40 m above the valley's base at the same site is thought to be only 90,000 years old (Zilh \hat{a} o et al. 1997). Rock surfaces exposed near the bottom of the valley cannot be much older than that terrace; they must be significantly younger (Bednarik 1998).

The principal argument of the archaeologists was that by refuting the claim of the Palaeolithic Age, rock art scientists were helping the government to allow the destruction of the rock art. In this, they ignored that the author, as Convener of IFRAO, was totally and unreservedly committed to the preservation of the rock art, irrespective of its antiquity, and that the argument that the rock art must be preserved *because* it is Palaeolithic was an invention of the archaeologists themselves. As a social scientist determined, 'the political nature of the archaeologists' strategy influenced their scientific discourse (Gon \c{c} alves 1998: 18). In reality, the need to protect rock art is entirely unrelated to its known or purported age. Therefore, this misunderstanding is attributable to the obsession of European Pleistocene archaeologists with the Palaeolithic period, the aetiology of which will be considered below.

The position of IFRAO, misunderstood by both the Portuguese government and the archaeologists, was that the C \hat{o} a petroglyphs were to be preserved *irrespective of their age*, and it became a critical factor in the national election campaign. The Socialists, who previously had little prospect of winning government, declared that they would abandon the dam, establish a protected zone in the C \hat{o} a valley and dismantle the old archaeological administration, replacing it with a more modern authority to revitalise the discipline. The voting public of Portugal agreed with this proposal and, against all expectations, the Socialists won the October 1995 elections—and did so in a landslide victory.

By about that time, a deep division had been established between the scientific disciplines and the archaeologists, especially those of Europe. All publicly commenting archaeologists had enthusiastically asserted the Palaeolithic antiquity of the C \hat{o} a petroglyphs. The scientists, including Portuguese geologists, either rejected the Pleistocene age proposition or counselled caution about the premature claims based solely on the rock art's perceived iconography. The animal images concerned seem to represent mostly horses (some with bridles) and Spanish fighting bulls, although there were also a few presumed pictures of ibex. It became increasingly apparent that the archaeologists did not understand or accept the testable proposition that the rock exposures near the valley's base were geologically very recent, late Holocene features that could not possibly bear Pleistocene rock art. Nor did they appreciate that the C \hat{o} a schist hydrates at a rate rendering survival of the petroglyphs for more than a few millennia impossible (Bednarik

2007: 67). The scientists, on the other hand, seemed incapable of effectively conveying their concerns to the archaeologists, and this inability to communicate dominated the academic discourse about C \hat{o} a for years to come.

During IFRAO's campaign, a young Lisbon archaeology professor, Jo \tilde{a} o Zilh \tilde{a} o, had become one of Abreu's key supporters. Being a specialist in the Palaeolithic period, he fervently advocated the Palaeolithic age despite his lack of experience with Pleistocene rock art. He had political aspirations (he later stood for public office, unsuccessfully) and, after the October 1995 election, essentially took over the C \hat{o} a rock art campaign, sidelining Abreu, and was selected by the new government to head the country's state archaeology, with unprecedented powers and budgetary support. He disbanded previous administrative structures, established two new bureaucracies (Instituto Portugu \acute{e} s de Arqueologia and National Centre of Rock Art), and promptly embarked on a massive campaign to prove the Pleistocene age of the C \hat{o} a petroglyphs. He instructed his teams to remove all lichens from them, using, in his own words, 'wooden tools and river water', which destroyed all hopes of applying lichenometry or radiocarbon analysis of dead lichen material to estimate the rock art's minimum age. However, photographs taken before this action showed unambiguously that the petroglyph grooves post-dated almost all lichen thalli, except a few very small ones. Therefore, they could only be of the most recent centuries. Some commentators have suggested that Zilh \tilde{a} o destroyed the lichens deliberately to conceal the recent rock art age, but this author believes that he did this out of ignorance. When the newspapers discovered it, he was roundly condemned; one paper's headline declared, 'Bronc \hat{o} a!' (*bronco* means stupid in Portuguese). His many dozens of excavations, churning up numerous archaeological deposits in the lower C \hat{o} a valley, yielded nothing older than late Neolithic remains, with ceramics and microliths continuing to bedrock at practically all excavated deposits. This was not unexpected; geologists had already realised that the sediments near the valley floor were inevitably of the late Holocene. However, Professor Zilh \tilde{a} o continued his search undeterred for the duration of his ascendancy. After several years, his crew finally managed to excavate a petroglyph panel at one of the many sites, Fariseu, covered by sediment (Fig. 3). Unfortunately, that deposit only consisted of a series of colluvial strata interspersed between layers of fluvial sediments resulting from the erosion of the Pocinho dam waters. These sediments were at the time about seventeen years old. However, the archaeologists claimed that stones from them had been heated, and they cited thermoluminescence results to imply



