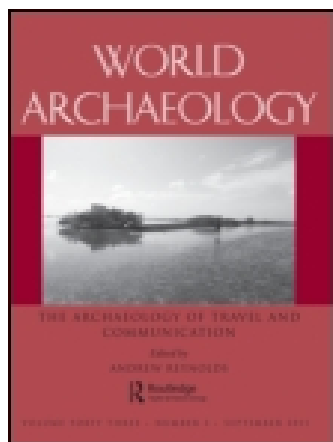


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Working with the military to protect archaeological sites and other forms of cultural property

Laurie Rush

Abstract

The protection of cultural property is a critical aspect of modern warfare. Post disaster, cultural property, including archaeological sites, can become a foundation for a recovering community. As the motto of the Afghan National Museum eloquently states, 'A Nation Stays Alive When Its Culture Stays Alive'. It is essential to educate military personnel to prevent inadvertent damage to museums, works of art, archaeological sites, sacred places and other forms of cultural property. It is also critical that military strategists and planners take cultural property into consideration as they prepare for 'no-strike' listing and all possible operations. In order to meet these challenges, archaeologists have begun to work with the US Department of Defense, NATO and a range of international forces in order to establish academic partnerships for appropriate response to situations where military personnel encounter archaeological sites in unfamiliar lands.

Keywords

Archaeology; military; stewardship; Iraq; conflict; heritage.

Introduction

Like it or not, in many situations, generations of the future will depend on the military personnel of today to save and protect archaeological sites and other forms of cultural property in situations of conflict occurring all over the world. Archaeologists, art historians and other subject experts are partnering with multiple ministries of defense in the US and Europe in order to support military efforts to educate personnel, to incorporate cultural property issues into military operations planning and to develop and implement practical and rigorous military guidelines for protection of cultural property.¹

Over 120 nations, including the United States of America, have agreed to abide by the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict. Even though this convention requires the parties to educate military personnel, very few of the member countries have established any form of formal program or initiative that would help them comply. However, there are archaeologists and heritage professionals who are currently working to save archaeological sites in the midst of armed conflict and natural disasters.

Saving archaeology at home

In the US and the UK, there have been cultural resources management programs on domestic military bases for decades. In the US, highly qualified archaeologists, historic architects and preservation professionals manage vast acreages of military lands and inventories of historic structures. In the US, archaeologists are responsible for keeping the military installations in compliance with the National Historic Preservation Act (NHPA), which requires inventory of cultural property (Section 110) and the opportunity for stakeholder consultation (Section 106) when proposed ground-disturbing activities risk damaging or destroying an archaeological site that may have the potential to contribute to new knowledge. In this respect, military land is managed to the same standards as all US federally owned land including the National Parks.

Following Section 110 and Section 106 means that the United States Department of Defense invests millions of dollars annually in archaeological survey, site evaluation and stakeholder consultation. All military land that is subject to disturbance from military training and all new construction footprints require thorough archaeological review. When one considers the scale of these activities, it quickly becomes clear that these responsibilities employ hundreds of archaeologists in the roles of civilian employees of the military, as defense contractors, as university recipients of military funds, as field technicians, as research fellows and even as field school participants. Millions of acres have been surveyed, and there are currently tens of thousands of archaeological sites in the US Department of Defense inventory, with thousands of them designated for permanent protection.

In addition, in 1999 the Department of Defense established a pro-active Native American consultation policy (US Department of Defense 1998). This policy encourages the establishment of partnerships between Native American nations and installation management personnel. The idea is to insure that if issues related to ancestral remains should arise, the installation has sound relationships in place that can be used to find solutions as colleagues rather than as adversaries. It is very common for the installation archaeologist to also serve as the Native American affairs coordinator as designated by the garrison commander. In this role, military archaeologists often become advocates for the indigenous people who have ancestral relationships with military lands, arranging for site visits and working together for preservation of the most important ancestral places. Many military installation archaeologists will attest to the fact that their relationships with Native Americans have informed their archaeological site analysis and interpretation as well as being incredibly rewarding at both the personal and professional level (see also

Francis Scardera's 2011 account in Peter Stone's edited volume, *Cultural Heritage, Ethics and the Military*).

In a comparable program, the UK Ministry of Defence has carefully inventoried its training areas and has an extremely robust site protection program in place with three full-time archaeologists and heritage professionals working for the Ministry. Very few people realize that Stonehenge is immediately adjacent to the Salisbury Defence Estate, acreage that features some of the best-preserved archaeological properties in all of the UK (Brown 2005, 2010).

