PROPOSALS FOR A PRACTICAL SYSTEM OF SIGNIFICANCE EVALUATION IN ARCHAEOLOGICAL HERITAGE MANAGEMENT

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Abstract: Significance evaluation plays a central role in archaeological heritage management. In this paper, a practical approach is presented based on experiences and recent discussions in the Netherlands. A restricted number of values (perception, physical quality and intrinsic quality) are operationalized as criteria in order to evaluate archaeological phenomena. In this manner, a more transparent framework is created to help determine if a monument is worth preserving. In the process of selection, monuments worth preserving are scrutinized from the viewpoints of policy considerations and priorities in archaeological heritage management in order to select monuments deserving of sustained preservation. The form of this system of significance evaluation is such that it can be used by all government levels, that the process is understandable for non-archaeologists, and that its results remain relevant from a research perspective.

Keywords: archaeological heritage management, Netherlands, selection, valuation

INTRODUCTION

The 1970s and, even more markedly, the early 1980s witnessed major shifts in attitude towards the archaeological heritage, in the Netherlands as well as elsewhere in Europe. On the one hand, archaeological monuments, in the sense of both movable and fixed parts of the cultural heritage, were no longer seen primarily as objects of study, but as cultural resources to be of use and benefit in the present and the future (Tripe 1984). On the other, a clear trend emerged towards replacing the notion of 'care and protection of monuments' by a new approach - the management of these archaeological resources. It was soon realized that this could not be done by

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viewing monuments in isolation. This must he done in three contexts: (1) the natural and the man-made landscape, at a regional scale (Groenewoudt and Bloemers 1997); (2) political developments such as the impetus of the green debate (Macinnes and Wickham-Jones 1992); and (3) the ongoing process of land-use planning (Bloemers 1997).

The management of archaeological resources can be described as a cyclical process (Fig. 1), based on documentation and registration, followed by the stages ot inventory-taking, significance assessment, selection, protection/conservation or excavation, and finally interpretation/synthesis and communication, which will provide the necessary feedback (Willems 1997:3). Discussions about the practical operations of the cycle have recently flared up in the wake of the implementation of the Malta Convention (Council ot Europe 1992). The debate centering on the themes ot valuation and selection **of** archaeological monuments in particular has only recently started in the Netherlands (Groenewoudt 1994, Groenewoudt and Bloomers 1997). In English-speaking countries, this debate has been carried on tot much longer (e.g. Briuer and Mathers 1996; Darvill et al. 1987; Darvill et al. 1995; Startin 1993). In the Netherlands, valuation and selection are part of the broader discussion about the reorganization of the system of archaeological heritage management and the tasks to be assigned to those participating in it, a debate that currently is a live topic in many European countries. The purpose of this debate in the Netherlands is to achieve a more effective division of labour, which should take the form ot complementary collaboration between different levels of government and a well-defined role for academic research and private enterprise.

Valuation and selection are on the agenda because, under new legislation based on 'Malta' principles, authorities will oblige developers to assess the impact of their plans on the archaeological heritage and to fund the necessary archaeological research. This - presumably - will be done on the basis ot a valuation, made by an authorized individual or agency, followed by a selection proposal on which the national, regional or local authorities can base their decision In select monuments. This decision will determine whether an **archaeological** monument is classified as significant and, if so, whether it can be preserved or whether an excavation should take place and indeed what aspect should be investigated. The initiator is obliged to bear the cost of this research: hence these are government decisions against which appeals may be lodged. This legal aspect, and also the aspect of quality control in archaeological heritage management itself, mean that the process of decision-making should he followed through with utmost care. Since not only the national government will strive for the conservation of monuments, there is a need for consensus of authorities at all levels about the system of valuation and selection to be adopted; therefore the system must of course be capable of implementation on all levels. Further, it is important that criteria be identified and used in such a way that it is clear also to the non-archaeologist what the decisions are based upon.

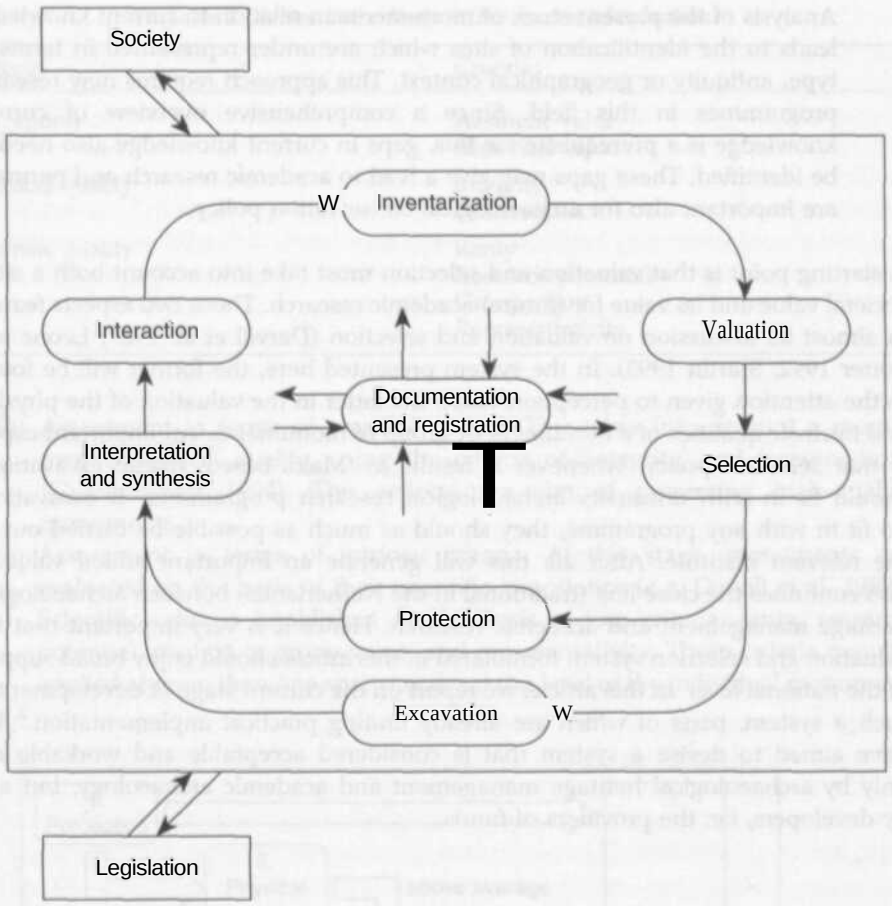

Figure 1 *The cyclical process of archaeological heritage management.*

The context in which valuation and selection take place takes two principal forms:

