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Problems with preservation in situ

Willem J.H. Willems

Preservation in situ has developed into a central dogma of western archaeological heritage management. This paper examines assumptions underlying that dogma and the way in which it works out in practice, both in western and non-western contexts. Bureaucratization and commercialization are seen as important drives behind its rise as a dominating concept in heritage policy. While surely useful and important in some situations, preservation in situ is too problematic in several ways to be acceptable as an ethical principle with broad validity.

1 Introduction

This paper was originally a contribution to a conference session that looked at the issue what the preservation of remains from the past reveals about the present.[1] An important aspect of heritage preservation in archaeology is the concept of preservation in situ. Although quite problematic in many ways, preservation in situ has over the past 25 years or so become one of the central dogmas of western archaeological heritage management practice. I remember when in the early 1990s the Dutch journalist Theo Holleman – in a paper about archaeological heritage management – wrote that employing archaeologists to protect archaeological heritage amounted to the same thing as employing rabbits to guard a field of carrots. Although he was deadly serious about it and I was director of the Dutch State Service for Archaeology (ROB) at the time, I thought that was not just a funny but actually also a quite realistic viewpoint. Many of my colleagues at the state service saw it as an outrageous and unfounded attack on what had by then already become one of the holiest principles underlying our work.[2]

At this same time, the United Kingdom and parts of Germany were still the only areas in Europe where commercial archaeology existed, although that situation would change drastically in the following years as a result of the Valletta Convention signed in 1992. The situation is now completely different. Some 25 years ago we were at the end of an era when massive infrastructure developments, housing projects etc. had caused the destruction of archaeological remains at such an unprecedented scale that the rescue archaeology of the 70s and 80s had been unable to cope. In that situation, there were essentially two approaches that were not mutually exclusive. One was to try and organize rescue archaeology in such a way that maximum knowledge of the cultural history of an area was obtained by large scale and innovative research projects.[3] The other was to move from rescue archaeology to preventive archaeology and to try – by surveying, predictive modeling, regional inventories and other such means – to obtain advance knowledge of archaeological sites so that they could be avoided during development and be preserved in situ.

The thoughts behind this were clear enough. A substantial part of the soil archive was being destroyed with usually no option to prevent that from happening. The resulting attitude was that the need for consumption of archaeological sites for research purposes could be more than satisfied by sites that would disappear anyway, and it was best to preserve sites in situ as archives for future consumption by academic research – and very occasionally for public enjoyment when there were suitable visual aspects. Already in 1980 the then State Antiquarian of Denmark, Olaf Olsen had published a paper in *Antiquity* (Olsen 1980) in which he challenged the practices of archaeology to satisfy academic curiosity by excavating ever more basically unthreatened sites. Such statements were followed by many others, and since then the management of archaeological resources in Europe and elsewhere has successfully been integrated into processes of spatial development, the principles have become incorporated into international treaties. An example is the Valletta Convention (Council of Europe 1992) that demands of countries that signed the treaty in Art. 4.2 to implement measures for the physical protection of the archaeological heritage, making provision for the conservation and maintenance of the archaeological heritage, preferably *in situ*, and in Article 5.4, to make provision, when elements of the archaeological heritage have been found during development work, for their conservation *in situ* when feasible.

2 The means and the goal

Principles such as these have meanwhile become accepted in most western countries, and indeed elsewhere (for example Naffé *et al*. 2008). By itself, there is nothing wrong with that. It is still true today that much problem-oriented research can also be done in the context of 'archaeological heritage

management' (AHM) or 'cultural resource management' (CRM) on sites that will have to disappear anyway for development reasons.[4] And it is also true that the archaeological resources contained in the soil of most western countries have been eroding heavily for at least a century now – through various means from environmental deterioration to development, so there is a reason for concern as the supply is finite. Nevertheless, in western heritage management practice, preservation has become the new orthodoxy and to such an extent that preservation in situ has in practice developed into an unreflexive preservation mindset that governs decisions by governmental heritage managers and decision makers. It is the good thing to do, it has become a goal in itself (Lipe 1996; Holtorf and Ortman 2008).

Of course there still are also western academic archaeologists that are involved in research elsewhere in the world that often continue excavation practices as they have been since the 19th century. Many Egyptologists, for example, keep shovelling sand in the desert looking for new tombs and other treasure and thus keep increasing the existing and already enormous conservation problems. And also the risks to exposed archaeological substance, both natural and man-made, as recent events in the Middle East have shown all too clearly. Similar forms of exploitative archaeology occur in many other countries and other areas of the world. But in North America, Australia and most of Europe preservation in situ has become a central and almost undisputed dogma that governs the practice of CRM and is a formidable obstacle to problem-oriented archaeological research. There are two causes for this development through which the means have become the goal: one is called *bureaucratization*, the other *commercialization*.