In Italy, the Carabinieri Command for the Protection of Cultural Property works together with the archaeological superintendencies and with the Italian military to insure protection of archaeological sites on Italian military land. As one walks along the Appia Antica just on the edge of Rome, it is possible to see protected tumuli inside of the protected Italian Air Force perimeter. It is common to find archaeological properties of immense global value within restricted military lands across the world, including an Egyptian military installation located at the pyramid fields of Darshur. Proactive programs for identifying and protecting these properties are unfortunately all too rare.

Domestic cultural resources management and cultural property protection during global operations: a distinction?

During the 2008 World Archaeology Congress (WAC), many colleagues raised the issue of ethics and working with the military prior to and during conflict. Controversy surrounding the invasion of Iraq and the potential for conflict with Iran drew attention to the question of whether it was appropriate for archaeologists to participate in the process of preparation for military operations that could potentially have an impact on archaeological sites. In her summary of the controversy, WAC President Claire Smith summarized the opposing points of view in a media release (Smith 2008):

The view here is that providing advice and expertise to the military during the war planning against Iran would offer cultural credibility and respectability to the military action. . . . Other members take the opposite stance that it is their responsibility as cultural heritage specialists to attempt to mitigate the damage done to cultural heritage wherever there is conflict as this cultural heritage could be an essential building block in the peace process.

Many archaeologists, up until that point, had been unaware of the number of colleagues who already worked for the Department of Defense in the US and the Ministry of Defence in the UK, or of the scope of work being accomplished. One aspect that is rarely considered is the fact that both Defense establishments support archaeology and stewardship for the purpose of staying in compliance with preservation law while making land available to military personnel in order to support preparation for success in violent conflict. For archaeologists whose career is in the defense sector, distinctions between peacetime stewardship and preparation for war may evaporate in the amount of time that it takes to detonate a weapon.

There is another aspect of cooperation with the military for cultural property protection that requires consideration, and that is insuring that all of the necessary information is available to military personnel assigned to disaster response. Recovering objects from the ruins of a collapsed museum is a completely different process from managing rubble from other types of structures. To manage situations properly, military responders need to know what types of cultural property they are going to be encountering, and much of that information must come from archaeologists. Another example would be planning for oil spill response. If archaeologists of the Roman Empire were to provide information on coastal archaeological sites in the Mediterranean and Adriatic seas that they would like to see protected in the event of a catastrophic spill to Navy and Coast Guard organizations, the likelihood of those sites being spared during the course of the clean-up would be dramatically increased.

Damage at Babylon: a potential US turning point

Given the fact that the US has an admirable program for protecting archaeological sites at home, it is fair to ask how US personnel could have been deployed to Mesopotamia without any preparation for operating in the immediate vicinity of some of the most revered archaeological sites in the world. It is an especially troubling question because during World War II, the United States had established the Monuments, Fine Arts, and Archives program, providing qualified personnel in uniform who saved countless works of art, historic structures and other forms of cultural property throughout Europe (Nicholas 1995) and even in Japan (Coccoli 2011). By 2003, this capability had all but disappeared within the US Department of Defense.

As an invasion of Iraq appeared increasingly imminent, US archaeologists and others with an interest in antiquities became increasingly alarmed about the potential for destruction of Iraq's cultural heritage and took the initiative of attempting to warn US political and military leadership (Cogbill 2008; Gibson 2009; Lawler 2003). In January of 2003, a meeting took place between Dr McGuire Gibson, Director of the University of Chicago Oriental Institute, Dr Maxwell Anderson, President of the Association of Art Museum Directors, Dr Ashton Hawkins, President of the American Council for Cultural Policy and Dr Joseph Collins, Deputy Assistant Undersecretary of Defense for Stability Operations and his staff. After discussion of the overall risks and concern, Dr Gibson stayed behind to clarify that there were thousands rather dozens of sites to consider. He shared his data with the Defense Intelligence Agency and it was used effectively for development and implementation of the 'no-strike' list for Iraq. In his interview with Cogbill (2008), Dr Collins described the minimal destruction and damage due to direct US military attack as an 'underreported success story'. This point has never been substantively challenged. In contrast, the preponderance of damage to heritage in Iraq was due to two types of problems – looting and damage. The damage, more specifically, occurred during the course of post-conflict establishment and expansion of military facilities. It should be noted that the current military initiatives are still grappling with the challenge of how to effectively apply the data and success of the 'no-strike' process to planning and implementation of ground operations. There is still a tremendous amount of work to be

done before planning for cultural property protection is truly integrated into the military operations planning process (Kila 2012).

The pre-invasion concern, as we now know, turned out to be well founded as news of the looting of the Iraq Museum, widespread looting of archaeological sites and damage at Babylon filled the airwaves throughout the early months of US and coalition presence in Iraq. It is also important to remember that during this tragic time, damage to heritage was occurring within the context of widespread disintegration of all aspects of Iraqi civil society, including damage to essential infrastructure like water, sewage and electricity systems. Wegner (2008), Ricks (2006) and many other scholars and commentators have pointed out that the outcome in Iraq might have been very different.