(a) Valuation and selection in land-use planning.
Dealing with archaeological values in planning procedures is already taking fairly definite shape in formalized prospection protocols. In this context, valuation and selection are aimed at both protection and research. *On* the one hand, planning procedures may allow the creation of conditions necessary for sustained conservation, on the other hand, some archaeological phenomena that are considered important will have to be investigated, because otherwise they will be lost.

(b) Valuation and selection with a view to preserving a stock of monuments that to the best of our knowledge is representative of the soil archive.

Analysis of the present stock of monuments in relation to current knowledge leads to the identification of sites which are under-represented in terms of type, antiquity or geographical context. This approach requires new research programmes in this field. Since a comprehensive overview of current knowledge is a prerequisite for this, gaps in current knowledge also need to be identified. These gaps may give a lead to academic research and naturally are important also for archaeological conservation policy.

A starting point is that valuation and selection must take into account both a site's societal value and its value for (future) academic research. These two aspects feature in almost all discussion on valuation and selection (Darvill et al. 1987; Leone and Potter 1992; Startin 1993). In the system presented here, the former will be found in the attention given to perception value, the latter in the valuation of the physical and intrinsic qualities of a monument or group of monuments. An important aspect is that selection policy, whenever it results in 'Malta based' rescue excavations, should fit in with university archaeological research programmes. If excavations do fit in with any programme, they should as much as possible be carried out by the relevant institute. After all, this will generate an important added value. It also continues the close link (traditional in the Netherlands) between archaeological heritage management and academic research. Hence it is very important that the valuation and selection **system** formulated in this article should enjoy broad support at the national level. In this article, we report on the current stage of development of such a system, parts of which are already finding practical implementation. We have aimed to devise a system that is considered acceptable and workable not only by archaeological heritage management and academic archaeology, but also by developers, i.e. the providers of funds.

THE PROCESS OF VALUATION AND SELECTION

Valuation and selection represent different stages in the process of decision-making. This process comprises several different steps. In valuation, three general values are distinguished, which may be made more specific as a series of criteria (Table 1). The general values correspond to steps to be followed in the process of **valuation** (Fig. 2).

(a) Assessment of a monument's perception. At this stage, monuments are evaluated in terms of criteria that reflect their perception value. This can be subdivided into 'aesthetic value' and 'historical value'. Perception value can serve as a tool for preserving especially that which is visible. It is about appreciation of the archaeological heritage from the public's point of view (Darvill 1995).

Table 1 Values and criteria in the process of valuation

Values:	Criteria:
Perception	Aesthetic value Historical value
Physical quality	Integrity Preservation
Intrinsic quality	**Rarity** Research potential Group value Representativity

(b) Assessment in terms of physical criteria. This takes into account a monument's physical quality, using the criteria of 'integrity' and 'preservation' (Groenewoudt 1994). This reflects the aim of preserving high-quality monuments.

(c) Assessment in terms of intrinsic criteria. At this stage, monuments are evaluated on the basis of their scientific importance (e.g. Darvill et al. 1987). Scientific value is established on the basis of four criteria: rarity, research potential, context or group value, and representativity. These criteria may be applied at more than one spatial scale: at the level of the individual monument

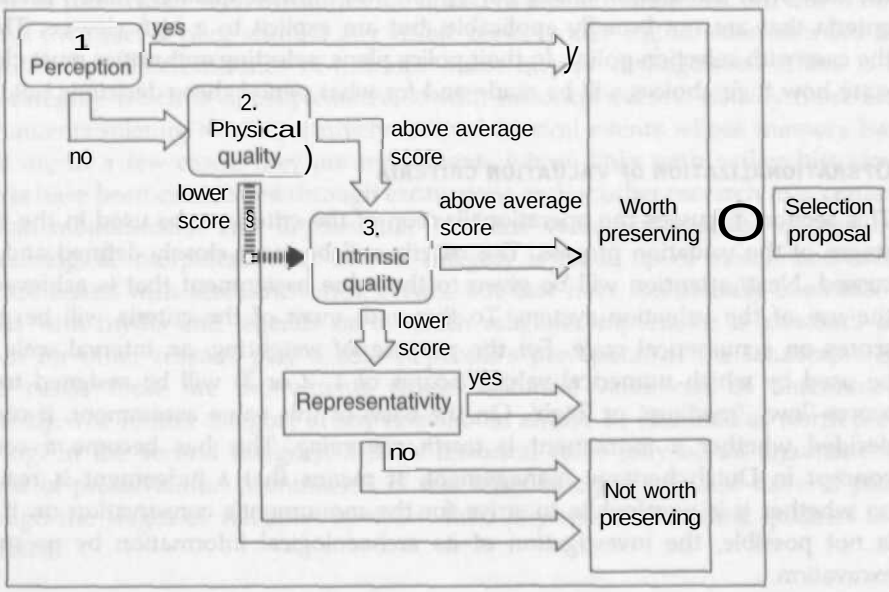

Figure 2 *The stages in the process of valuation.*

and that of micro-regions containing several monuments (Moratto and Kelly 1978:2). At this stage, the aim of preserving intrinsic quality is further substantiated, and opportunities are created for realizing the objective of retaining a representative stock of monuments (e.g. Darvill et al. 1987; Reed 1987).

