Editorial

CAROLINE MALONE & SIMON STODDART

The history of WAC (World Archaeological Congress) has come full circle. WAC-4 was held in the very country, South Africa, whose citizens were excluded from the first meeting in 1986. In the spirit of reconciliation, no opinion or individual was excluded from the 1999 congress held in the perfect natural and ideological setting of Cape Town. Ironically, the academic agenda of *truth* is not part of WAC , since the term 'truth' suggests a level of verifiable certainty more in agreement with the beliefs of UISPP, the former 'partner' in the original World Archaeological meetings planned in the mid 1980s.

It is worth briefly reviewing the background of this intensely politicized history which spans three editors of ANTIQUITY. In the July Editorial of 1986 (*Antiquity* 55: 81–3) Glyn Daniel drew attention to 'the regrettably sad affair' of the 'shameful scandalous shambles of the Southampton World Archaeological Congress', which had started out life as the XIth Congress of the International Union of Pre- and Protohistoric Sciences (UISPP). As readers of ANTIQUITY will remember, the exclusion of South African and Namibian colleagues from the Southampton meeting caused a deep split in the international archaeological community. Two conferences were held, *one* (the WAC) minus South Africans (by exclusion) and many others (by choice) in Southampton, and the *second* (UISPP) rapidly assembled in 1987 in Mainz, maintaining the traditions of 'Eurocentricity', which the WAC meeting was keen to change. Since that time there have been many more meetings, and, indeed, WAC has become global through the exotic location of meetings. The World Archaeological Congress has grown into an institution of its own, now quite separate from any vestiges of its original UISPP conception. The Congress and its Intercongress meetings now represent the topical, highly political world of Heritage, Ethics, the Indigenous Past, and other such areas which have become arguably as important as the more traditional pursuits of the discipline of archaeology. Rival conferences in the then Czechoslovakia (UISPP) and Colombia (WAC) were announced in Chippindale's Editorial of March 1990 (*Antiquity* 64: 9–10), but the WAC Colombia meeting was relatively low key, and did not attract too much publicity. The same was not true of the Delhi meeting in 1994 (Hassan 1995), where quite scandalous local politics and interests dominated the chaotically organized meeting. Some semblance of order was regained only at the last minute, and there has been discussion of the episode ever since (Kitchen 1998; Thomas 1998). For those not involved, the whole business of WAC seemed absurd when the subject of archaeology dissolved into bitter arguments and lengthy machinations over exploded heritage issues.

The wounds have healed, however, and ANTIQUITY is pleased to report on the events of the Cape Town meeting of January 1999. Few Congresses can have been happier or better organized than WAC-4. Sitting in one of the many sessions over the four-and-a-half days, the Editors speculated on the reasons why archaeologists from around the world should attend a World Congress. The reasons for travelling half-way around the world were self-evident when one listened to, talked to and observed the activities of colleagues from over 70 nations and nearly 800 participants, all equally engrossed in each other's cultures and archaeologies. In the summer temperatures of Cape Town, mellowed by the fine University campus, excellent organization, food and general enjoyment of listening to vibrant African music, there cannot have been one participant who was not wholly positive about being there. The Congress was a model of what these things should be — friendly, supportive, informal and charged with important discussions and commitment to a very wide brand of inclusive 'archaeology'. That the Cape Town meeting has been a success is all the more poignant in view of the history of WAC. For those who were involved in the Southampton meeting, there is clearly the feeling that they had helped to shift Apartheid from South Africa, and arouse proper academic indignation for the conditions of non-white people in South Africa. The opening Ple-

The daily routine of WAC seen through the eyes of advisory editor, Kate Clark.

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nary session of the Congress (and internal meetings of the Congress) certainly emphasized this point, with a rousing speech from the Government Minister for Water and Forestry who acknowledged the past support of WAC in the struggle against Apartheid. The enthusiastic participation by over 20 other African nations was a further acknowledgement of how this magnificent country has re-entered the international arena.

However, not everyone was there. Some countries and ethnic groups were thinly, if at all, represented. This was an English-speaking conference where French- and German-speaking representation was low, but Spanish representation much higher, especially from South America. In particular, Europeans, who still prefer to support the interests of UISPP, were few in number, as were many prominent professors or those involved in on-going university teaching. East Asia was poorly represented, doubtless because of the weak currency and economic instability of the region. Some 260 people (many indigenous) were given varying degrees of financial support to attend and there was a particular strength of interaction between different countries of the South (Third World). However, the South still has to promote its own archaeological questions, rather than respond to the countries of the North. The impact of the conference may, however, have been more influential than the presence of nearly 800 people. The Internet presence of the site (http://www.uct.ac.za/depts/age/wac/) was considerable and well over a million 'hits' had already been recorded by the time of the conference.