As the invasion of Iraq unfolded, US Marines were assigned to protect the ancient city of Babylon from looting. They set up Camp Alpha, and as they established defensive positions and a helicopter landing zone, news of US damage to archaeological features at Babylon reverberated around the world (MSNBC News 2004). It will always be painful to read the detailed accounts of the damage (Curtis 2004), especially for US military archaeologists. As the descriptions unfold, it becomes increasingly clear that damage of this nature can and should be prevented through planning, education and direction from the highest levels of political and military leadership (Wilson 2012). There were efforts to address the situation. Polish military personnel completed a series of mitigation projects using the Commander's Emergency Response Fund Program (CERP) (Burda 2005), and the US State Department funded the 'Future of Babylon' program, supporting efforts via the World Monument's Fund (US Department of State 2009).

When the news from Babylon began to emerge through the global media, some archaeologists who were working in the US Defense domestic stewardship program realized that they were uniquely positioned to apply their knowledge and experience to address the fact that US forces did not have the resources in the form of awareness, training or expertise that they needed when encountering the archaeological challenges of ancient Mesopotamia. A group of installation cultural resource managers, with financial support from the Office of the Secretary of Defense Legacy Resources Management Program, initiated the 'In Theater Heritage Training Program for Deploying Personnel'. They designed the program to tackle the challenge from three directions: education and awareness training, mapping and planning, and establishing stronger military regulations and guidelines for cultural property protection going forward. Since then, they have added a fourth initiative, and that is research designed to gain a more sophisticated understanding of the strategic and tactical costs of failure and benefits of accomplishment of cultural property protection during global operations. The Office of the Secretary of Defense Environmental International Cooperation (DEIC) Program also supported project initiatives including archaeology awareness materials to be used during the Bright Star War Games and opportunities for cultural property protection discussions at environmental meetings in Jordan, Abu Dhabi and Qatar.

One approach to organizing these initiatives was to form an action group. First called the Central Command¹ Historical Cultural Advisory Group, or CCHCAG, the group included representatives of the Office of the Secretary of Defense, the installation cultural resources community, combat command environmental engineers, air combat command cultural resources and army central command geospatial support. The group has evolved into the Combatant Command Cultural Heritage Action Group or CCHAG (www.cchag.org) and

tries to meet annually while coordinating activities and initiatives via conference calls. The cultural resources managers also formed an informal international network called the International Military Cultural Resources Working Group or IMCuRWG.

A critical component of success with military cultural property initiatives to date has been partnership between three critical groups: academic archaeologists, especially those whose work has been in conflict areas, civilian defense employees responsible for environmental compliance including military archaeologists and cultural resources managers, and uniformed military personnel who recognize the critical importance of cultural property protection. The Archaeological Institute of America under the leadership of then President C. Brian Rose is the only academic organization composed primarily of social scientists that proactively came forward to assist the military during the Iraq conflict. Dr Rose personally initiated a soldier lecture program to introduce deploying personnel to the history, heritage and archaeology of Iraq and Afghanistan (Rose 2007). Drs Roger Ulrich of Dartmouth College, Sam Paley of SUNY Buffalo, and Sarah Parcak of the University of Alabama Birmingham also stepped forward to work directly with the military archaeologists, providing expertise for education and mapping projects (Parcak 2011). Cooperation of this nature helped to bridge the 'great divide' between the defense professionals who are largely archaeologists trained as anthropologists who specialize in the archaeology of the Americas and their old world colleagues, many of whom have backgrounds in the Classics and Art History.

Education and training

The best-known outcome of the education, awareness and training initiatives is the archaeology awareness playing cards for military personnel (Fig. 1). The cards were part of a series of tools created by a partnership between Cultural Resources Program at Fort Drum under the direction of Dr Laurie Rush and the Colorado State University Center for the Environmental Management of Military Lands (CEMML) under the direction of Dr James Zeidler. Since 2006, over 150,000 decks of these cards have been distributed to deploying soldiers, sailors, marines and airmen. There are three types: the original deck that was designed for Iraq and Afghanistan, a deck focusing on Egypt used during the Bright Star War Games in 2009 and, at the request of soldiers, a deck focusing entirely on Afghanistan. The Drum/CEMML partnership also produced awareness posters, many of which turned up in offices and forward operating bases in Iraq and Afghanistan as well as at the Pentagon; soldier archaeology awareness pocket cards in five languages including Arabic; training lectures and slides; and an interactive computer-based training program. In cooperation with a heritage NGO called Saving Antiquities for Everyone (SAFE), the Drum/CEMML team also created a heritage reference website for Iraq, Afghanistan and Egypt designed to be used by military personnel (<http://www.cemml.colostate.edu/cultural/cptraining.html>).