On the basis of data collected during the valuation process, a selection proposal is drawn up for those monuments that are deemed worth preserving. This step in the process should be carried out by the government itself, through the archaeological service of the authority concerned. These recommendations are tested against the selection policy laid down by that authority, which records the points to be considered in making choices and the priorities to be observed in selection (Groenewoudt and Bloemers 1997). At this point, consideration may be given to the option of preserving larger geographical units, while at the same time observing planning procedures and working in collaboration with government authorities. Besides, this is where the struggle takes place for maximum results. A crucial point in the present ideas about government in the Netherlands is that every level of government should in principle be free to pursue its own policies and hence to make its own selection choices.

At these stages of the procedure, we are dealing with three different types of criterion. In the first place, there are broadly applicable criteria that can be very precisely specified. This is the case with the assessment of physical quality. In the second place, there are broadly applicable criteria that require a description; they leave a wider margin for interpretation on the basis of expert judgement. This is the case with the assessment of perception and intrinsic quality. Finally, there are criteria that are not broadly applicable, but are explicit to a high degree. This is the case with selection policy. In their policy plans, selecting authorities must clearly state how their choices will be made and for what period these decisions hold.

OPERATIONALIZATION OF VALUATION CRITERIA

This section discusses the operationalization of the criteria to be used in the three stages of the valuation process. The criteria will be more closely defined and discussed. Next, attention will be given to the value assignment that is achieved by the use of the valuation system. To this end, most of the criteria will be given scores on a numerical scale. For the purpose of weighting, an interval scale will be used by which numerical values (scores of 1, 2 or 3) will be assigned to the scores 'low', 'medium' or 'high'. On the basis of this value assessment, it can be decided whether a monument is *worth preserving*. This has become a central concept in Dutch heritage management. It means that a judgement is reached on whether it is worthwhile to strive for the monument's conservation or, if this is not possible, the investigation of its archaeological information by means of excavation.

Assessment of perception value

The perception value of an archaeological monument can be measured by two criteria: 'aesthetic value' and 'historical value'. In both cases, these mainly relate to visible monuments. 'Aesthetic value' refers to the value of archaeological monuments as part of the landscape, which can generally be translated as visibility.[3] This criterion centres on the external appearance of the monument, in the sense of its condition, shape and texture in relation to its surroundings. Aspects to be considered include the monument's visibility as a landmark, its links with other (visible) monuments or geographical features and its setting in the landscape, in brief the degree to which a monument may please by its external characteristics.

The concept of aesthetic value is barely ever used in archaeological practice. Operationalizing aesthetic value as 'visibility' produces a workable criterion. Visible monuments constitute a powerful reminder of the past and therefore should be preserved as much as possible even if their scientific value in certain cases is slight. The Dutch landscape is intensively cultivated; as a result of building and reclamation there is a relative scarcity of field monuments, both in the form of 'positive' (above-ground) and 'negative' (dug out) relief features. Examples are dwelling mounds (terpen), megalithic tombs (hunebedden), barrows, mottes, and moats. Visibility is a relative notion. The characteristics both of the monument itself and of its immediate surroundings decide whether a monument may be classified as 'worth preserving' on the grounds of visibility.

The historical value of an archaeological monument relates to the memories of the past that it evokes. Some monuments represent a living memory of the past (Schuyf 1995). In most cases, such memories are linked to a field monument, but this is not always the case. A place without any visible remains may still function as a *lieu de mémoire*. Two different kinds of historical value may be distinguished. There is a rare category which is directly connected with historical events. Usually these are monuments relating to comparatively recent historical events whose memory has lived on; in a few cases, they are monuments whose links with earlier historical events have been established through excavations and/or other research (e.g. certain Roman monuments). This implies that historical value may also be created by archaeological interpretation. A second category is made up of monuments that are not linked with actual historical events, but that have traditionally been associated with myths and legends or to which religious importance is attached, or which for other reasons play a role in people's perception of the landscape. In both cases, these monuments whose historical value can be determined explicitly. The former category at any rate should always be classified as worth preserving. In the second category, a site's historical value may be an argument in favour of preservation.[4] Monuments of this latter category will also have to pass through the stages of valuation in which their physical and intrinsic qualities are assessed.

Together with other, non archaeological landscape features, archaeological monuments may contribute significantly to the aesthetic, educational and recreational quality of an area. Monuments with a high perception value are pre-eminently suitable to generate popular support for the protection of archaeological monuments in general.

Assessment on the basis of physical criteria

On the basis of physical criteria, a judgement is made as to whether a non visible monument is worth preserving in principle. The valuation of such monuments involves the assessment system developed by Groenewoudt (1994). In this system, the concepts of 'integrity' and 'preservation' play a crucial role. Already a few years' experience has been gained with this method for assessing physical quality. In practice, it is found to work well, in the sense that experts regard the results as relevant and that its application by different experts produces identical or at any rate very similar results. Hence the method is considered a reliable one.

Physical quality is the degree to which archaeological remains are still intact and in their original position. To [illegible] this value, a distinction is made between the criteria of integrity (the degree to which disturbance has taken place) and preservation (the degtee to which the archaeological materials have survived). By means of site-oriented investigation in the field, evidence may be obtained about the physical condition of a monument, which will allow an assessment that is reliable as well as objective - in the sense that comparable results are reached by different investigators.

For this purpose, several methods, techniques and parameters have been developed (see Appendix). Some of these are broadly applicable; in other cases, their applicability depends on local conditions or the physical characteristics of the type of monument to be [illegible]d. Two categories of parameter can **be** distinguished. One category offers an insight into the quality determining conditions only (e.g. soil structure, hydrology). The other category provides **concrete** information about the presence, quantity and quality of the sources of archaeological evidence as well as the dimensions of the site. The assessment of the physical quality of a monument is underpinned by a description of the parameters and observations on which this valuation is based. This makes the assessment verifiable.