One significant development from WAC-4 was revealed when the academic secretary of the next UISPP meeting, Dr Marcel Otte of the University of Liège in Belgium, made some impassioned announcements which aimed to bury the old disagreements and enable a constructive relationship to be re-established between WAC and UISPP. Otte proposed that the two congresses were now so different in character and academic aspiration that there was a place for both, and UISPP welcomed that diversity. They each did different things and there was no convergence or competition between them. He personally welcomed all WAC participants to the Liège meeting in 2001 (see the ANTIQUITY *Supplement* for details). He suggested that the two meetings should be appropriately scheduled with one or other taking place every

9 things to do if you are bored at WAC-4

two years, and that there would be close collaboration between the organizers to ensure harmony. All this is good and positive, even if the wounds of WAC-1 have taken 14 years to heal. Let us hope that such splits within the archaeological community never happen in this manner again, since there is much that has been lost as a result, even if at the end more political goals have been gained.

Although this congress certainly represented a major break from the Eurocentric focus of most archaeology, and really had combined the north and south more than any other archaeological congress to date, the lack of language support (simultaneous translation) due to financial constraints was a major problem. English ruled the day, and whilst convenient for some, clearly a much wider range of language provision is required if the 'world' community is to be properly integrated at such meetings.

Money is always a problem with international meetings, especially for subjects like archaeology, where big business generally has very little interest in supporting the proceedings. Surprisingly, mining companies in Australia had provided financial support for over 20 Native Australians. Perhaps such initiatives can be encouraged from similar organizations in the future. For the South Africans, the venture was a risky one indeed. There was no public backing financially, even though the City and the University of Cape Town were supportive in

other ways. The *rand* was in a 30% decline against the dollar, and with final numbers unconfirmed until the last moment, the whole venture was fraught with anxiety. In future, organizers would like outside support from the outset, but such support will always be hard to confirm when venues are chosen in rapidly changing and economically unstable parts of the world. Brazil is suggested as the next venue for WAC, but even as the Cape Town congress unfolded the Brazilian *real* was depreciating substantially. At least in this sense, all would agree that archaeology cannot be divorced from political and economic reality. In other respects, the future direction of WAC was less clear. The main intention (declared at a historiographical session on WAC itself) was to continue to hold conferences where many positions could be rehearsed. In our opinion, the holding of a good conference with predominantly interesting themes has always been a central measure of the achievement of WAC.

But what of the content of such a meeting as WAC? The stated aims are towards exploring indigenous pasts, the heritage in its various manifestations, material culture, repatriation, political interpretations. The programme included a vast range of contributions, more or less appropriately assigned to sessions of similar theme. A prominent feature of the programme was the African connection, headed by a series of excellent keynote speeches. One was the moving delivery by Thurstan Shaw on video of a tribute to the late Bassey Andah, the Nigerian ex-President of WAC. Another was a cleverly articulated rendition of the South African setting of Glyn Isaac by Carmel Schrire. Elsewhere the African coverage ranged from District 6 (of Cape Town) to the slave trade, *indigenous* migration, the material culture of colonialism and the African Burial Ground in New York. In the rest of the programme, at one end of the scale there were contemporary material culture and indigenous voices — not archaeology in the traditional academic sense at all — and at the other, highly detailed research on such topics as genetics, metal analysis, fossils and the like. The 'Middle Ground' was actually thinly represented, with contributions on the more traditional concerns of archaeology — settlements, trade and burials wrapped up in period and regional approaches. The wider concerns about the past — such as 'who owns it?' or 'who were they?' have taken such precedence in recent times that the conventional concerns about 'how good is the evidence?' and 'how reliable are the data?' have slipped away, replaced by the more philosophical theme that all data are theory-laden. It seems to be assumed that all archaeologists define and collect their evidence in ways that should not be questioned. However, how can we be sure that the sweeping claims and assumptions of archaeological evidence really support the wider, political implications that underly 'Heritage issues' if the evidence itself is never questioned? Martin Hall, when questioned on the Academic content of WAC-4, replied that the content was a reflection of the state of the discipline. If this is so, then another recent concern relates to the 'State of the Discipline' and it is one where readers should consider carefully what archaeology is and how it is done. In the view of the current editors, in our search for cultural relativism we should not abandon a concern for good and precise methodology.