Figure 3. Unpatinated petroglyphs at the C \hat{o} a site of Fariseu, excavated below colluvial and fluvial recent sediments. Some of the equine images feature bridles. Image by Institut Portugu \acute{e} s de Arqueologia.

that they had been heated at the end of the Pleistocene period. Perhaps they had been affected by a bushfire, perhaps by an anthropogenic hearth—the question is moot because the deposit is colluvial, as Zilh \tilde{a} o (2000) himself admits, which means that its components are all stratigraphically irrelevant. A Pleistocene occupation claim would not be accepted anywhere else without radiocarbon dates from organic material, stone tools, pollen analyses, osteal remains, credible dating information, or any other reliable archaeometric data. Even less can it be accepted from a controversial site with no realistic prospects of being of the Pleistocene.

However, what led to Zilh \tilde{a} o's demise was not any of these setbacks or the growing unrest among Portuguese archaeologists about his politicising and partisan leadership of the discipline; it was his conduct in another rock art controversy. In the late 1990s, the Portuguese government decided to build Europe's largest dam, the Alqueva dam, in the Guadiana valley in the southern part of the country. The world was assured that this European Union-financed project did not involve any destruction of rock art sites, and Zilh \tilde{a} o had in the order of one hundred archaeologists work in the valley to salvage cultural heritage values. Very shortly before the dam was completed, Spanish researchers examining the small area to be inundated on their side of the border reported discovering rock art in the upper Guadiana valley. Still, the large team of archaeologists on the Portuguese side saw no rock art at all, having worked in the area for many years. Then, an anonymous letter to an environmentalist NGO, the Liga para a Protec \mathring{c} o da Natureza, claimed that there were vast bodies of rock art in the valley, access to which had been restricted since the beginning of the project (Arc \grave{a} et al. 2001). IFRAO once again went into action but to no avail. The dam was

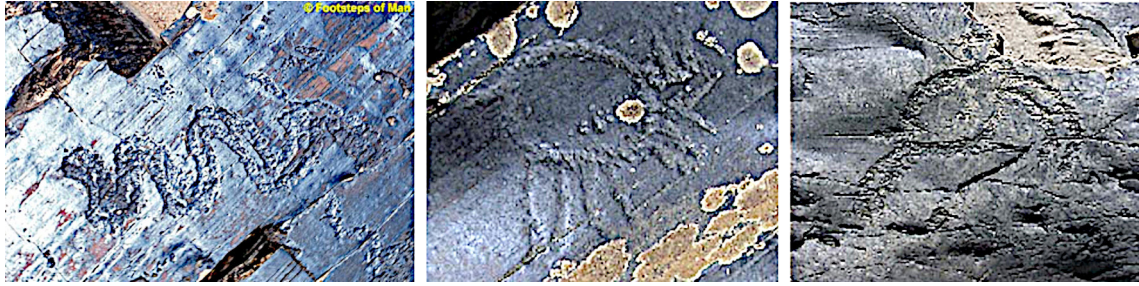


Figure 4. Petroglyphs of various sites along the Guadiana river, southern Portugal. Note the very deep patination on them. Images by Società Cooperativa Archeologica Le Orme dell'Uomo.



Figure 5. Some of the hundreds of rock inscriptions at Siega Verde, western Spain.

practically complete by that time, and the estimated 600 to 800 rock art sites of the Guadiana valley were forever submerged, first by water, later by millions of tons of gravel. One of Europe's largest corpora of rock art was destroyed without even having been recorded (Fig. 4). This tragedy occurred despite the presence of so many archaeologists.

This was one of the most shameful events in the history of archaeology, and Zilhão had been responsible for protecting the monument. His immediate superior, the Minister for Culture, was sacked over the incident, and Zilhão left the country almost immediately.

As a footnote, it needs to be mentioned that the Côa

sites have a sister site on the Spanish side of the border, which is identical in geological setting and similar in rock art content. It was 'discovered' by archaeologists soon after Côa was, in 1998, but the petroglyphs of Siega Verde had been known by the residents of nearby Castillejo de Martin Viejo since they were made. These locals 'had a good laugh' (Hansen 1997) when archaeologists told them that the rock art was of the Palaeolithic period, as its largely 20th-century antiquity was well known to them. However, when the site was listed as World Heritage by UNESCO, they did see that this would bring fame and economic benefits to their village. Like Côa, Siega Verde was listed because of the purported Pleistocene age of the rock art, but no credible evidence was ever offered to support the proposition of its antiquity. The site also features hundreds of rock inscriptions, many of them with dates, which were used to calibrate the schist's fluvial erosion rate (Fig. 5). This demonstrated beyond reasonable doubt that all animal images on the site are under 200 years old. The main body of petroglyphs and inscriptions was created around 1925, and some of the 'Palaeolithic' bovinds date from the 1950s (Bednarik 2009a) (Fig. 6).