The *bureaucratic* development is a result of the fact that archaeological sites, or remains, or resources or whatever else we choose to call them, are not just objects of study for archaeologists. They are normally also part of a nation's cultural heritage, or at least mostly and in so far as they are known. That means that they have values ascribed to them that can go (far) beyond research value and may have social, ideological and economic relevance. The implication is that archaeological resources – as with all cultural heritage – are subject to conflicting interests from a whole range of stakeholders, are considered of local, national or international significance, and are therefore government and administrative concerns. That means there is a need for regulation.

Until the 1970s archaeology was still largely an academic pursuit, and the specialized bureaucracies dealing with archaeological heritage management were mostly still in their infancies. In fact, they were mostly not yet dealing with managing heritage in the modern sense but rather with an activity known as 'monuments protection' and listing or scheduling sites in a kind of national stamp collections. When these bureaucracies began to grow, they were initially – and in some countries they still are – run by people with academic attitudes and training. By contrast archaeological heritage management today is usually part of a much larger bureaucracy within organizations such as quasi-governmental organizations (quango's) or state services and ministries of culture, or national parks or combinations of these. These have much broader and sometimes very different core purposes,[5] they have specialists in very different fields,[6] and they have senior staff with management rather than academic qualifications. These organizations almost universally believe that the pursuit of knowledge is something that has no place in their organization because that is what universities are for. They see their own role as policy advisors, regulators and/or facilitators. As a policy, preservation in situ suits them well: it is respectable, it is part of their mission of "*Preserving the past for the future*" (Spennemann 2011), and internationally everybody else does it or at least claims to do it. As a rule it does not cost much money and if it does there are so-called mitigation strategies whereby development is allowed under certain conditions and often on the basis of untested assumptions about the effect of these measures. And last but not least it is of course a source of considerable bureaucratic power. After all, being able to decide or influence decisions on spatial and economic development is a far more powerful position than legally protecting some chosen places as (national) monuments, issuing excavation permits or controlling repositories.

3 Commercial archaeology

The other reason why preservation in situ has become such a dogma, is *commercialization*. Table 1 presents the various types of archaeological work over the past eight years in the Netherlands. It was derived from the 2011 Annual Report of the Dutch Heritage Inspectorate (Erfgoedinspectie 2012, 14), but the area and dates are in fact not important in this context, because similar data can be found for many other countries and areas. What is relevant is that the first three lines all indicate evaluation work and only the fourth indicates excavations. It is clear that only about 5-6 percent of all archaeological work involves excavation. Table 2 shows that about one third of these excavations is actually just a very short affair of a few days, usually just one. This is typical, and apparently in all western countries that have commercial archaeology, it is primarily evaluation work that gets done. It is much more in demand by the bureaucracy and it is much less risky as a business. No company that is honest and works according to normal standards and ethical principles can exist on only excavation as a business, let alone make an acceptable profit. They can, however, do real well on evaluation work and consultancy.

	2004	2005	2006	2007	2008	2009	2010	2011
Borehole survey	-	-	2231	2333	2556	2261	2318	2100
Watching brief	177	242	214	246	249	279	296	353
Trial pits/trenches	232	323	410	420	500	503	540	481
Excavations	194	193	187	194	204	200	148	179

Table 1 The number and type of archaeological projects in the Netherlands from 2004-2011 (source: Erfgoedinspectie 2012, 15).

	2004	2005	2006	2007	2008	2009	2010	2011
1-5 days	54	58	63	60	58	59	38	59
6-10 days	23	23	29	38	43	37	30	29
11-30 days	41	69	55	57	71	63	47	52
more than 30 days	38	39	34	37	29	40	31	37
unknown	38	4	6	2	3	1	2	2
total excavations	194	193	187	194	204	200	148	179

Table 2 The duration of excavations in the Netherlands from 2004-2011 (source: Erfgoedinspectie 2012, 15).