The proliferation of conferences such as TAG, WAC and even EAA (European Association of Archaeology) seem to represent a huge increase in the platform space for 'archaeologists' who wish to speak on any of the wide-ranging topics that now pass as archaeology. The open platform of WAC and EAA given to almost anyone, regardless of knowledge, expertise or relevance is of concern to the archaeological community since it can paint a curious picture of our discipline. How much of what is presented is really a reflection of what is generally being done? Is what is being done rigorous or even remotely connected with the generally accepted study of the past?

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These are questions which leave us wondering. However, it is clear from publications we receive, including many from One World Archaeology, the WAC publication series, and from the wealth of material presented for consideration to ANTIQUITY that many 'archaeologists' still pursue the conventional aspirations of our trade and with great effect!

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For half a century, aerial photography has been rightly acknowledged as one of the major tools of archaeology. Methods have been pioneered and refined, and where coverage has been intensive, as in the British Isles, it is safe to say that perhaps half of all the known prehistoric sites of the land have been found or confirmed through air photos. In fact, so routine has it become to fly and photograph, that virtually every archaeological report, text book or museum display will include examples. In Britain, aerial photography (where the founder Editor of Antiquity, O.G.S. Crawford began his archaeological profession in the 1920s) is apparently widely available and easily done. The Royal Commission for Historical Monuments (until its imminent absorption in April by English Heritage) has flown exclusively to record buildings and monuments, and private flyers add to the annual coverage of selected parts of Britain. For broader, academic survey, there is really only one institution that has maintained an extraordinary programme of flying for archaeology, geography, and all aspects of landscape and land-use, and that is the Cambridge University Committee for Aerial Photography. Few readers will not have heard of the founder, Professor Keith St Joseph, who built up the operation and maintained the extraordinarily rich collection of half a million air photos, that are constantly used and are of great historical importance. The Unit also offers the facility to fly new areas and monitor the old. The collection is of incalculable value for research and for landscape/heritage management. Thus it comes as an extraordinary blow to learn that the Committee is due to be wound up in a little over a year's time, because the University cannot be expected to continue to fund it. The threat is not new; it was issued last in the early 1980s. However, in spite of pioneering new techniques (digital imaging and infra-red, thermal tracking photography) and many other new applications of use to all scientists dealing with the landscape, there is surprisingly little interest or furious reaction from archaeologists. This is the state of the discipline — where the two extremes seen in the sessions of WAC are reflected in the way that archaeology is now taught and researched. At the general end, there is a growing concern for philosophies and ethics about the past and abstract theories to deal with them. At the particular end, the concerns are, quite literally, microscopic, and genetics, molecules and the like rule research funds and research space. The middle-ground concerns of methods and applications, sites and sequences, typologies and technologies have become apparently irrelevant and dull and the discipline barely acknowledges them any more. Into this middle ground, aerial photography also falls — dull and irrelevant, and in Cambridge, where theory is always very important, the fabulous resource remains under-used and under-acknowledged. The arguments proposed for supporting closure are that the operation is expensive, that the photographic collections are little used by the academic community and that the space the committee occupies would be of more use to a closely related discipline. In other words, the archaeological community could lose this 'jewel in the crown' because it has forgotten how to use some of the fundamental methods and resources in what will always be a landscape discipline. An outcry in the 1980s saved the unit then, and the same might be true again. In this context we have invited ROBERT BEWLEY (currently in the RCHME) to reflect on the state of aerial photography.