Some background information

These are the basic historical facts of the Côa controversy. They tell of an unfortunate chain of events, but they are not the main topic of this paper. It is of much more importance to analyse the system safeguarding humanity's immovable cultural heritage monuments, as well as the factors that led to this unfortunate affair. This involves the failures of leading players, the inherent defects of the international and national cultural heritage 'industry', and especially the underlying shortcomings in the belief systems guiding the decisions of those charged with preserving humanity's patrimony. These are weighty issues, and their critical review has been limited. It will be attempted here.

It will be evident from the above that one of the key

factors in the Côa controversy was the conviction of all commenting archaeologists that rock art of 'Palaeolithic' antiquity is worthy of preserving, even at high cost to a nation; more recent rock art is not. This is a very curious position for scholars, who are supposedly trying to be objective, rational and neutral. In many societies, the most valuable rock art is the most recent, for self-evident reasons. For instance, to indigenous minorities, the manifestations of their connection to the land and to recent relatives are of greatest concern (May et al. 2021; Goldhahn et al. 2022). They might demonstrate traditional ownership of the land. Even in Europe, there are associations of rock art investigators who focus on relatively recent traditions, emphasising the historical connections of present populations to these (e.g. Anisa). Another reason it is most pertinent to investigate the inverse relationship is the curious fact that many dozens of European rock art sites are on the World Heritage List (WHL) because they are, or supposedly are, of the Pleistocene. However, there are far more surviving Ice Age rock art sites in the remaining continents than in Europe, and *not even one* of them is on UNESCO's list. Some extra-European sites are older than the oldest known in Europe, namely in Australia, Asia and Africa, and some known in India and southern Africa are *significantly* older (Bednarik et al. 2005; Beaumont and Bednarik 2015). Therefore, the question arises: if oldness determines importance, why are there not numerous sites from those other continents on the WHL?

Eurocentric cultural consciousness perceives the cave art of southwestern Europe as the 'cradle of art' (there is no evidence that the palaeoart of the Pleistocene should even be defined as 'art' in the sense that the term is understood today). This misconception is intimately bound up with another major controversy: the notion that African 'moderns' entered Europe in the last half of the Late Pleistocene and brought a superior culture, including cave art. This myth (Bednarik 2008) derives from a 1970s hoax of a German archaeology professor (sacked for misconduct in 2004) but has been accepted by most of the world's archaeologists. The 'African Eve' hypothesis, as the media dubbed it, has been refuted and has no cultural, palaeoanthropological or genetic evidence in its favour, yet the discipline uncritically believed it for several decades. It provides another example of the fads of Pleistocene archaeology, which have a history reaching back to its very beginnings (Bednarik 2013). It also helps to explain the role of 'Palaeolithic-ness' in the thought processes of Eurocentric scholars: the importance of 'Palaeolithic art' is that it supports ethnocentrism because it 'proves' that art originates in Europe. This is amply manifested



Figure 6. Bovid image at Siega Verde, soundly dated to the 1950s by calibrated fluvial erosion.

in the WHL. It divides societies and seeks to preserve a superseded model of cultural superiority. In constructing its myths, even sites such as Côa and Siega Verde have been conscripted as being Palaeolithic, despite any lack of proof of such antiquity. Most importantly, this obsession with cultural material such as rock art having to be 'Palaeolithic' to be 'important' has created such inherent biases that its study borders on a religious orientation (Freeman 1994). This obsession includes many specific expressions (Bednarik 2009b) and is not entirely limited to Europe.

Since Pleistocene rock art was accepted hesitantly, after first having been fiercely rejected by all archaeologists, the discipline has developed a 'High Priesthood' (Thompson 2014) that, for each generation of researchers, has acted as a final arbiter in deciding what is or is not Pleistocene 'art'. While it has often provided valid rulings and presented superb insights, it has also made many consequential errors and given rise to numerous falsities. In Australia, a Pleistocene antiquity of rock art was first proposed over a century ago (Basedow 1914), i.e. shortly after its European acceptance. Here, the proposal remained largely ignored for the greater part of the 20th century, and no obsession with this form of evidence developed. Much the same can

be said about Africa and Asia, until recently. It would, therefore, be of particular interest to examine the neurology of the European arbiters of 'Palaeolithic-ness' in rock art because this was evidently the key factor in their attribution of the Côa (and Siega Verde) petroglyphs to the Pleistocene. Many other similar schist open rock art sites on the Iberian Peninsula have been defined as Palaeolithic, and no credible evidence for this attribution has been provided for any of them. In addition, many of the other European rock art sites listed by Bahn and Vertut (1997) as Palaeolithic have been shown to be Holocene, so this is a widespread issue (Bednarik 2009b). Therefore, it is relevant to ask what the basis is of the decisions the arbiters make about the Palaeolithic attribution of rock art.