Site hardening and replicas

Around the world, military training lands are in short supply. In the US and the UK, where important archaeological sites that are on military training land are protected, there

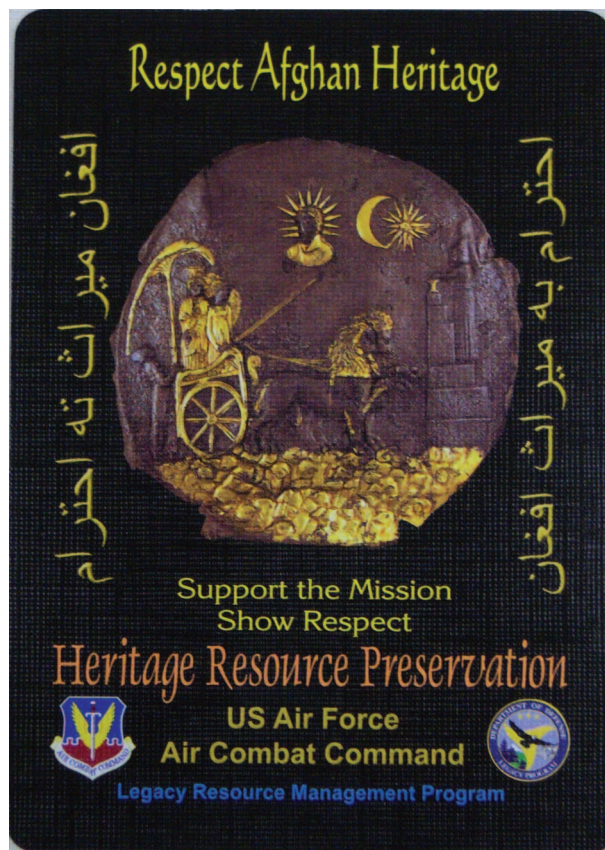


Figure 1 Playing cards issued by the US military.

are inherent challenges in simultaneously meeting both military and stewardship missions. However, it quickly became clear to archaeologists both at Fort Drum and Salisbury Defence Estate that archaeological sites could be used safely as an opportunity for military personnel who were training for Iraq and Afghanistan deployment. At Fort Drum, using the CEMML partnership and in cooperation with the Land Rehabilitation and Maintenance (LRAM) Program, a combined team of archaeologists and field technicians, under the direction of Mr Ian Warden, began a pilot project to stabilize archaeological features in situ to make them safe for military training. The Drum team selected the archaeological site listed on the National Register that was once the historic iron foundry village of Sterlingville, NY. The site was being managed as an 'off-limits' protected area, even though it was one of the most requested training locations on the installation. As an off-limits area, the historic foundations were being destroyed by vegetation growth and weathering. Adding to the concern, family members who had lost their homes in historic Sterlingville when Fort Drum expanded for the purpose of military training in 1941 did not appreciate the fact that the land and properties sacrificed were not being used as intended.

Mr Warden used his expertise in land stabilization and erosion control to suggest prescriptions for each exposed archaeological feature. The feature types included chimney

falls, middens, laid stone and concrete foundations and cellar holes, cisterns, open wells, retaining walls and historic gardens where perennial species remained. Treatments ranged from leaving stable features exposed and in place, sometimes reinforced by wooden framing, to complete burial. All features that were stabilized using burial or covering methods were first covered with a layer of geo-textile and a layer of sand. Fragile features were reinforced using sand bags. Once the exposed features were considered to be stable, the area was marked with signs reading, 'Historic Area, Training Permitted, No Digging'. These signs are supplemented with the Blue Shield symbol as identified in the 1954 Hague Convention. Currently, approximately 10,000 soldiers per year train in historic Sterlingville. As a result, these personnel receive the opportunity to occupy a historic property without digging prior to deployment. The Sterlingville pilot project was used as a prototype for other installations including stabilization at two sites in the training areas of USMC Quantico, and generated a publication for use by other defense archaeology and LRAM teams (Wagner et al. 2007).