ROBERT BEWLEY* *writes*:

As the end of the century (and the millennium) approaches it is an appropriate time to consider the role of what has become known as 'aerial archaeology'. One pressing reason for this is the review by Cambridge University of the future of its Aerial Photography Unit. This Unit, which undertakes reconnaissance and maintains a unique library of aerial photographs, was established in 1945 by the late Professor St Joseph and between 1980 and his retirement in 1998 was curated by David Wilson. The unit has been a major mechanism for teaching aerial photographic skills, and surely one of the lessons of this century is the need to transfer the skills of one generation to

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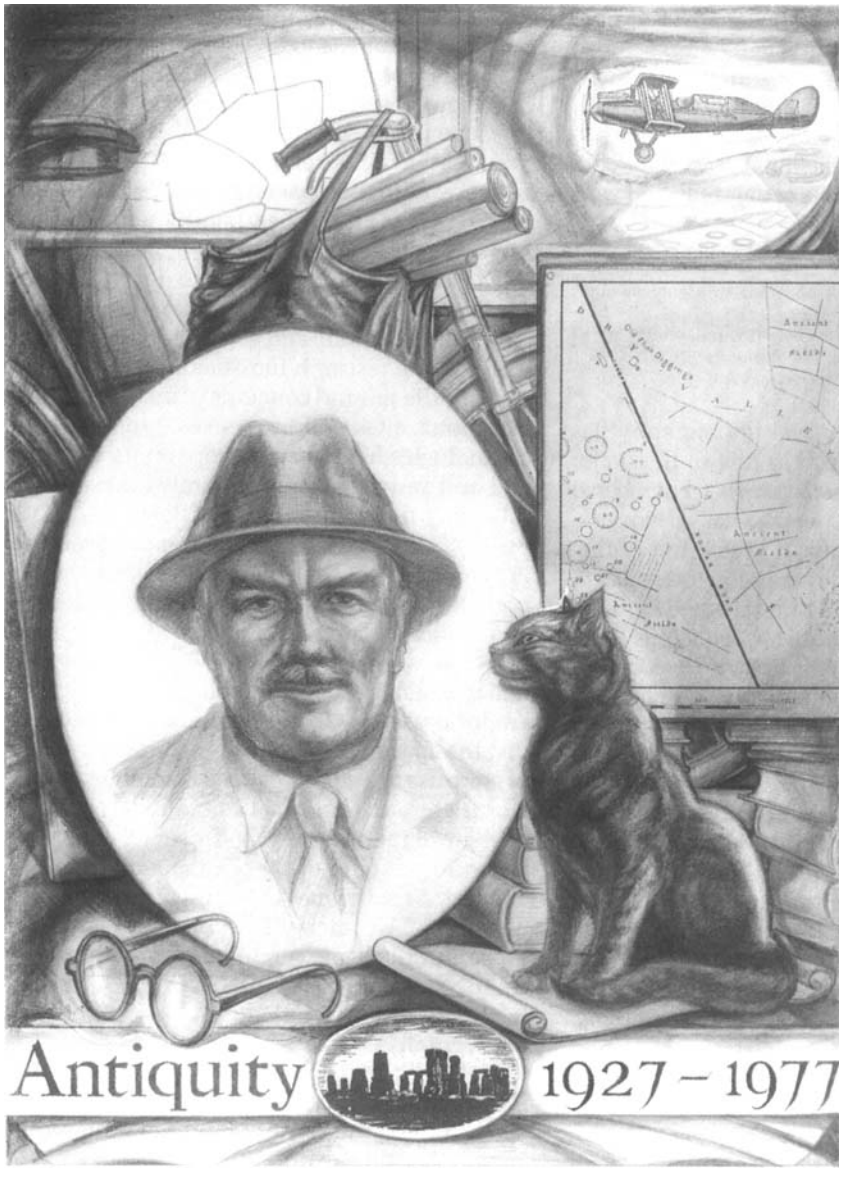

A picture from the ANTIQUITY *archive: O.G.S. Crawford and attributes drawn by Brian Hope-Taylor.*

the next. This happened in the St Joseph–Wilson transfer, but has 'aerial archaeology' in Cambridge or Britain planned for developing the skill base in the next millennium?

Archaeology itself is a relatively recent discipline, but the techniques employed by aerial archaeologists have only been available in this, the 20th century, through the developments of both cameras and, more importantly, aeroplanes (Bewley 1997). After nearly a century of development (Crawford 1954), what have been the major achievements and what does the future hold for aerial photography? Some of these questions were addressed at the conference on Aerial Archaeology in Central and Eastern Europe at Potsdam in 1994 (Kunow 1995; Palmer 1995; Wilson 1995).