In the case of the Côa corpus, this is particularly hard to fathom. Its percussion petroglyphs have no equivalent in authentic Palaeolithic rock art, whose engravings are typically made by abrasion or incision. The most common motifs in authentic Palaeolithic European rock art are the so-called 'signs', seemingly aniconic, geometric arrangements. Relatively naturalistic animal depictions occur in many rock art traditions, but the Palaeolithic 'signs' are highly characteristic. They are completely lacking at the Côa sites and in all the other purported Palaeolithic open-air sites of Iberia. These are all on rocks that weather relatively rapidly. So, the most typical Palaeolithic component is not even represented at these supposedly Palaeolithic sites. Moreover, many of the Côa zoomorphs had been made with metal tools. Another glaringly obvious factor is the complete absence of depictions of animal species that did not exist there in the final Holocene. Genuine Pleistocene rock art features numerous mega-faunal images of species that became extinct towards the final Pleistocene, including in Iberia. Adding to this the lack of authentic Pleistocene sediments and occupation evidence at both Siega Verde and the Côa sites, the weathering condition of the schist, the lichen and the available scientific dating evidence, it is very hard to see how these misidentifications arose. It could be argued that the regional researchers in Spain and Portugal may have lacked the requisite knowledge and competence, but why did the 'high priests' of the discipline elsewhere not realise that the claims were incongruous and had no empirical support? Based on the available evidence, it seems there is only one reason why the zoomorphic petroglyphs of the Iberian schist sites were decreed to be Pleistocene: they were perceived to be of Palaeolithic style. So, this is the issue on which the Côa controversy hinges, and on which it can be resolved: the self-ascribed ability of the self-appointed Palaeolithic 'art' experts to tell the Palaeolithic age of a motif from its style—an imposed subjective attribute.

The aetiology of the obsession with the Palaeolithic

Just as no illness can be comprehended from its symptoms alone, a preoccupation with the Palaeolithic

cannot be fully understood without clarifying its aetiology. During the 19th century, non-archaeologists' efforts to posit the Palaeolithic age of some rock art were emphatically rejected by virtually all archaeologists. After the turn of the century, the notion of such Ice Age art became not only possible, it thrived, and it soon led to a tendency of pronouncing much younger rock art corpora as also being of the Upper Palaeolithic period. This tendency pertained throughout the 20th century. An excellent example of this trend is provided by eastern Spain's Levantine rock painting traditions (Beltrán 1982). At any of the sites of this tradition, there is not one of the typical Palaeolithic 'signs', nor do any extinct species seem depicted, nor is there any other indication of Pleistocene age. Nevertheless, this rock art was attributed not only to the Palaeolithic period but was also initially assigned to the very earliest part of the Upper Palaeolithic. Breuil (1948, 1952), for instance, placed the early Spanish Levantine paintings into the Perigordian (which effectively begins with the Neanderthal Châtelperronian and continues to the Gravettian), partly because of its stylistic similarities with the paintings of Lascaux which he mistakenly also regarded as Perigordian (contrary to popular belief, the most prominent of the Lascaux paintings are more probably of the Holocene; Bahn 1994, 1995). He and others perceived this entire art corpus as essentially very early Upper Palaeolithic. Martínez Santa-Olalla (1941), Pericot (1942), Bosch Gimpera (1956, 1967) and Hernandez Pacheco (1959), by contrast, placed it in the Holocene, usually the bulk of it in the Mesolithic, and both Almagro (1966) and Ripoll Perello (1964, 1968) agreed with this assignment, even extending the duration of the Levantine figurative art to the Neolithic. Jordá Cerda (1964) went further still, concurring with Martínez Santa-Olalla (1941) that the Levantine shelter art is Neolithic and Bronze Age, with the 'schematised' figures extending into the Iron Age.

In the second half of the 20th century, Levantine rock art was widely accepted for several decades as being of Mesolithic age and published as such on numerous occasions. Only during the late 1980s did this attribution finally become challenged, primarily through the work of Beltrán (1982) and Hernández Pérez et al. (1988). The entire rock art corpus remains undated, but the present consensus favours an age of Neolithic or younger. This is a classic example of a well-known, extensively studied and published major regional rock art tradition that has been attributed to many archaeological periods from the beginning of the Upper Palaeolithic to the Iron Age, i.e. to pre-Historic periods of the region for the past 40,000 years. The complete absence of any credible proof of Pleistocene antiquity did not prevent these claims, which are now assumed to be false and were mainly based on stylistic assumptions and faulty archaeological reasoning.