That conclusion is not meant to put the blame with commercial archaeology or to disqualify commercial work, this is simply a result of the way the commercialized system works. There are evidently also quality issues related to commercial excavations and their contribution to research, but these are ambiguous and not the real issue here.[7] Surveys and other evaluation methods are widely used to assess the archaeological potential of an area and what is supposed to be a cyclical process whereby some sites are then excavated and generate new knowledge, does in fact stop with a few test pits or trial trenches and lots of evaluations that declare sites to be of not enough value (Bonnie 2010, 12-13). From those that remain, a considerable portion is then 'avoided' by the development and thus preserved in situ. In a recent report it was concluded on the basis of a selected sample that – of the selection of sites that were evaluated as 'worth preserving' – 38% is then actually preserved in situ (Schute *et al*. 2011). It is difficult to interpret that figure, because it is not known how many sites were not considered valuable enough ('worth preserving'), and it is also unclear if the percentage is representative for the Netherlands in general. However the same study indicates that in practice virtually none of these sites are subsequently protected legally or subjected to actual preservation measures, though a small part (almost 9%) receives protection from destruction through the spatial planning system. For the remainder (30%), development plans have been adapted or abandoned. The other 60% was excavated in some form or examined under a watching brief. These may not be representative figures but at least they give some indication of the situation in a densely populated country with a high development pressure.

What is achieved by this preservation in situ policy is no doubt that less excavation work is necessary, so the development becomes cheaper, and substantial numbers of sites remain in situ. By itself that is of course what the policy aims to do, though in most cases it is totally uncertain what will happen to the sites involved. In addition to this lack of legal or planning protection, there is still little research being done that could underpin the assumption that preservation in situ would actually be the best solution in the increasingly polluted environment of today. There are groups such as around the Paris meetings, where PARIS stands for "preserving archaeological remains in situ" (Corfield *et al*. 1996; Kars and Van Heeringen 2008). This type of science-based research is of course very useful (Huisman 2009; Bonnie 2010), but also quite expensive and for the moment its results remain limited because of the complexity of degradation processes. The ongoing process of climate change probably dwarfs anything that can be done through technical preservation measures, as does the intensification of agriculture.

Also, as mentioned above, it is increasingly common in the practice of heritage management to define all sorts of damaging impacts that are allowed to take place on preserved sites as part of mitigation strategies. There are sites that are allowed to be built over, or partially excavated sites of which the remaining portions are "preserved in situ" in awful

conditions by administrative decision, just to reach a compromise and with virtually no chance of survival until a very hypothetical future research excavation. Even in the western countries discussed so far that is quite unlikely to ever happen. There still are a very few pure research institutions left, but their capacity is infinitely small compared to the size of the problem, and they also serve political goals as is evident from their connection to Ministries of Foreign Affairs.[8] University-based academics are in fierce competition over scarce grants and increasingly need to publish in peer-reviewed journals and in the English language, or perish. The contribution they can make is also very limited.

To be fair, it should also be acknowledged that the system does have at least one real benefit because at the regional level our knowledge of the landscape and its uses in the past, does on average increase and we get much better ideas on its habitation and other uses (Van den Dries 2011). Or at least we do in countries where results get published or, at a minimum, results can be made publicly available. That is most of the world, except in countries such as the USA or the UK, where (from a non-Anglo Saxon perspective) rather peculiar legal principles let the client decide on that. In continental European countries and legal traditions, this practice is out of the question: where the public interest is at stake the information belongs to the state and cannot be withheld.

4 Points to consider

The result of the development and policies discussed above is that fewer properly resourced excavations get done, that we therefore learn less about the past and that the social role of archaeology diminishes where its negative economic impact increases through the burden that they place. Archaeology costs more and simply has fewer new stories to tell. Of course the general public has no interest in field evaluations of whatever kind, let alone in preserving bits of land in complicated administrative processes at high cost and with mostly very unappealing gains.[9] There are several points to consider here.

First, there is the obvious truth that where the gains for society are more appealing, there will be more political and public support for preservation policies. As has long been recognized, subsurface archaeological sites can best be preserved through the careful management of change in landscapes (Fairclough and Rippon 2002; Lozny 2008; Bloemers *et al*. 2010). This creates added values that may be perceived as compensation for and legitimation of the cost of preserving land containing archaeological resources. But in the end, it remains of course the visible landscape that is perceived as valuable or enjoyable, and so even within that framework it is necessary to provide historical and other context about places to illustrate their relevance and justify why they should be preserved. Buried archaeological sites lack associative values of visible sites, but they should be regarded as an asset, not a burden.

This is a point that has recently been put forward most explicitly by Spennemann (2011), who rightly points out that the cost of historic preservation is incurred *today*, in the here and now, so its benefits should be clear today. He warns against the "preserving the past for the future" phraseology so widely used by heritage organizations as justification for preservation policies. Indeed, heritage is all about ascribed values, and archaeological resources become archaeological heritage through the values we attach to them. There is no way to predict what values will be held by future generations, so essentially, according to Spennemann (2011, 12), we are preserving the past for ourselves. That fits well with earlier statements such as by Tunbridge and Ashworth (1996, 6) who concluded that "the present selects an inheritance from an imagined past for current use and decides what should be passed on as useful to an imagined future".