The majority of this century (some 70%) has been one of data collection — mainly recording sites, buildings and landscapes through photography, with only some 30% (in the latter years of the century) devoted to interpretation, mapping, analysis and understanding. This is an important division because it emphasizes the point that archaeology, as a subject, requires a considerable amount of time and effort in data-collection prior to providing understanding. Indeed, the major successes of the century have been the large collections of photographs in Britain which are avail-

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The Cambridge University Air Photography Unit's Cessna 337 over Cambridge. (Cambridge University Collection of Air Photographs copyright reserved. Negative no. A-AknA5. 30 July 1993.)

able for study, especially those held in Cambridge University (CUCAP) and the National Monument Records for England, Scotland and Wales. In a developing subject (especially in the inter-war years 1918–1939) there was much discussion about techniques (Crawford 1928; 1929; Riley 1944) and the way in which cropmark and soilmark sites became visible. However, it was the dedicated amateur aerial photographer who pushed the subject forward. After the War a number of pilots (Baker, Hancock, Pickering and Riley) carried on flying and recording sites from the air and made their information available through National Monuments Records as well as the growing number of local sites and monuments records.There is no doubt that archaeology has had its aerial reconnaissance on the cheap and that proper investment for the future must be a priority.

It was in the late 1940s and 1950s that archaeologists began to understand the potential of the information contained on both vertical and oblique aerial photographs (Beresford 1950; RCHME 1960). This latter publication, *A Matter of Time*, was a landmark in the subject and its message (destruction of sites in river valleys) is as true today as it was in 1960. It is regrettable that more was not done sooner (by all archaeologists) to act upon the recommendations and knowledge available in the 1960s. Although the publication in 1984 of the Danebury landscape study (Palmer 1984) was the next important step in interpreting, mapping and understanding the English landscape, its publication 24 years after *A Matter of Time* shows the lack of vision in the 1960s and 1970s. Although the 1970s saw a few important attempts to bring together aerial information (Benson & Miles 1974; Leech 1977), these were mainly mapping exercises, not aimed at understanding the totality of the landscape. Since the 1980s the focus and objectives of aerial work developed (Bewley 1984; 1994; Whimster 1989) to meet the needs of conservation authorities (county-based archaeologists as well as national agencies). Thus, from just aerial reconnaissance and mapping the aims were directed towards an understanding of archaeological landscapes from prehistory to the 20th century (Bewley 1998; Stoertz 1997).

This development is demonstrated by a National Mapping Programme (NMP) for England whereby all archaeological sites, visible on aerial photographs as either cropmarks, soilmarks, parchmarks and earthworks, are mapped (at 1:10,000 scale), interpreted and then recorded. The results of over 20 projects are now available in the National Monuments Record. This programme (currently in the RCHME but soon to be amalgamated with English Heritage (EH)) was developed in consultation with EH's Monuments Protection Programme so that better understanding of the nation's archaeological resource can be obtained. Projects using complementary techniques are also being carried out in Scotland and Wales. Similarly the MARS project had an aerial survey element to assess the changes to sites over 50 years (1945–1995), the results of which are now published (Darvill & Fulton 1998).

The Castle earthworks, Granard, Co. Longford, Ireland. (Cambridge University Collection of Air Photographs copyright reserved. Negative no. AJO53. 8 July 1964.)

This rapid review leads me to consider the future of aerial survey. Should aerial survey be 'more of the same' or can the technique develop and expand? My view is that it is a mixture, with more of the same over a wider geographical area (i.e. world wide), and expansion and development of its techiques. It must move from being a sub-discipline to a central, integral tool, available for all archaeologists and landscape students everywhere. The future lies in integration and not separation, even though specialists will be required for certain parts of the work. The results of aerial survey projects are extensive in terms of the chronological and geographical scope of the work, but they are based on one strand of evidence. Field projects need to be integrated in the future so that the questions raised by aerial evidence can be explored. It is important for aerial archaeologists and air photo interpreters to develop a well-understood philosophy of what they can achieve and what they cannot.

Aerial survey is good at discovering, locating, recording, classifying, analysing and presenting extensive (or single site) information. In the past decade there has been a more integrated approach so that aerial reconnaissance has been linked more closely with other survey projects. This has been particularly true of archaeological surveys, especially those using existing aerial photographs, but surveys recording certain types of buildings (textile mills and hospitals especially) have also shown the effectiveness of the technique (Giles & Goodall 1992). Its limitations, using traditional photographic techniques, are that it relies on one aspect of the available resources for its initial interpretations (as there is often no other source), and from aerial photographs it is difficult accurately to assign a date or function to a site. Equally it is rare that relative dating can be achieved from the aerial evidence alone. Classification schemes have been developed to help classify sites (Edis *et al.* 1989) but the underlying assumption in the system used for the NMP is that sites of a similar size and shape may have a similar date and function. We know that this is not always the case, but it allows for sites within classes or groups to be analysed in terms of topographical location and other archaeological associations, so that more intensive (often field-based) studies can be planned.