Effectively, in Iberia, any petroglyphs on natural rock that are seen to represent equids or bovinds are inevitably attributed to the Upper Palaeolithic. How-

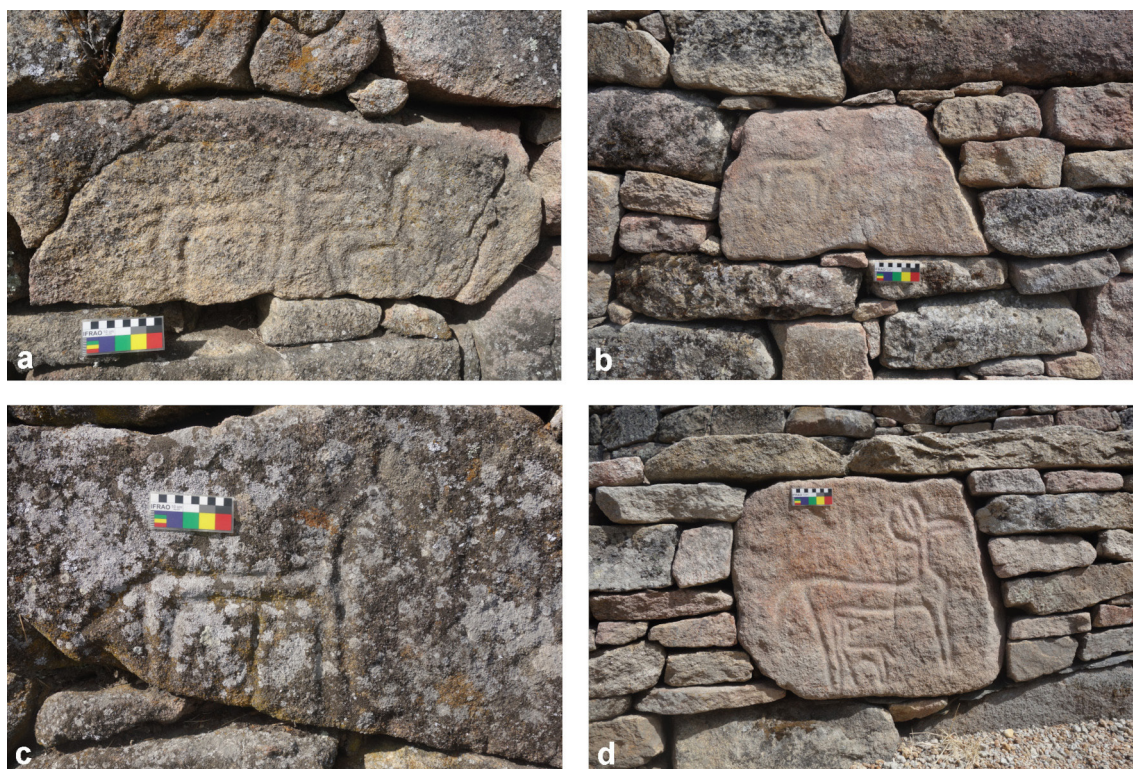


Figure 7. Some of the best-preserved quadruped petroglyphs on the granite ramparts of Castro, Yecla de Yeltes, near Siega Verde.

ever, no such claims are made if identical and similarly weathered images are on rock structures such as the extensive fortifications of Castro, near Yecla de Yeltes in western Spain. These hundreds of horse-like petroglyphs can only be of a Roman or later age, based on the antiquity of the structures (Fig. 7). At the nearby site, Siega Verde, similar zoomorphs made in the last two centuries, none of which can be described as Palaeolithic style, were defined as Palaeolithic by all commenting archaeologists. This suggests that to them, images of horses on rock are Palaeolithic unless proven otherwise. Based on their mistaken stylistic dating, they nominated the Siega Verde site for the World Heritage List and successfully misled UNESCO into listing it in 2010. The circumstances suggest that the gatekeepers of the human past involved in the 'authentication' and nomination of the site were genuinely unaware of the published evidence that the rock art was recent (Bednarik 2009a).