So in order to be relevant for the world of today, archaeological heritage can contribute in various ways to the economic and social well-being of present-day nations or communities, it can be "a driver of development",[10] a source of income through tourism and it can be used to provide identity and a sense of rootedness. None of these is without problems and risks, and much attention is nowadays paid to develop best practices and standards to help overcome unwanted effects and consequences. But in the end, in order to actually *be* useful and relevant today, all this needs to be based on research. No matter whether we 'discover' the past or 'create' it, and no matter if we do this through scientific research or by more collaborative means involving stakeholder communities, we do need to investigate so that we can have the stories needed for interpretation.

That is one more reason why dogmatic policies of preservation in situ will not work. This paper is of course not intended as a suggestion to completely reverse archaeological practice and go back to Olsen's *rabies archaeologorum* from before. It is bad enough that remnants of that still survive in parts of western archaeology. But there is surely a middle road in this, one that was laid out over a decade ago by Bill Lipe (1996, 27) in his conclusion to a paper in which he poses the thesis that preservation is only a means, not an end:

In sum, what should drive archaeological preservation is the social benefit that archaeology can provide to society over the long run. That benefit is primarily the contribution of knowledge about the past derived from systematic study of the archaeological record. In situ preservation of archaeological resources is a tool for optimizing that benefit. (.....)

Long-term, frugal consumption of the archaeological record by well-justified research—both problem-oriented and

mitigation-driven—must be an accepted and integrated part of the preservation program. If the research doesn't get done, or if it gets done and we don't learn anything from it, or if only scholars learn from it and the public is shut out, then preservation will have been in vain, because its goals will have not been achieved.

There are recent examples of projects in which heritage authorities appear to have perceived the need for new knowledge and allowed some of Lipe's *frugal consumption* even at high status protected sites. This has been done for example in the United Kingdom at Stonehenge, where English Heritage granted permission for a small trench to be dug in 2008 for the first time in forty years, surrounded by all sorts of publicity (Darvill and Wainwright 2009, 5). Something similar happened in the Netherlands, where the Barrow Landscapes Project was initiated and authorities gave Leiden University permission to excavate barrows, also after research of barrows had stalled for about forty years (fig. 1). Here too there was much publicity and the intent was to answer new research questions and provide a better background for information and public outreach (Fontijn 2010). Both examples may also be a good illustration of the way in which academic archaeology can in the future fruitfully contribute to archaeological heritage management (Lohof 2011, 53). Another way that has been explored in recent years is by digesting and interpreting the many reports of preventive archaeological investigations produced by development-driven archaeology, and use them to create new

Figure 1 Barrow excavation at the Royal Estate near Apeldoorn in 2007, in which also sizeable portions of the surrounding area were investigated. This new approach has yielded fundamental new insights and was only possible after lengthy discussion between the Faculty, the municipality of Apeldoorn and the National Heritage Agency RCE (Fontijn *et al.* 2011, 16-17).

syntheses. But the contribution that academic archaeology can make in the bulk of development-driven archaeological research is severely limited for quantitative reasons and the way in which academic research works.

5 Beyond Europe and North America

That point is even more true in third world countries, where academic archaeology is usually even smaller in absolute terms and may be limited to just a few people at the national level. In a recent paper, Scott MacEachern (2010) has outlined what can happen in such a situation when western companies start large-scale projects. International organizations, such as UNESCO, the World Bank, the European Development Bank, or major international businesses like Exxon and Rio Tinto, have developed standards on how to manage cultural heritage and they have ethical policies to deal with the impact of development on cultural resources. For international companies such as Rio Tinto,[11] good CRM policies have become sound business principles and part of their risk management strategies, so compliance is not an issue. Most companies are used to taking responsibility for cultural heritage, but it appears that the way in which this is done determines whether it is of any use.

MacEachern has been dealing with Exxon in Central Africa, and worked on a pipeline project in Chad and Cameroon. In his paper he comments on the archaeological heritage management strategy that was mirrored after western practices. This implied that, for example, senior local academics not used to tenders and contract work were excluded because they could not respond adequately. Apart from such mostly unintended consequences, the western (in this case North American) model of CRM programmes was used, which meant that site avoidance and mitigation of construction impacts on cultural heritage were the primary goals. Excavation for research purposes – to learn something about the cultural history of an area – or for training purposes were seen as both an illegitimate use of client funds and an unacceptable act of destruction of archaeological resources. However, the idea that site avoidance and preservation are the only valid strategies in CRM work is, in MacEachern's view, based upon assumptions about archaeological work that are not realistic in a third world and particularly a Central African context.