Clearly, though, nineteenth-century rubble and concrete foundations cannot accurately represent the mud brick cities of Mesopotamia or ancient deposits along the Silk Road. In order to help make training as realistic as possible, the archaeology and LRAM team built replica archaeological features and culturally appropriate cemeteries in the Fort Drum training areas. The purpose was to provide deploying soldiers with the opportunity to practice avoidance of inadvertent collateral damage and proportionate response when enemies attempt to use cultural property as cover, weapons caches and even firing points. Mr Richard Osgood and his British Defence Estate team have even created a mobile museum to be included as an opportunity for British forces to practice rapid and appropriate response to looting scenarios. The Salisbury team also incorporates archaeological off-limits areas into actual training scenarios. These scenarios offered the opportunity for teaching military units such as tank battalions that incursion into archaeological sites such as the Roman village on Salisbury Plain would have direct negative impacts on mission success.

Military archaeology and education in the Middle East and Afghanistan

Cultural property protection initiatives in the Middle East have included military exercises, environmental partnership conferences, meetings with ministers and on-site training programs. The United States routinely participates in coalition military exercises throughout the world, and these events include planning as well as executive seminar sessions. The Central Command environmental engineers arranged for cultural property protection sessions to be included in the planning sessions at Bright Star as well as at executive seminars at Eagle Resolve in Abu Dhabi and Qatar. They also added cultural heritage to the agenda of two Jordanian military partnership environmental conferences in Amman. The positive response of high-ranking Jordanian military officers to the topic offers encouragement for continuing international engagement and education. In addition to formal presentations and discussions, traveling with the military to the Middle East provided multiple opportunities for on-site teaching. It is important to note that the teaching goes both ways. When an archaeologist visits an archaeological site with military

personnel, it creates the opportunity for developing an appreciation and understanding of what the military challenges are when mission requirements bring operations into sensitive areas (Rush 2010).

The Central Command environmental engineers in conjunction with the Pentagon environmental program made it possible for an archaeologist to join an environmental inspection team going to Bagram, Kabul and Kandahar. The mission included a heritage briefing where the Director General of Heritage of Afghanistan shared the podium with a US Army archaeologist in order to brief US military leadership in Kabul on the importance of Afghan heritage. The positive effects of this presentation led to funding by the US Army Corps of Engineers for an artifact conservation facility to support the salvage archaeology at the ancient Buddhist city of Mes Aynek that will be destroyed by the Chinese copper mine.

Also with support of DEIC, an international team of archaeologists was able to provide on-site awareness training experiences to US and UK military personnel during the Bright Star War Games. When archaeologists have the opportunity to work with military personnel at a site like the Step Pyramid at Saqqara, Egypt, the site essentially does the teaching (Zeidler 2011). Archaeologists worked with the soldiers discussing such issues as: (1) the importance of minimizing impacts when operating in the vicinity of archaeological sites; (2) force protection issues in properties that contain unexpected tunnels and voids; (3) consideration for reconstruction and site preservation; (4) concerns about looting and risks and; (5) the potential role that cultural properties can play in helping local communities establish economies based on visitation and tourism. More than once, military personnel pointed out that they would be more than happy to conform to the requirements for responsible operations in the immediate vicinity of significant cultural property with one distinct caveat. Military personnel cannot be expected to identify archaeological properties without the help of detailed maps and guidance. The consensus was that in order to implement an effective cultural property protection program, forward personnel require archaeological expertise and information during the planning phase.

Planning and mapping

To be prepared for any eventuality, the military would require detailed cultural property maps covering every corner of the globe. The 1954 Hague Convention specifies that parties to the convention agree to establish lists of valued cultural property and will take proactive measures to protect these properties. One of those measures includes careful mapping. The issue, however, is far more complex than it might appear on the surface. Archaeological maps in the wrong hands can not only guide looters, but can also become target lists in conflicts where one group is attempting to eradicate the culture and heritage of another. Destruction of mosques and monasteries in the former Yugoslavia is only one example of many in terms of this form of genocidal behavior (Bevan 2006). After careful consideration of the complexities and risks, the consensus in the US is that maps are critical for successful property protection. The CCHAG has attempted to tackle the mapping needs in a variety of ways.

Project ORCHID is a data-mining initiative funded by US Air Combat Command. In addition to funding the new CCHAG website (www.cchag.org), ORCHID has supported a workshop that brought together all of the teams working on mapping and cultural heritage training initiatives. It has also built upon country profiling programs found in industry and is in the process of developing guidelines for helping defense analysts to recognize signatures that are indicative of archaeological features in remote-sensing photography. ORCHID team members are also researching sources of additional data and establishing data standards to improve accuracy.

The Drum/CEMML team has also worked with environmental GIS analysts to develop archaeological maps for Iraq and Afghanistan. Beginning with datasets provided by regional subject matter experts, the Iraq and Afghan maps document thousands of sites. In addition, the original atlas from the Iraq State Board of Antiquities was translated into English by the Air Force language center in San Antonio and is available to all interested colleagues (Boswell 2011). The map of archaeological properties for Afghanistan prepared by the US Army in cooperation with academic colleagues has been offered back to the Afghan Ministry of Information, Tourism and Culture to serve as a basis for an Afghan National Register of Archaeological Sites.