The key to success in the future will be in developing spatial analytical techniques, using GIS. These analyses will become possible because of very recent developments in digital mapping (the NMP has moved in the last six months from paper maps to digital maps). The Royal Commission in Scotland has already integrated some of its mapped information into their GIS, and English Heritage's work at Stonehenge has shown the way forward for a variety of archaeological and heritage management purposes (Batchelor 1997).

One of the fundamental questions which we do need to answer in the next decade concerns the validity we can assign to the information derived from aerial photography. How representative is it for understanding prehistoric, Roman

or medieval landuse and settlement? We are on the threshold of answering this question (Carter 1998), and given the breadth and depth of the aerial evidence it is likely to be a positive answer but it will require quantification and qualification, aided by the application both of new techniques and ground-testing geophysics and survey.

In the late 20th century there is a world-wide emphasis on cost-effective archaeology, and value for money (irrespective of politics). The approaches and techniques of aerial survey provide the ideal opportunity to discover and record 'more' for less money than any amount of excavation. Even if no more photography is undertaken there are still decades of work to be done cataloguing, examining and interpreting the existing collections of aerial photographs.

One major area for research will be in the use of airborne scanners which can see through the soil, measuring spectra of light which are not visible to the naked eye (thermal and infra-red in particular). These have been tested by the Cambridge Unit. It is imperative that a research and teaching capability is maintained in Britain, and this is currently only available to the archaeological community at Cambridge.

Since 1990 more countries have been willing to allow aerial photography than was possible in the past 50 years (mainly in Europe as a consequence of the ending of the Cold War) but there are many others which could do more to encourage it (Bewley *et al.* 1996; Bewley & Kennedy 1998). The majority of countries have vertical aerial photographs taken for a variety of purposes (military and civilian). These should now be made available; to argue that they are secret and confidential is to deny the value of satellite imagery which is now widely available, but no substitute for the flexible implementation of low-level flying. The transfer of skills is happening, not just between countries but also from generation to generation, as there are now more archaeological air-photo interpreters in Britain and Europe than ever before.

Beyond Europe the potential is equally high, and the continents of Africa (Darling 1998) and America have yet to be fully explored using this technique. Recent results from New Zealand (Jones 1994) show that, in the right place, aerial survey can transform our understanding of the history of a country. Connah & Jones' (1983) work in Australia showed cautious optimism for the technique, and since then the use of aerial photography for 20th-century remains (often in the urban environment) has been developed. As interest in military archaeology expands, as it is now doing (Schofield 1998), there is still a great deal the technique has to offer scholars of historical landscapes and structures.

In conclusion, the future development and application of aerial photographic survey has profound implications for those who will fund archaeological survey and research. Aerial survey should be seen as one of the primary processes in archaeology. Ground-based survey and excavation should be seen as a post-aerial-survey activity to answer specific research and assessment questions. Governments, funding bodies and developers seek value for money, and surely aerial survey and its developing intellectual philosophy are of intense interest and importance to all concerned with archives, archaeology and landscapes.

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Stonehenge always creeps into ANTIQUITY and, as reported in the December 1998 Editorial, the prospect of funding a road tunnel in order to divert the road that currently dominates the area has its critics and its supporters. The issue came to the fore at WAC in the context of the threats to the World Heritage in Africa, the Americas and beyond. In the final session, while praising the initiatives of the British government in agreeing to fund a cut-and-cover tunnel, a congress resolution was made to ask the British Government to fund the more expensive, long-bored tunnel solution, and also requested full and proper consultation with appropriate experts. The consultation process, however, is already under way for the route of the A303 road, rapidly, quietly and legally. The people of Amesbury in Wiltshire have had a two-day (January 16–17 1999) consultation, prior to the next stage of the development, which will be the announcement of the preferred route. Interestingly, the leaflet distributed to the locals includes a proposed time-scale; 'A New Deal for Trunk Roads in England envisages a start of construction within seven years, subject to statutory procedures, and opening within ten years.' At the exhibition preview of the scheme in Amesbury, the chief executive of English Heritage, Sir Jocelyn Stevens, announced that 'everyone was on board' as regards support for the scheme. Everyone, that is, except the Wiltshire Archaeological and Natural History Society, who were 'out on a limb' for not enthusiastically supporting the scheme. This august society has cared for the monument longer than any other, and it seems churlish to ignore its comments and concerns.