Assessment on the basis of intrinsic criteria

After the assessment of physical quality, it is clear which archaeological monuments are in principle 'worth preserving'. Subsequently, these monuments are evaluated on the basis of their intrinsic quality. The national government at this stage checks whether the sites deemed worth preserving are of national or international significance. This section discusses the operationalization of these criteria at the

national level to produce a set of guidelines. The nature of each criterion is such that they are easily operationalized by lower levels of government for implementation at the regional or local level. The criteria are as follows:

(a) Rarity
(b) Research potential
(c) Group value (archaeological and geographical context)
A special role is reserved for the fourth criterion, which comes into play only if there is a possibility of in situ conservation of the site
(d) Representativity

'Rarity' is defined as the degree to which a certain type of monument is (or has become) scarce in a period or region. Rarity therefore is a relative notion. The assessment of rarity rests on current insights into the content and composition of the soil archive. To determine rarity value, we need insight into the extent and variety of the archaeological heritage of the Netherlands, how much of it is left and the condition it is in. Such insight requires information that currently is available only to a limited extent. This has two implications. First, archaeological heritage management at the national level must, in consultation with university departments and archaeological services at lower governmental levels, formulate a research programme aimed at acquiring specific knowledge in this area (see later). As far as the condition of the heritage is concerned, a survey comparable to the recently published MARS (Monuments at Risk Survey) project in England (Darvill and Fulton 1998), could provide the necessary information.

The second implication is that we shall have to work on the basis of existing information which, as the earlier mentioned programme is carried out, will be progressively refined and expanded with more specific data. Dutch archaeology still does not possess a workable inventory of the state of archaeological knowledge. At present, there is only a very general, initial survey (Groenewoudt and Bloemers 1997: Fig. 12) which, in its organization, is broadly comparable to the English model (Olivier 1996). It is important to develop a detailed inventory of knowledge and gaps in our knowledge, to be compiled for each of the various archaeologically relevant regions that make up the country's 'archaeo regions' (Fig. 3; Groenewoudt 1994; Fig. 8). This is to be done in the coming years.

The assessment of rarity is based on a score for each type of monument per archaeo region and per period. Rarity is assessed as 'low' (score 1), if there are a large number of similar, coeval monuments in the region which are in a similar or even better state of preservation. This can be determined either on the basis of available data (e.g. an inventory) or on the grounds of expectation, provided this is based on a recent and specific predictive map. Rarity is judged to be 'high' (score 3) if the monument is unique or if very few similar monuments survive in the region. In all other cases, a 'medium' score will ensue. Often, monuments will score 'medium' rather than 'low' simply because insufficient evidence is available, particularly

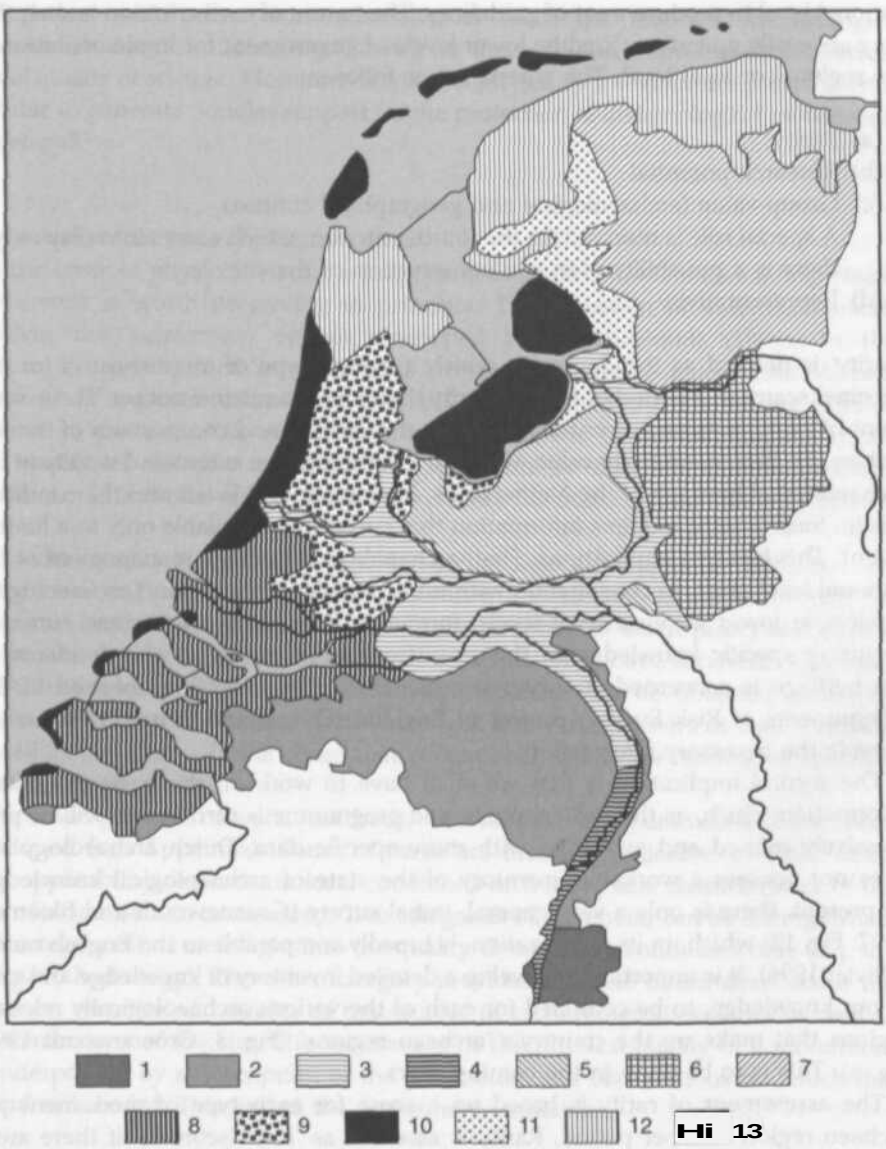

Figure 3 *Archaeologicallyrelevant regions within the Netherlands (archaeo regions).*