The recent conflict in Libya offered an opportunity to demonstrate how effective mapping, in the form of a ‘no-strike’ list, can be. A partnership between academic archaeologists in both the US and the UK and the US Defense Intelligence Agency resulted in successful use of ‘no-strike’ targeting during the aerial campaign in Libya. Using lists of critical cultural properties provided by the academics, the US Defense Intelligence Agency (DIA) was able to provide the NATO targeteers with critical locations of sites of global significance to be spared if at all possible. In over 17,000 sorties, the only damage to cultural property from aerial bombardment in Libya was secondary minor damage to one castle façade (DIA pers. comm. 2012). Success included no damage at the Roman fortification at Rasaimergib near Leptis Magna where the radar installation that Gaddafi forces had deliberately installed on cultural property was destroyed using precision targeting. The Blue Shield–IMCuRWG team confirmed this result during their post-conflict inspections in the spring of 2011 (Blue Shield and IMCuRWG 2011). When one of the inspection team members, Dr Hafeed Walda, reported in person at the American Academy in Rome conference in November 2011 (Walda 2011), the good news was picked up by the Associated Press (D’Emilio 2011) and traveled back to the DIA.

Stronger regulations and guidelines

In 2009, the US articles of ratification of the 1954 Hague Convention were deposited at the Hague. From that point on, cultural property protection during military operations became a requirement of US treaty law. An additional legal driver in the US includes Section 402 of the National Historic Preservation Act, which governs protection of cultural property in areas outside of the US where the US is in a position of responsibility. This law has been tested in court in the ‘Dugong vs Gates’ where lawyers representing Okinawa sued the US arguing that an installation expansion needed to consider the dugong because of its status as

a cultural icon on the Okinawan equivalent of the US National Register. Specifically for the military, there is also the *Overseas Environmental Baseline Guidance Document* (OEBGD) (Office of the Under Secretary of Defense for Acquisition, Technology and Logistics 2007), which specifies criteria for protection of cultural property in areas where the US has a long-term presence. For specific operations and exercises, there is Annex L to the operations plan that specifies environmental considerations, and cultural property is included in this list. The experiences in Iraq and Afghanistan demonstrated that stronger guidance than Annex L was needed for all aspects of environmental compliance. L. T. C. Brewer, a Central Command environmental engineer, drafted, revised and completed Central Command 200–2, an environmental regulation for all contingency operations within the Command. This completion included securing the signature of the Central Command Chief of Staff, a major accomplishment. The historical/cultural section was written by members of the CCHAG and includes an engineering flow chart for use by military personnel with no archaeological experience who may be encountering archaeological material in the field. This regulation was used in 2008 by Sergeant James Carlson to save an archaeological site just east of Baghdad that was threatened by excavations for fill material (Carlson 2011).

Another way to elevate the profile of protection of archaeological sites within military consideration is to incorporate such protection into strategic planning. An archaeologist working for Central Command drafted an informational document that points out the relationship between potential damage to cultural property and US encouragement for development of mining resources in Afghanistan. In actuality, the ancient citizens were also mining deposits of copper, lapis and other minerals that are in demand today. It is not a coincidence that the Chinese copper mine will destroy the ancient Buddhist city of Mes Aynek. Unfortunately other mining initiatives will have similarly destructive results. However, because of the intervention of an archaeologist, the issue has been brought to the attention of the military planners at the highest levels (White 2010).

Research

Over time, it has become increasingly clear that the three-part approach described above – education, planning and regulatory guidelines – on its own is insufficient to form a foundation for a sophisticated and institutionalized cultural property protection program within the United States Department of Defense. A missing component is research. The archaeologists and military personnel working on these initiatives have begun to recognize that there is much to be learned about a range of critical questions, including: (1) an improved understanding of the processes that caused the US to lose its cultural property protection capabilities; (2) international examples that can be used to guide further US initiatives; (3) more informed imagery analysis; (4) root cause analysis of events that have resulted in damage to cultural property by US operations or initiatives and; (5) testing hypotheses related to the possibility that failure to identify and protect cultural property at the local level may lead to acts of violent retribution.

World War II and beyond

In 2010, the American Academy in Rome, via the Booth Family Rome Prize in Historic Preservation, graciously supported a project that enabled a US Army archaeologist to live and work at the American Academy in Rome for eleven months in order to study European examples of cultural property protection and to craft and develop a cultural-property-education curriculum that could be offered to students at NATO Defense College Rome. As it turns out, the Academy and the British School in Rome are part of a proud tradition that identified Fellows with experience and expertise to the military so that they could be assigned for service with the Monuments Fine Arts and Archives program (MFAA). Both institutions have archives and collections that offer first-hand accounts of World War II experiences, offering direct lessons and applications with potential benefit for today's deploying military unit (Rush 2012; Woolley 1947).