The preoccupation with attributing rock art to the Upper Palaeolithic is not restricted to Spain and Portugal; it is evident in many other countries. In reviewing Bahn's list of European sites he claims are of the Ice Age (Bahn and Vertut 1997: 42–43), it is evident that most of those outside France and Spain provide no such proof. The two German sites Bahn lists, Geißenklösterle and Hohler Fels, must be deleted from the list (Bednarik 2002). The same applies to Bahn's examples from Czechia, Hungary, Romania and Russia (Bednarik 1993, 2006; Svoboda et al. 2005; Steelman et al. 2002). More recently, another claim has been made for Germany, again involving equine petroglyphs that

are almost certainly of recent age (Welker 2015; cf. Bednarik 2015). It is crucial for archaeologists' careers that what they produce is important (Campbell 2006). However, how does one objectively establish what is important? Archaeology has developed a spectrum of relative importance, and while there remain considerable differences among practitioners, at least in Europe, Pleistocene specialists have convinced society that the oldest is the most important. Moreover, the most sensational find will propel its discoverer to greater recognition. A recent trend is that similar inclinations have appeared elsewhere (Aubert et al. 2014; Zhang et al. 2021), contradicted by the unsuitability of the dating criterion analysed (reprecipitated carbonates subjected to uranium ablation).

Ancient 'art' of the Pleistocene is among the most prized finds in this strategy for importance, and the greater its antiquity, the greater the significance it is accorded. However, another factor complicates the matter: if the rock art is from somewhere other than Europe, it is of much less consequence, even if it is older than any from Europe. So, which of the two variables determines rock art's importance: its age or location? Apparently, even if the rock art is several times as old as the oldest known in Europe, that is irrelevant. In contrast, a corpus of the Holocene, such as the Côa one, deserves a World Heritage listing even if the misguided criterion on which its nomination was solely based is an error. One false assumption is supervenient upon another: that Pleistocene rock art is more important than Holocene and that the Côa rock art is of the Pleistocene.

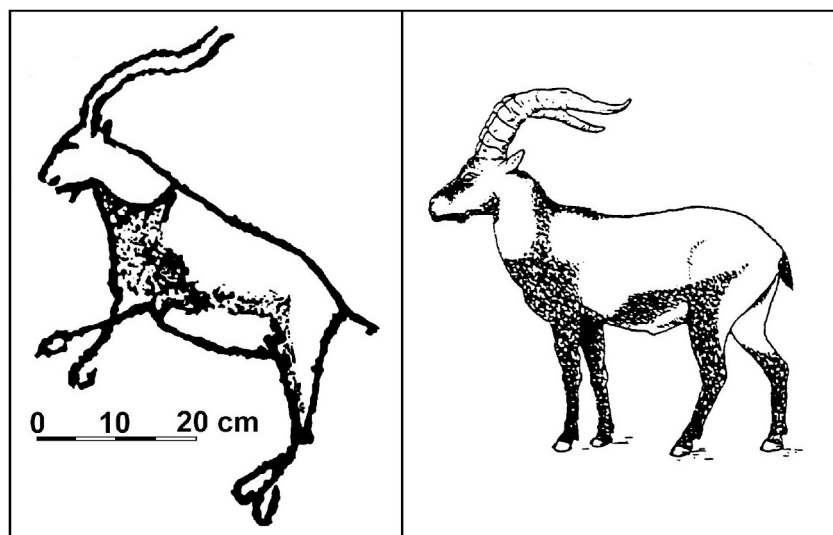


Figure 8. (a) Zoomorph at Rego da Vale, lower Côa valley, adapted from Zilhão et al. 1997; (b) drawing of *Capra ibex victoriae*, adapted from Engländer (1986).

The first conviction is an archaeocentric expression of a belief system determining what Pleistocene archaeologists consider important and forms the basis of their perception of merit. This resembles the standards by which palaeoanthropologists secure fame and recognition through reporting new hominin species. Not surprisingly, we already have dozens of them, all vigorously defended by their promoters, and it stands to reason that at this rate, we may within a few centuries have as many as we once had species of grizzly bears, namely 300—when in fact the grizzly is itself only a sub-species. Much the same applies to the currently perceived hominin species: many of them are, at best, sub-species, but that does not prevent the enlargement of the list in the quest for renown and academic eminence. The principle also applies to sensational claims about rock art: the promoters derive acclaim and reward if the claims conform to the value system the discipline has arbitrarily established.

The legacy of Côa

It is to be expected that these promoters will vigorously and painstakingly defend their claims when they are tested, as would be the way of science. That occurred in the Côa controversy three decades ago: the proposing archaeologists became victims of the capricious value system that had evolved in their discipline. Their strategy of opposing the scientific work by four researchers, conducted as a blind test, was not only of a 'political nature' (Gonçalves 1998); its primary purpose was to preserve the role of archaeologists as adjudicators of what is and is not Palaeolithic rock art. This appears to be the crux of the matter: the available empirical evidence provides no support for the view that the arbiters can reliably determine the Palaeolithic provenance of rock art from its perceived style (Bednarik 1995c). Some of the most outspoken