We are pleased to announce the winners of the 1998 TAG quiz, set by one of last year's winners, Prof. A. Whittle. The winning team was composed of the principal members of the 'Origin of Spaces' symposium, namely Prof. R. Bradley, Dr J. Thomas, Dr N. Thorpe and N. Bestley.

We also take the opportunity to thank our out-going Reviews Editor, Anthony Sinclair, and welcome the new, Nicholas James. In the same way that we have much appreciated the support of Anthony Sinclair as fellow graduate student, fieldworker and editor, we have known Nicholas James for many years. He brings into play a knowledge of themes as diverse as Mesoamerican archaeology, landscape history and cultural tourism, as well as a passionate interest in the books themselves.

ANTIQUITY continues to show a strong European dimension within its global coverage. Our subscribers can now pay for their subscriptions in Euros (€) (see the new details in the Editorial notices and in the *Supplement*). The new Framework V research programme of the European Union (reported on in our September 1998 issue) has now been approved at 13.7 BECU, somewhat below the original aspirations, but still a substantial source of funding. The focus of culture has been directed towards the monitoring and control of damage to the cultural heritage (moveable and as part of the built (particularly) urban environment). The current issue of ANTIQUITY contains a special French contribution which dwells in some detail on the interrelationship of three of the major linguistic blocks within the European Union — French, English and German — and the impact of these different ideologies on archaeological interpretation. Several authors make the point that French (and many other continental European) archaeologists are content to build on previous achievement whereas English-speaking scholars feel a need to oppose the achievements of the past in order to make their mark. There is much of this, not only in the development

of theory but in the origin of the rival congresses already discussed in this editorial. Although ANTIQUITY will continue to publish exclusively in English, European coverage and debate are a very important part of our collective interests in understanding ourselves.

At a time when the accessible archiving of the past, has become a matter of real concern, for all types of archaeological data, including aerial photographs, JULIAN RICHARDS describes for us a new on-line catalogue of digital data: ArchSearch.

JULIAN RICHARDS* *writes*:
In ANTIQUITY 71 we described the work of the Archaeology Data Service which is providing a home for digital data and making it available for re-use. After months of preparation the Archaeology Data Service's online catalogue of digital data, ArchSearch, was launched in September 1998 by Emeritus Professor Rosemary Cramp. Using the latest computer technology, the ADS catalogue makes information about archaeology rapidly available to anyone with Internet access. For the first time ever, this online catalogue will make it possible to locate similar archaeological sites across the English, Irish, Scottish, and Welsh borders. So if you've ever wanted to know where all the Roman sites in Britain are, you now have a place to begin your search.

The online catalogue uses sophisticated technology based on a network of databases — all using different software and different computers — around the country and abroad. It is one of the first cultural heritage applications of new technology developed for exchanging information quickly and efficiently.

Users are initially able to search a number of important UK resources, including substantial sections of the RCAHMS' National Monuments Record of Scotland, RCHME's Excavation Index for England and their Microfilm Index and the world-class library catalogue of the Society of Antiquaries of London. There are also plans to collaborate with overseas organizations to provide access to non-UK archaeology.

A number of search screens are offered, each tailored towards a different type of query in order to avoid overloading users with too many options at once. A user can elect, for example, to carry out a keyword search across the entire catalogue, or they can restrict themselves to a location-specific search and request resources from within a single parish, district or county, or one of the new unitary authorities. As well as different search forms, users will be able to interact with the catalogue by means of a map interface, allowing them to point at locations of interest on their computer screen. Links are also offered through to the prototype catalogue of the Arts and Humanities Data Service. Here, a user can enter a single query that is automatically passed to five separate databases spanning archaeology, history, text and the performing and visual arts.