Research in Rome also offered the opportunity to study the Carabinieri Tutela Patrimonio Culturale (Carabinieri Command for the Protection of Cultural Property, or Carabinieri TPC). This elite unit, which works in partnership with the Italian Ministry of Culture, is the most comprehensive and capable force in the world dedicated to protection of archaeological sites, artifacts and works of art. The force offers education for improving security for public, private and ecclesiastical collections; an international database for tracking stolen art and artifacts; and comprehensive investigation expertise that results in recovery of thousands of objects worth millions of euros on an annual basis (Pastore 2001). The Carabinieri TPC has over 120 officers with fourteen regional offices. This force also has deployment capability (Benedettini and Rush 2011). In 2003, as part of a UNESCO peace-keeping mission, a multi-disciplinary team of Carabinieri went to Nasriyah province in the south of Iraq (Cremonesi 2003; Zottin 2008). In addition to TPC officers, the team also included specialists in areas such as food safety and governance. The team completed aerial surveillance of archaeological sites in the region, carefully mapped the known sites and completed an anti-looting operation, arresting looters and recovering stolen artifacts. The Carabinieri also responded to the looting at the Iraq National Museum in Baghdad, providing one of their most capable officers who, in addition to recovering looted objects, also patiently documented stolen and missing objects for inclusion in the Carabinieri database. A combined effort between the Carabinieri and the University of Torino also created the Virtual Museum of Iraq (Parapetti 2008) (<http://www.virtualmuseumiraq.cnr.it/homeENG.htm>). The Carabinieri offers a model not just of military capability but also of what can be accomplished when academic expertise is partnered with a militarized police force.

Imagery analysis

Pairing archaeological expertise with defense imagery analysis offers the potential for improved ability to identify archaeological sites using remote sensing (Parcak 2011). Archaeologists can identify features created by humans in all types of aerial and satellite imagery, and, in fact, these capabilities are improving continuously. When these skills are

combined with defense imagery like lidar coverage for portions of Iraq and Afghanistan, hundreds of previously undocumented sites appear. Antoinette Egitto, a graduate student at the University of Kansas, has identified dozens of previously unknown archaeological sites in just a tiny portion of Helmand Province, Afghanistan using unclassified lidar images from the US Army Corps of Engineers 'Buckeye' imagery (Egitto 2012). This type of collaborative research results in archaeological discovery while providing military planners with the tools they need to avoid archaeological sites, especially during the process of selecting locations for new bases, bed-down sites, humanitarian aid projects or facility expansions. If projects like the prototype research currently underway at the University of Kansas were to be multiplied at a global level, the opportunities for archaeological discovery would be nearly limitless.

Improvised explosive devices (IEDs)

It is difficult to describe and appreciate the intense relationship between individuals, families and communities and the cultural property that is an integral part of religious belief, history and identity. History is filled with examples where violation or destruction of sacred space has ignited or exacerbated violent behavior. A component of ethnic conflict and genocide is deliberate destruction of cultural property and desecration of religious symbols and edifices. Modern warriors, especially those with peace-keeping and stabilization responsibilities, need to be able to identify valued features and sacred spaces in cross-cultural conflicts. From a social science perspective, a hypothesis that needs to be tested is the proposition that if a military unit fails to identify a sacred feature like a cairn burial along the road in Afghanistan, and runs over it with a military vehicle, perhaps members of the local community would be angry enough to consider violent retribution. In a situation where we do not know what we do not know, it is extremely difficult to go back and test what types of actions may have prompted placement of improvised explosive devices and if there are cause-and-effect relationships between this form of aggression and a possible failure to understand clues in a foreign landscape. Again, archaeologists have many of the skills and types of knowledge required to address challenges of this type.

Archaeology and the military today: further academic partnership and the no-strike list

As of the spring of 2012, archaeologists and their military partners are moving forward in a range of partnerships that are expanding far beyond the realm of planning, education, regulatory requirements and research. In terms of planning, the positive outcome in Libya has energized the no-strike program at DIA and has elevated cultural property protection as a higher priority within the agency's activities. At this point in time, the US Defense Intelligence Agency is poised to accept as much archaeological data as the academic community is willing to provide, with the capability of updating their database system every twenty-four hours. All archaeological data residing there can be used not only for future no-strike targeting, but also to guide disaster response, and hopefully in the future,

cultural property considerations during ground operations. The success in Libya has also prompted British academic institutions to approach the British Ministry of Defence for discussions of how to rebuild relationships in order to create opportunities for academics to provide valuable information that would enable the British MoD to establish more effective and informed cultural property policies and practices.