protagonists for this stylistic dating have just as vehemently spoken out against it (Bahn and Lorblanchet 1993; Bahn 1993). However, they oppose the scientific dating of the best-dated rock art in the world, that of Chauvet Cave in France (Pettitt and Bahn 2003; Pettitt et al. 2009), and argue for stylistic dating despite having previously accepted the Chauvet dates (cf. Bahn and Vertut 1997). Such ambivalence by commentators who both embrace and reject stylistic dating helps to illuminate the method's incongruity and deficit of consistency. Despite hundreds of stylistically misdated examples of rock art, the 'high priests' (Thompson 2014) of Palaeolithic 'art' insist on their ability to know the age of rock art motifs based on merely eyeballing them. They derive their authority

from this very ability. Furthermore, as one of the main protagonists in the Côa issue stated, 'respect and consideration for your colleagues' (Zilhão 1995) renders blind tests unethical—just as he, as a public servant, angrily rejected the right of the world's most significant archaeological body (the IUPPS) to judge his work unless he had invited such scrutiny (Zilhão 2001). After the Côa debacle, Zilhão himself presided over the most significant destruction of rock art in Europe, facilitating the obliteration of hundreds of sites on the Guadiana River in southern Portugal before they could even be recorded (Arcà et al. 2001; IUPPS 2001).

More importantly, in considering blind tests inappropriate when they impinge on the reputation of archaeologists, Zilhão succeeds in illustrating the chasm between archaeology and science. He represents a model that finds it is more considerate to one's colleagues (not to mention to the public) to allow them to be misled by consensus opinions of established powers or notional paradigms than to provide them with proper falsifiable data derived without recourse to what would be an 'acceptable finding'. Stylistic dating has been well described by Bahn and Lorblanchet (1993), who recall how, in 1940, the Lascaux cave art was assigned to the Perigordian by Breuil and Peyrony with a handshake. One can only assume that, in subsequent years, it would have served as a model of how Perigordian rock art should look. The same applies to countless other stylistic designations in rock art, and I regard it as almost impossible to extract and delete from archaeology's 'accepted fiction' (Bahn 1990) all those pronouncements that were based on others which are now discredited (plus those yet to be discredited).

In reality, the specific Lascaux images Breuil had in mind when he placed them in the Perigordian are

probably of the Holocene (Bahn 1994, 1995). This serves to illustrate the stylistic impotence again: to demonstrate that the Côa rock art must be Palaeolithic, Zilhão (1995: Fig. 6) placed the image of a Lascaux 'aurochs' head beside a Côa bovid's, to show their stylistic similarity. However, if, as Bahn argues convincingly, the Lascaux figure is of the Holocene, how can that be used as evidence that the Côa image is of the Solutrean? Breuil (1948, 1952) had quite correctly noticed the iconographic similarities between the large Lascaux bovinds and some of those found in the Levantine shelter paintings, which is why he placed both in the Perigordian incorrectly. Effectively, Zilhão's stylistic contention is that he can determine a figure's age from its similarity to another undated figure. He calls this 'stylistic dating' and then presents what he considers a 'refutation' of the scientific datings of some of the Côa rock art based on several notions of similar calibre. For instance, he falsely claims that ibexes are extinct in the region when a Côa ibex motif matches the coat colouring of *Capra ibex victoriae*, a typical late Holocene sub-species (Wyrwoll 2000) (Fig. 8).

In fairness, the archaeologists wanting so hard to demonstrate the Pleistocene age of the Côa petroglyphs face considerable impediments. Despite intensive surveys and dozens of excavations in the valley, no Pleistocene sediments have been demonstrated to exist there. None of the excavated sediments with occupation traces extended below the co-occurrence of Neolithic microliths and ceramics. There are claims of hearths, but not a single radiocarbon date has ever been presented from their charcoal. So, there are no Palaeolithic stone tools from the Côa river terraces, no faunal or human remains; there is no stratigraphic connection between rock art and sediments (except, at one site, a superimposition by fluvial and colluvial sediments caused by the Pocinho dam in recent years). Zilhão and colleagues deserve recognition for their persistent endeavours to find credible Palaeolithic occupation evidence, but this is virtually impossible on a valley floor that lacks Pleistocene sediments. Nowhere in the world would the excavation results they have tendered be accepted as demonstrating a Late Pleistocene hominin presence. Therefore, thirty years after their claims were made, they remain unsubstantiated. Since Zilhão's exit from Portugal after the destruction of the vast Guediana rock art complex in 2001, archaeological activity in the Côa valley has been downgraded. No significant new finds were reported in recent years.

This pronounced dearth of supporting evidence for the cause of those wanting to place the Côa petroglyphs in the Pleistocene stands in stark contrast to the treatment of those four researchers who had provided scientific age information for some of them. After witnessing the archaeological upheaval following the initial publication of the results, two of them recanted their results. Watchman and I stood by our results, and for this, we experienced the full fury of

the 'High Priesthood' (Hansen 1997). We were attacked verbally, our presentations at international conferences were disrupted, we were personally defamed, and our reports were routinely misrepresented and distorted. Several years later, Watchman withdrew from the discipline. There has been no apology for the unprofessional treatment meted out to us for daring to oppose the dogma that the age of rock art is established by its subjective style.