Legend:

1 Ihr Hills of Zuid Limburg;
2 the Southern Sandy Area;
3 the Central River Area;
4 the Meuse Valley;
5 the Central Sandy Area;
6 the Eastern Sandy Area;
7 the Northern Sandy Area;
***8 the** Southwestern Marine Area;*
9 the Western Low lying Peat Moors;
HI the ZuiderzeiArea;
11 the Northern Low lying I'eat Moors;
12 the Northern Marine Area;
13 the Dune Area.

monuments other than settlements. For instance, cemeteries (older than sub recent) will therefore only sporadically score 1: they are difficult to find and, even when many more examples are thought to exist, it is usually difficult to assess their integrity and preservation.

'Research potential' is the significance of a monument as a source of knowledge about the past. Research potential reflects the amount of new knowledge about the past that (excavation of) the monument might generate. This may equally be the closing of gaps in such knowledge or the opportunity to formulate alternative interpretations of the past (pluriform knowledge acquisition). The results of any investigation are closely related to its questions and objectives: to make alternative interpretations possible, new excavations are usually needed to gather relevant data. Hence the question is not only whether new evidence is expected to fill lacunae, but also whether it is expected to be relevant to current research needs. Further, it should be noted that research potential is also determined by a monument's 'group value'. The research potential of a complex of monuments in an archaeologically and geographically coherent ensemble usually exceeds the sum of its component parts.

The research-potential score of a monument is based on an analysis of lacunae in knowledge and current research objectives. In the first instance, it is decided by the current state of research relating to similar monuments of the same period in the same archaeo-region. But, as with rarity value, only an initial, global inventory is available for this purpose and the same steps are necessary here to achieve improvement. Different types of knowledge lacunae may be distinguished, which may or may not occur in combination:

(a) geographical knowledge lacunae: areas about which comparatively little evidence is available;
(b) chronological knowledge lacunae: periods about which we are still comparatively poorly informed;
(c) intrinsic or thematic knowledge lacunae: these relate to various aspects (themes and processes) of the (pre)history of the Netherlands.

Research potential is generally 'high' if the rarity value scores highly, but the other scores may differ: even about common types of monument there may be knowledge lacunae, whereas a monument that scores 'medium' on rarity value may belong to a category about which much is known. A specific factor determining research potential is the relevance of the anticipated information yield to current research objectives. This is derived from the current research programmes of the archaeological bodies operating nationwide: the university departments and the state service (ROB). If excavation of a specific monument fits into one of these programmes, its research potential is always high (score 3). This variable must be backed by a periodically reviewed, explicit inventory of running research programmes which are given nationwide publicity. This does not mean that the option of preserving

the monument is abandoned: a site's relevance to current research does play a part, even if at a later stage the option arises to preserve the monument.

By 'group value', we mean the extra value that a monument gains through still having an archaeological and/or geographical context. 'Archaeological context' refers to the presence and the research potential of nearby sources of archaeological evidence. This may be a synchronic context - in the close vicinity there are further monuments of the same archaeological period, allowing inter site analysis - or a diachronic context - there are monuments from various periods, allowing an evolution (a historical process) to he studied.

'Geographical context' is the degree to which the original geographical context is still present and/or recognizable; the presence of organic sediments in a monument's vicinity is an important consideration. Such elements contribute significantly to the possibilities for research of past landscapes and land use.

A monument's group value is determined on the basis of its 'close vicinity'. Thus it is not the archaeo-region as a whole that counts, but the micro region (also referred to as an 'archaeological-geographical ensemble' or 'community area' (Neustupny 1991), which is usually the basic geographical unit in archaeological research. This is defined as an area in which it is expected that there are functional or socio-economic links between the archaeological phenomena and the surrounding landscape, viz. links relating to the functioning of a community in a particular period or to the area's occupation through the centuries. The extent of such a micro-region will depend on the research objectives and the period(s) under study.

A monument's group value is established on the basis of both archaeological and geographical contexts. Usually, the starting point is a (field) survey or inventory (Groenewoudt and Bloemers 1997:136–7), in combination with additional data on the surroundings, e.g. taken from predictive maps (Deeben et al. 1997). This supplies the basis for evaluating the geographical context and may furnish additional details for use in [illegible]; the archaeological context. If neither context has survived to any significant extent, group value is recorded as 'low', if one of either is not or is no longer present or is seriously disturbed, the score is 'medium' and if both are extant to a significant extent, group value will be 'high'.

'Representativity' is the degree to which a certain type of monument is typical of a period or an area **(chronological** or chorological representativity). In the intrinsic-value assessment, an important part is also played by the criterion of representativity. However, in contrast to rarity, research potential and group value, representativity is relevant only if eventual conservation of the monument is an option. This is inherent in the definition and operationalization of the concept. After all, the aim is to safeguard representative samples that, from an (inter)national point of view, are characteristic of (parts of) the Netherlands. The typicality of a monument may be determined both **quantitatively** and qualitatively. In its qualitative sense, the concept of typicality may relate to specific views about the interpretation of material culture, e.g. V. Gordon Childe's definition of 'culture'. In this sense, also rare or even unique monuments may be representative. In our proposed system

ut valuation, such monuments are already given special consideration, through their rarity value. Hence we are here dealing exclusively with monuments of well-represented 'types'. The greater the number of known, similar monuments from the same period and the same part of the country (archaeo legion), the more 'representative' individual monuments will be; it is on this basis that their typicality will be assessed. Such monuments will generally not be considered for selection on the grounds of the first three intrinsic value criteria. This would produce a result at odds with an important principle of archaeological heritage management: the safeguarding of a representative sample for the future. After their intrinsic value has been assessed in terms of the first three criteria, monuments that in principle could be preserved for the future should therefore be assessed by the criterion of representativity. Protection on the grounds of (among other things) representativity presupposes the existence of a government policy that is serious about their conservation. Where this indeed is the case, assessment of a monument's representativity (on the basis of the inventory mentioned earlier per archaeo region) may take place.