In the US, the partnership between the Archaeological Institute of America and the military archaeologists is generating a reserve officer training corps (ROTC) curriculum package that can be used as a framework for achieving the goal of introducing cultural property protection to all reserve officer cadets in universities across the United States. This curriculum could also be used at the military academies. The package will provide educational goals and outcomes customized for the military audience along with suggested presentations featuring military lessons learned. The materials are designed to meet military education needs while making it easy and productive for archaeologists to volunteer as lecturers for the program. It is also hoped that this process may help to develop future partnerships between the academic archaeologists who may have expertise that could be critical for a young officer faced with a challenging situation. The Office of the Secretary of Defense Legacy Resource Management Program has recently funded development of a field commander's guide to cultural property protection, and this document is designed so that it can also serve as a textbook to support the plans for military education.

Educational initiatives are also taking place at the international level. The Austrian Defence Academy and the International Institute of Humanitarian Law have hosted successful cultural property courses for military officers from all over the world, including representatives of military forces from nations of the former Yugoslavia, South America, Egypt and eastern Europe. Plans for a course inviting military officers from African nations are underway. After a series of US State Department sponsored lectures in 2011 at Turkish universities describing the US efforts, Turkish students and faculty have expressed interest in developing similar educational opportunities for the Turkish military.

Among the most exciting current developments are archaeological projects that are designed to benefit wounded warriors and veterans while contributing to the field. Dr Michael Trimble of the St Louis District Army Corps of Engineers recognized that the curation challenges of US federal collections could be met by training and employing US combat veterans. He used congressional stimulus funding to begin the program and is currently asking the congress to continue support. In the UK, archaeology is actually being used successfully as therapy for wounded soldiers. Called Operation Nightingale, this program is achieving miracles where many other programs have failed. Conceived and led by Medical Officer Diarmaid Walshe, in cooperation with military psychologists and the Salisbury Defence Estate Archaeology team, Operation Nightingale offers wounded and troubled soldiers the chance to participate in actual archaeological excavations, as well as to gain qualifications (Fig. 2). They camp on site and in addition to archaeological methods they learn useful skills such as project management, surveying and scientific drawing. Even more importantly, they form valuable relationships with the other soldiers as well as with the archaeologists, gaining confidence interacting with civilians as they prepare to re-enter the wider community. During the initial program, 20 soldiers were offered the opportunity to excavate a Neolithic barrow on Salisbury Plain that had been disturbed by badgers. Of the 20, 18 improved beyond even the most positive expectations of the project planners.



Figure 2 Project Nightingale in action. Rifleman Michael Kelly explains to a British Forces Broadcasting Service TV crew his discovery of an Anglo-Saxon grave with iron shield boss in the ditch of a Bronze Age burial mound at Barrow Clump, Wilts, UK, July 2012. Injured soldiers and archaeology students (top of picture) dug together and learned from each other on this Operation Nightingale project. (Photo: Simon James).

Graduates of the program have elected to go back to school, some have found jobs in the civilian community and some have returned to the force. The UK Ministry of Defence archaeologists have found that the participants have become so capable that they are able to employ them as archaeological field technicians as they do further compliance projects on the Defence Estates (*Heritage Daily* 2012; Wessex Archaeology 2011). Program proponents have generously offered the opportunity to soldiers in the US, who could also benefit tremendously.

Summary and conclusions

The relationship between archaeologists and the military has generated concern, especially within the context of controversial military actions. However, one has only to look at Gallipoli (Gill 2011) or Troy to recognize that many archaeologists have been fascinated by warfare and the military since the field began. There is also a tradition of archaeologists

as spies (Price 2003), and a glance at the British Naval Intelligence Division Geographical Handbook Series causes us to realize that in the not so distant past, members of university communities provided geographic information to the military on a level of quality and detail that is rarely seen today. What many fail to realize is that those partnerships of the past benefited the profession of archaeology and opportunities for archaeological discovery as much or more than they benefited the military. From saving sites in Libya, to discovering sites in Afghanistan, to offering therapy to wounded soldiers, efforts to support the military in stewardship, education, planning, guidance and research have taken archaeologists in directions few dreamed of when they chose to enter the field. If the accomplishments and challenges of the past ten years are any indication, we can only imagine where these partnerships may lead.

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Note

The views expressed in this article are those of the author and do not reflect the official policy or position of the Department of the Army, the DoD, or the US Government.

- 1 The US Department of Defense divides the globe into regional combatant commands. Central Command covers the Middle East and South Asia.

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