That does not mean the Côa affair was entirely in vain—far from it. The Côa rock art was saved, not by the claim of its Palaeolithic age, but through the generosity of the nation of Portugal, which graciously stopped dam construction. It was saved for its intrinsic value and 'irrespective of its age' (refer to *Turin Declaration*; see Smith 1996; Rosenfeld and Smith 1997). Throughout the campaign, I maintained that it was inappropriate to predicate the preservation demand on opinions about antiquity or the effects of inundation (Bednarik 1995a, 1995b). If we had won the reprieve under the false pretence of Solutrean antiquity, a later revelation of the younger age of the corpus would have been devastating. It had been suggested that we first secure the site's preservation based on a purported Solutrean age and that we could always later squabble among ourselves about the actual age after the dust had settled. I regarded this as deceiving the victim in the unfortunate affair—the public of Portugal. As it stands, we won the preservation of the rock art fairly on valid terms. In late November 1995, a year after IFRAO Representative Simões de Abreu commenced the campaign to save the Côa art, the newly elected Portuguese government created an archaeological park in the valley, a research centre and a museum. The damage done by Portuguese archaeologists (who first botched two separate impact studies in the Côa valley and then jeopardised the action to save the rock art) has been repaired by IFRAO, under the inspired and dedicated leadership of its Portuguese Representative, Dr Mila Simões de Abreu, but at substantial personal cost to herself. In terms of the monetary damage inflicted in this one instance and in terms of the many Portuguese rock art sites that have been destroyed in the past, with the full knowledge of Portuguese archaeologists, their failures amount to one of the most significant archaeological scandals in history. We did not hear their protests when many rock art sites disappeared under the Pocinho dam previously, and similar destruction had occurred at numerous other dams across the country, with their acquiescence: the Tejo sites (Fratel and others); Vale da Casa; the sites recorded by the Abbe Baçal in the 1930s; Alfaião, Fraga da Ferradura; Rio de Onor, Letras do Cabeço da Velha; Montouto, Fragas da Boavista; Vilar de Lomba, Fraga da Estrela; Ousilhão, Fraga da Vela; and finally the many Guediana sites. On the contrary, archaeologists approved all this destruction of rock art and benefitted from it through consultancies.

However, the final chapter of this incredible story

of cultural heritage destruction sanctioned by professional archaeologists was written in another country. Late in 2001, the state government of Western Australia decided to destroy the largest assemblage of rock art in the world by replacing it with the largest industrial complex in the Southern Hemisphere. Located in the Dampier Archipelago, just off the northwestern coast of Australia, the cultural precinct of Dampier comprises an estimated one million petroglyphs. In Portugal, the price of saving the Côa petroglyphs had been in the order of \$200 million, but here, the loss to the state was in the dozens of billions of dollars. The government invited 18 large multinational companies to set up industrial complexes on the island of Murujuga, in some cases subsidised by the government. An estimated 95,000 petroglyphs had already been lost to industry since the mid-1960s, which is more than exists in the entire Côa valley. Here, the stakes were some orders of magnitude higher. I would have never had the audacity to oppose two governments (state and federal) and a huge conglomerate of big resource companies had it not been for the Côa success. The Côa struggle, in which I was closely involved, had taught IFRAO (the International Federation of Rock Art Organisations) that it could take on a government and prevail. There was one added incentive for me to rise to the challenge: I had in the 1960s re-discovered most of the vast corpus of Dampier rock art, recording 572 petroglyph sites on the main island of the archipelago. I felt that I had an obligation to attempt the seemingly impossible, but in early 2002, it was the Côa experience that gave me the courage to begin the largest campaign in history to preserve indigenous cultural heritage. I launched the Dampier campaign, and it did not take one year to conclude, as did the Côa confrontation; it took twelve years (<http://www.ifrao.com/save-dampier-rock-art/>). It was an incredibly bitter struggle, but I managed to drive away 17 of the 18 companies wanting to set up industries at Dampier, to procure compensation for the local Indigenous community (in 2003), to secure a National Heritage listing (in 2006); to achieve the establishment of a national park owned and operated by the Traditional Owners (in 2013), and to secure the return of thousands of removed petroglyphs (in 2014). The Dampier Campaign led by me achieved, in fact, all its demands and was an incredible success for IFRAO. Thirty years after the Côa controversy, that federation can confront any vested interests in the world that destroy rock art, which is a direct result of Abreu's success in Portugal. That is the main legacy of the Côa controversy.

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