'Representative' monuments should preferably have a high group value. In principle, archaeological geographical ensembles scoring highly on synchronic and diachronic context will include many 'typical' archaeological monuments. By definition, such monuments will score 'low' on rarity and 'medium' on research potential. This is generally the case with sites of comparatively slight antiquity. The number to be selected for conservation strongly depends on practical and policy considerations. In terms of intrinsic quality, the international perspective is of special importance for deciding the size of the sample. If the type of archaeological monument is rank common internationally, the number to be preserved at the national level may be more modest.

Weighting

The weighting of the various criteria has already been mentioned, as well as the ways in which criteria affect each other. This section presents a brief description of the weighting process (Table 2).

Table 2. The weighting of values and criteria (NA = not applicable).

Values	Criteria	Scores		
		high	medium	low
Perception	Aesthetic value	NA		
	Historical value	NA		
Physical quality	Integrity	3	2	1
	Preservation	3	2	1(2)
Intrinsic quality	Rarity	3	2	1
	Research potential	3	2	1
	Group value	1	2	1
	Representativity	NA		

In the first place, checks are made whether monuments may be classified as worth preserving on the grounds of perception value - because of their aesthetic or historical value. In the system as described here, it has been decided that a positive judgement on these parameters must always lead to positive selection. Of course it is also possible to attach a numerical score to perception value, which counts as part of the total score. Monuments with a high perception value will then only be classified as worth preserving if their scores on the other criteria too are sufficiently high.

The remaining monuments will then be assessed in terms of their physical quality. A monument's physical quality will generally put it in the 'worth preserving' category if the criteria of integrity and preservation together score above average (five or six points).[5]

Monuments that on the grounds of their physical quality have been classed as in principle worth preserving are then evaluated in terms of their intrinsic quality. With an above-average score of seven points or more on the intrinsic criteria, a monument will be classified as worth preserving. For monuments with a lower score, checks are made to decide whether the criterion of representativity is applicable. If so, a proposal will be made to conserve it as a sample of a category worth preserving. All remaining monuments will be classified as 'not worth preserving'.

There are, of course, alternatives to the step-by-step weighting process as described earlier. As already mentioned, perception value may be treated differently and the weighting need not necessarily be done step by step. These and other alternatives need to be tested in practice, in order to gain experience and to be able to compare and evaluate the results.

The monuments classed as 'worth preserving' will be subjected to selection. Earlier, it was noted that there is no point in assessing some criteria if, in practice, sustained preservation is not an attainable option. In the case of other criteria, valuation is in part determined by current research requirements. Hence valuation cannot be separated from its social and academic context.

SELECTION

Selection, which follows valuation, revolves around two things: policy considerations and choices in the form of priorities. Each level of government will make its own policy decisions. After all, what may not be of particular interest on a national scale may be considered of great importance locally. Moreover, local government may wish to place a particular emphasis with a view to local or regional identity, or for other reasons, which do not have a resonance at the national level. Since these choices may have scientific as well as legal and economic repercussions, the starting points and priorities on which they are based need to be laid down in policy documents. Priorities are always formulated with the primary objective of conserving archaeological monuments, by means of (at the national level) statutory

protection and other instruments, such as planning legislation. In the implementation ot policy in concrete selection decisions, a wide range ot more specific policy considerations may come into play. I lere a tew will be mentioned which are important at the national level.

An important consideration in the implementation ot conservation policy is that of public support. Public interest in archaeology is directly related to the social basis tot archaeological heritage management and hence ot" vital importance. A recent study among the Dutch population made it manifestly clear that such interest focuses mainly on matters that appeal to the imagination: Romans, megalithic tombs, castles and the like. On the oilier hand, liiere often is broad support at the local level tor specific monuments that are not of special national importance. Regional and local authorities would do well to exploit such points ot contact in the implementation of thei policies, so as to strengthen public support tor their overall conservation policies. Here, it is also important to note that, in contrast to otheı culture historical disciplines, archaeology influences the public's perception and opinion not so much through conservation as through excavations. A good understanding and collaboration between levels ot government and other parties involved in environmental planning is an absolute prerequisite toı the proper protection of the interests of archaeological heritage management. Given that archaeological interests often clash with other societal and economic interests, conflicts in this area must not be dodged. In such situations, it is important not to lose sight oI the long term perspective. It is essential that one's chosen position is properly explained, both to those directly involved and to the broadeı public.

Making choices involves not only setting priorities but also deciding on posteriorities. The objective ol preserving monuments marked as representative presupposes a level of government that will take action to ensure such preservation. How governments wish to deal with representative monuments must be laid down in national, regional or local policy plans. Yet it is highly likely that such plans mark as posteriorities categories ot monuments that on the grounds ot representativity might be selected tor conservation: toı example, the still very numerous post-medieval monuments (post dating AD 1500). Therefore, it is important to exploit opportunities wherever thev arise. This may be possible especially in places where an area oriented archaeologi al policy is to be' implemented. This facilitates preservation of monuments in larger, integrated areas. In such a situation typical monuments, which normally would not be considered toı selection, may share in the benefits.

Furthermore, archaeological heritage management will derive great benefit from well thought-out complementary collaboration between government levels, in which policy choices are harmonized to produce congruent priorities. A good example ol complementary collaboration in the Netherlands is the attention that many local authorities give to the soil archive in town centres, toı which in future a more opportunity creating and supportive national policy should be implemented.