The long-term goal of the ADS is to devolve data back to those best placed to maintain them; the creating organizations. All along, the ADS has advocated a distributed rather than centralized structure for its catalogue, and is investigating the use of technology such as Z39.50 (a communications dialogue developed in the library world to ensure that libraries can work together) as a means by which large organizations such as RCHME and RCAHMS might make their data available to our catalogue without the data ever needing to leave the NMR in question. Other organizations such as the Scottish Cultural Resources Access Network (SCRAN) are also exploring Z39.50, and the next step will be for the ADS to provide access into their catalogue and *vice versa*.

If you have access to the World Wide Web, take a look for yourself at
http://ads.ahds.ac.uk/catalogue/

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Prizes[1]

ANTIQUITY is pleased to announce the winners of the ANTIQUITY Prize (awarded to the best contribution to ANTIQUITY) and the BEN CULLEN PRIZE (awarded to the best young contribution to ANTIQUITY) in 1998.

The ANTIQUITY PRIZE, of £1000, now in its fifth year of award and for a contribution of special merit, is awarded to PATRICK SIMS-WILLIAMS for his article 'Genetics, linguistics, and prehistory: thinking big and thinking straight', published in September 1998.

1 The ANTIQUITY Prize is funded out of our own resources, accumulated out of subscriptions. The judges for both prizes were Caroline Malone, Barry Cunliffe, Joan Oates and Stephen Shennan. The choice was made from all contributions to volume 72.

The BEN CULLEN PRIZE, a prize to the value of £500, is awarded to DAVID WENGROW for his article '"The changing face of clay": continuity and change in the transition from village to urban life in the Near East' published in December 1998. David is a research student in archaeology at St Hugh's College, Oxford.

In March 1998, we instituted the custom of the regular publication of Notes for contributors and we are happy to repeat this practice in the light of a year's experience of editing. One of the major changes introduced is in our practice of citing radiocarbon dates and we have invited JANET AMBERS to explain the details of current practice.

JANET AMBERS* *writes*:
Uncalibrated radiocarbon results should be expressed according to international convention, as recommended by Stuiver & Polach (1977). For virtually all papers published in ANTIQUITY, this will be as a mean value and the standard deviation (expressed as a ± error term) in radiocarbon years before 1950, and calculated using the 5568-year half-life, as shown below. Always include the laboratory code number to any radiocarbon result; this is the only means by which a measurement can be linked to a specific sample.

BM-2646 2680±50 BP

ANTIQUITY now follows the international convention, formalized by Mook (1986), of using capital BP to indicate uncalibrated figures.

Rarely, and only for specialist papers, it may be necessary to quote $D^{14}C$ values; in this case follow the style of Stuiver & Polach (1977).

Radiocarbon results should normally be calibrated prior to any discussion or interpretation. Calibrated results should be quoted as date ranges (the irregularity of the calibration curve means that it is impossible for a calibrated age to be expressed as a ± term), together with the associated probability (the most frequently used probability levels are 68% and 95%, the equivalent of ±1 and ±2 error terms respectively). We now follow international convention and use the terms cal AD and cal BC to indicate calibrated figures, as:

'Cellulose from branch wood from context F163/2 gave a radiocarbon result of 2680±50 BP (BM-2646) which calibrates to possible calendar age ranges of 900–870 or 855–805 cal BC at 68% probability or 930–790 cal BC at 95% probability.'

While it is possible to produce a crude calibration by hand, we strongly recommend the use of a computer program, as this is the only way to incorporate all the information contained by the raw figure. The two calibration programs most frequently used at present are OxCal (from the Oxford Radiocarbon Accelerator Unit) and CALIB (from the Quaternary Isotope Laboratory, University of Washington). These can be obtained from the authors or, together with other programs, directly from the *Radiocarbon* web site (www.radiocarbon.org).

The current internationally approved calibration curves are Stuiver & Pearson (1986) for AD 1950–500 BC and Pearson & Stuiver (1986) for 500–2500 BC. These curves will soon be replaced by Stuiver *et al.* 1998 (covering the period 22,000 BC to AD 1950) but should continue to be used until the 1998 figures are available.

Details of curve used and calibration method should always be quoted, together with any other necessary correction (such as the Southern hemisphere offset) applied. While only calibrated figures will normally be used in discussion and it may be tempting to omit the uncalibrated results, these should always be included somewhere (in a footnote or end table if necessary), together with the full laboratory identifier, to allow both for figures to be verified and for future improvements in calibration curves and practice.

Finally, always include details of the actual material analysed; this may radically affect the way in which the date should be interpreted.

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