Unlike in western countries, it cannot be assumed that resources exist to support research archaeology in a context separate from that of development-led heritage management work. Even to assume this will be possible in the future, is unfounded. Another circumstance that is very different from the situation in western contexts is the fact that after the conclusion of a CRM programme, it may well be totally impossible to get access to particular areas or particular classes of sites. And in cases where it would be possible to undertake any follow-up research, that is still rather unlikely to ever happen because resources are normally lacking. Even worse is the presumption that the primarily commercial relationship between contractor and client should not take into account 'extraneous' issues like the development of national archaeological capabilities and the investigation of cultural history in different parts of the world. This makes sense in the western world where the developer does not want to pay for things that belong to the responsibility of the state. But elsewhere it is not just shortsighted, it is worse than that. Not taking these opportunities into account goes against principles codified in World Bank directives on cultural heritage protection in bank-assisted projects (MacEachern 2010, 357). Using such opportunities of infra-structure development, capacity building and investigation of cultural history are in fact seen by the bank as legitimate objectives. The same attitude is also evident from other examples, such as the cultural policy of Rio Tinto. In that policy (see Bradshaw 2011, 16) it is stated explicitly that "cultural heritage management for Rio Tinto businesses is broader than just managing the impacts of ground disturbance".

In general, it would seem to be a very bad idea therefore to export western notions of preservation in situ and site avoidance and mitigation procedures. Instead, it would be much more useful if in third world contexts capacity building and taking advantage of properly resourced research opportunities as a rule take precedence over maintaining sterile principles. In addition, while in many situations it may be unavoidable to employ western methods and staff, care should be taken not to transplant the complete *modus operandi*. If we do not use the opportunity when it presents itself, we will lose not just the information about the past and what it can be used for, but also the sites, the fabric, will be lost and possibly even the rare chance to properly train and educate local colleagues. Especially if the work is done in a collaborative setting, much can be learned from both sides as I experienced myself in a recent heritage project in Mongolia (Gunchinsuren *et al*. 2011).

To conclude, it is evident that of course in some particular situations and especially in densely populated western countries, preservation in situ sometimes is a useful strategy. In non-western countries this may occasionally also be the case. After all we are dealing with a non-renewable resource that is limited, and sometimes local populations do not wish resources that they value – as heritage or in other ways – to be touched. But often preservation in situ is either misused by uncritical application in situations where research and other objectives might have been better served by proper investigation, or it is consciously misused to prevent additional costs and investment. As an ethical principle that has universal application, it is therefore questionable and in

need of serious reconsideration, as a bureaucratic policy it has serious negative aspects that need to be considered, and as a dogma of archaeological resource management, it is highly dubious and may even be counterproductive.

Notes

1 The paper was prepared in the context of the EU-funded ACE-project (Archaeology in Contemporary Europe) and was presented at a session entitled *An Archaeology of Heritage,* during the 2011 Society for American Archaeology meeting in Sacramento, California, organized by Elizabeth Chilton and Cornelius Holtorf. The session has meanwhile been published in a thematic issue of *Heritage & Society* (2012). I am grateful to Elizabeth Chilton and Cornelius Holtorf for inspiring me to write this paper and to Monique van den Dries for critical comments on an earlier draft.

2 See Holleman 1996 for an explicit position, especially chapters 4-6.

3 See Willems 1997, Zwart 2011, chapter 1.

4 Archaeological heritage management or AHM is the common term in Europe, while in North America it is more usual to speak of CRM or Cultural Resource Management.

5 For example, tourism.

6 Such as forestry, spatial planning, public outreach, data management, etc.

7 See for example the recent discussion between Kristiansen and Van den Dries in World Archaeology (Kristiansen 2009; Van den Dries 2011). Also Van den Dries, this volume.

8 Good examples are the *Deutsches Archäologisches Institut* and the *Écoles françaises* in various parts of the world.

9 The recent dissertation of A. Zwart (2011) provides some interesting case studies "Ex situ or in situ, the battle for the buried archaeological record. On archaeological heritage, planning and the quality of the living environment".

10 As was the theme of the 2011 General Assembly of ICOMOS in Paris, see Gottfried and Hidalgo Sánchez 2012.

11 An outstanding example is Rio Tinto's recent cultural heritage guide (Bradshaw 2011).

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