It has already been mentioned that the degree of threat is an essential consideration in the setting of priorities with respect to conservation and excavation. It is logical that (acutely) threatened monuments and ensembles are often given priority in policy implementation. Such deployment for preserving evidence by means of excavation makes sense only if enough time and means are available to document properly those aspects of the monument to which it owes its status as 'worth preserving'. If preserving the actual monument is still possible, the potential yield of doing so is the crucial point. The protection of monuments on the basis of the Dutch Monuments Act is a labour intensive matter, while statutory protection in itself offers insufficient guarantee for sustained conservation. Monuments worth preserving should only be considered for statutory protection if it is possible to create such preconditions that sustained conservation is ensured. If that is not the case, then excavation is the preferred option. Often sites that are considered for preservation lie in rural areas where conservation of the monument requires periodical management intervention or a permanent, appropriate, archaeology friendly form of land-use. Such efforts are effective only if the long-term prospects for conservation are favourable. That is to say, there must be certainty about both the goodwill of those concerned and the availability of the necessary means. In the case of important monuments, acquisition by the government is, of course, always preferable. In contrast to many other European countries, however, there are hardly any opportunities for this in the Netherlands. Just now and then, in the margin of large re-allotment schemes or nature development projects, is it possible for sites of major archaeological value to be brought under government ownership. An excellent way to achieve sustained conservation is by aiming for conservation of larger, integrated areas (cultural landscapes). This will allow the traces of an area's occupation history to survive within their context. A good way to attain this objective is to develop an area oriented culture-historical policy, in collaboration with the other culture-historical disciplines and the levels of government concerned (see e.g. Lüning 1997). Monuments worth preserving in principle always merit the investment in management measures needed for their sustained conservation. Yet situations will arise when such measures, though possible, are extremely costly. Obviously, the cost in such cases must be weighed against the benefit. If this equation has a negative outcome, an excavation is to be preferred. Protection of a monument of a certain type can best be undertaken therefore where it incurs the least cost. When such cases arise in the conservation of monuments selected on the basis of representativity, which however are still sufficiently numerous, even replacement by other monuments of equal value could be considered.

In the valuation process as proposed here, current academic research priorities play an important role in the assessment of research potential. However, supporting heritage research is important as well, the purpose of which is to provide improved instruments for archaeological heritage management. Therefore, in deciding which selected monuments should be excavated, a factor to be considered is whether excavation might, on the one hand, contribute significantly to improving methods

and techniques used in archaeological fieldwork (both prospection and excavation), and, on the other, refine methods for predicting archaeological values. The development of methods and techniques may also require the formulation of specific research programmes. Such programmes will naturally affect the assessment of the research potential of monuments.

THE INSTRUMENTS

An effective process of valuation and selection will depend upon a number of instruments or frames of reference, all of which have been touched upon at various points in this article. Here, these will be briefly recapitulated. In fact, valuation and selection can be viewed as part of an integrated system of quality control, in which not only archaeological procedures, but also organizations and individuals should meet certain standards. In the Netherlands, new legislation is currently being prepared in which elements of quality control play a part, because some aspects of this require a statutory basis.

In the interests of a process of selection, authorities should formulate, in advance, their policies regarding the conservation and investigation of archaeological monuments and the priorities set in this field. This is important at the national level but, at the regional and local levels too, policy plans should provide such information. A national register of all finds and sites and of monuments enjoying any form of protection is essential. In the Netherlands, these data are recorded digitally in the central database of Aldus, which can also be consulted and supplied with fresh data from decentralized terminals (Roorda and Wiemer 1992a; 1992b; Zoetbrood et al. 1997).

At the national level, the first generation of an 'Indicative Map of Archaeological Values' (IKAW) is available (Deeben et al. 1997). This predictive map indicates the degree to which archaeological remains are likely to be present in the soil. Three different values are indicated on the map: it distinguishes areas with a high, a medium or a low likelihood of containing remains. The map was produced by means of analysis and extrapolation of relationships of pedological and geological features with the known distribution of archaeological remains. At present, the state service is working on the development of a second generation of this map, with additional and more detailed data. The eventual result will be subjected to thorough practical testing. In collaboration with the provincial authorities, work is also being done on 'Integral Historical Landscape Assessment Maps' at the provincial level. The usefulness of these maps will be augmented with increasing integration of the classifications used for these maps and their inventorization methods.

Compiling inventories of planning or other areas requires research that in the Netherlands is standardized in three stages: (1) an 'initial appraisal' based on documentary research; (2) 'additional archaeological inventory-taking', consisting of area-oriented, usually non-destructive research in the field; and (3) 'additional

archaeological investigation', which entails closer and usually destructive area or site investigation. In order to improve assessment in terms of intrinsic criteria, detailed insight is required into the extent and the variety of archaeological monuments, their durability and their current condition. As yet, only the first-generation predictive map (IKAW) and a provisional inventory of knowledge and knowledge lacunae are available (Groenewoudt and Lauwerier 1997) but these are far from adequate. An important tool in this respect can be the development of research frameworks such as in England (Wainwright 1991; Olivier 1996) and an agenda with clearly defined research priorities.

In the process of selection, the determination of the level ot special relevance of a particular monument or complex of monuments to current research objectives requires detailed information about the research programmes of the archaeological heritage management agencies and the university departments. These could be brought together and published in a periodically updated 'research calendar'.

CONCLUSIONS

In a rapidly changing environment, in which archaeology is coming of age and archaeological heritage management is increasingly gaining its own place as a matter of public interest, we need to ensure that this interest is in .1 position to compete with other societal interests. Through the implementation of the Malta Convention or as a result of national legislation, the care for our archaeological heritage is being improved throughout Europe As a result, archaeologists are increasingly involved in decisions which may have profound legal, economic and social effects. This development has many consequences, both in the field of archaeological practice with the emergence of commercial archaeological firms. and in governmental decision-making. Archaeological interests must be well-argued, and for the public the process of decision-making should no longer be entirely a black box.

In this article, we have shown how the procedure ot valuation and selection may be carried out with clarity and - to a certain degree - objectivity. The system appears to be workable, although practical experience in the Netherlands is as yet limited and further debate at home and abroad will have to bring further refinement. It is of crucial importance that through an explicit, systematic approach to archaeological heritage management, excavation and other necessary investigations should continue to be relevant to academic research. However, more safeguards will be needed in this area, because the introduction ot commercial archaeology without an integral system of quality control on a statutory basis has already produced a great deal of 'research' whose relevance to the creation of new knowledge about the past is, to say the least, dubious. Fortunately, many European countries are now working to improve this situation, and this will also help to narrow the gap that is sometimes experienced between academic archaeology and archaeological heritage management.

NOTES

1. An important overview of the situation and ongoing discussion in many European countries is provided by the proceedings of the 1997 colloquium 'Archäologische Denkmalpflege im vereinten Europa Situation - Probleme - Ziele', published in Archäologisches Nachrichtenblatt 3(2), 1998. For the Netherlands, see Willems et al. 1997.

2. These procedures were followed in the selection of sites to be preserved in situ or to be excavated along the course of the planned freight railway line connecting Rotterdam with the German Ruhr area.

3. In the Netherlands, aesthetic value is a legal concept, featuring in the definition of monuments in the Dutch Monuments Act (an English translation of the Act was published as an appendix to Willems 1997).

4. This is not a very important issue in the Netherlands; in some European and in many non-European countries, however, this is the criterion which provides a basis for taking into account the value systems of native populations.

5. In the dry, Pleistocene parts of the Netherlands, poor preservation tends to be the rule. To avoid the risk that in these areas a quality score of five points is never attained, a normal (i.e. poor) state of preservation will, nonetheless, in these areas score two points.

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APPENDIX: PARAMETERS

This appendix presents an overview ot parameters that may be used in attaching scores to the various criteria Extensive practical experience has been gained already with the criteria relating to the physical condition ot" monuments. The others are still at an experimental stage.

Aesthetic value
- Visibility from the surface as a distinctive landmark
- Shape and textut e
- Relation to the surroundings

Historical value
- Links with factual historical events
- Ascribed qualities or significance

Integrity
- Presence of features
- Integrity of features
- Spatial integrity
- Intact stratigraphy
- Movable finds in situ
- Spatial relations among movable finds
- Spatial relations between movable finds and features
- Survival ot **anthropogenic** biochemical residues

Preservation
- Preservation ot artefacts (metal/other)
- Preservation of organic material

Rarity
- The number of comparable coeval monuments ot good physical quality within the same archaeo region whose presence has been demonstrated
- The same, expected on the basis of a recent and specific predictive map

Research potential
- Full or partial excavation/investigation of comparable monuments within the same archaeo region (mine/less than S vears ago)
- Recent and systematic study ot the aichaeo region concerned
- Recent and systematic investigation of the archaeological period concerned
- Relevance to a pre existing research programme of a university department or government agency

Group value
- Synchronie context (presence of coeval monuments within the same micro-region)
- Diachronie context (presence of monuments of various peri<ds within same the micro-region)
- Geographical context (physical and historical-geographical integrity of the landscape)
- Presence of organic sediments in the dose vicinity

Representativity
- Number of comparable, coeval monuments of good physical quality within the same archaeo-region, whose presence has been **demonstrated**
- The same, expected on the basis of a recent and specific predictive map
- Typicality in an international perspective
- Conformity with the policy of the government concerned

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ABSTRACTS

Propositions pour un système pratique d'évaluation de la signification dans la gestion du patrimoine archéologique

Jos Deeben, Bert I. Groenewoudt, Daan P. Hallewas et Willem J.H. Willems

Dans la gestion du patrimoine archéologique, l'évaluation de la signification joue un rôle central. Dans cet article, une approche pratique est offerte, fondée sur des expériences et des discussions récentes au Pays Bas. Un certain nombre de données (perception, qualité physique et qualité intrinsique) sont utilisées en tant que critères d'évaluation du phénomène archéologique. De cette façon, un système de référence plus clair est créé pour aider déterminer si un monument vaut la peine d'être préservé. Durant le processus de sélection, les monuments sont examinés en fonction des considérations et des priorités qui régissent la gestion du patrimoine archéologique afin de décider le type de monuments qui bénéficieront d'une préservation plus poussée. La forme de ce système d'évaluation est telle qu'il peut être utilisé à tous les niveaux de gouvernement, qu'il est compréhensible pour les non-archéologues et produit des résultats toujours pertinents du point de vue de la recherche.

Vorschläge für ein praktisches System von Signifikanz-Bewertung in der Verwaltung archäologischer Denkmäler

Jos Deeben, Bert I. Groenewoudt, Daan P. Hallewas und Willem J.H. Willems

In der archäologischen Denkmalpflege spielt die Bewertung der Signifikants archäologischer Phänomene eine zentrale Rolle. In diesem Artikel soll ein praktisches Beispiel vorgestellt werden, welches aus den in den Niederlanden gemachten Erfahrungen entwickelt würde. Einige Werte (Erlebung, physische Qualität und inhaltliche Qualität) wurden als Kriterien zur Bewertung archäologischer Phänomene nutzbar gemacht. Auf diese Weise könnte ein klares Verfahren entwickelt werden, welches bestimmen hilft, ob ein Denkmal Erhaltungswert hat. Im Zuge dieses Auswahlprozesses werden erhaltungswerte Denkmäler aus politischer Sicht und hinsichtlich der Prioritäten der archäologischen Denkmalpflege geprüft, um dann entscheiden zu können, für welche Denkmäler eine dauerhafte Erhaltung anzustreben ist.

Dieses Auswertungssystem für die Bedeutung der Signifikants ist derart gestaltet daß es auf jede Verwaltungsebene anwendbar ist, daß der Prozess ebenso nicht Archäologen verständlich ist und die Resultate dabei ihre wissenschaftliche Relevanz behalten.