Teaching Archaeological Heritage Management. Towards a Change in Paradigms

Annemarie Willems, Suzie Thomas, Alicia Castillo Mena, Viktorija Ėginskas, Visa Immonen, Iida Kalakoski, Tuuli Lähdesmäki, Ulla Lähdesmäki, Margaret Gowen-Larsen, Arkadiusz Marciniak, Elena Pérez González, Cheryl White & Aron D. Mazel

To cite this article: Annemarie Willems, Suzie Thomas, Alicia Castillo Mena, Viktorija Ėginskas, Visa Immonen, Iida Kalakoski, Tuuli Lähdesmäki, Ulla Lähdesmäki, Margaret Gowen-Larsen, Arkadiusz Marciniak, Elena Pérez González, Cheryl White & Aron D. Mazel (2018) Teaching Archaeological Heritage Management. Towards a Change in Paradigms, Conservation and Management of Archaeological Sites, 20:5-6, 297-318, DOI: 10.1080/13505033.2018.1559423

To link to this article: https://doi.org/10.1080/13505033.2018.1559423

Published online: 11 Feb 2018.

Submit your article to this journal

Article views: 51

View Crossmark data
Teaching Archaeological Heritage Management. Towards a Change in Paradigms

Annemarie Willems\textsuperscript{a,b}, Suzie Thomas\textsuperscript{a}, Alicia Castillo Mena\textsuperscript{c}, Viktorija Čeginskas\textsuperscript{d}, Visa Immonen\textsuperscript{e}, Iida Kalakoski\textsuperscript{f}, Tuuli Lähdesmäki\textsuperscript{d}, Ulla Lähdesmäki\textsuperscript{g}, Margaret Gowen-Larsen\textsuperscript{h}, Arkadiusz Marciniak\textsuperscript{i}, Elena Pérez González\textsuperscript{j}, Cheryl White\textsuperscript{k} and Aron D. Mazel\textsuperscript{l,m}

\textsuperscript{a}Department of Cultures, University of Helsinki, Helsinki, Finland; \textsuperscript{b}Friends of ICAHM, AW Heritage Consultancy, Jyväskylä, Finland; \textsuperscript{c}Faculty of Geography and History, Department of Prehistory, Ancient History and Archaeology, Complutense University of Madrid, Madrid, Spain; \textsuperscript{d}Department of Music, Art and Culture Studies, Jyväskylä University, Jyväskylä, Finland; \textsuperscript{e}Department of Archaeology, University of Turku, Turku, Finland; \textsuperscript{f}Tampere University of Technology, Tampere, Finland; \textsuperscript{g}Pirkanmaa Provincial Museum, Tampere, Finland; \textsuperscript{h}Archaeologist and heritage consultant, Hjørring, Denmark; \textsuperscript{i}Institute of Archaeology, Adam Mickiewicz University, Poznań, Poland; \textsuperscript{j}Universidad Europea de Canarias, Facultad de Ciencias Sociales, Santa Cruz de Tenerife, Spain; \textsuperscript{k}Department of History, Faculty of Humanities, Anton de Kom University of Suriname, Paramaribo, Suriname; \textsuperscript{l}School of Arts and Cultures, Newcastle University, Newcastle, UK; \textsuperscript{m}GAES, Witwatersrand University, Johannesburg, South Africa

ABSTRACT

The concept of archaeological heritage management (AHM) has been key to wider archaeological research and preservation agendas for some decades. Many universities and other education providers now offer what is best termed heritage management education (HME) in various forms. The emphasis is commonly on archaeological aspects of heritage in a broad sense and different terms are often interchangeable in practice. In an innovative working-conference held in Tampere, Finland, we initiated a debate on what the components of AHM as a course or curriculum should include. We brought together international specialists and discussed connected questions around policy, practice, research and teaching/training, at local, national, transnational and World Heritage levels. In this article we take the Tampere discussions further, focusing especially on the meaning, necessity, implications and prerequisites of interdisciplinary HME. We offer our thoughts on developing HME that reflects the contemporary aspects and needs of heritage and its management.

KEYWORDS

Archaeological heritage management; heritage management education; teaching and training; practice; research

Introduction

The concept of heritage management (HM), and especially archaeological heritage management (AHM) has been a key aspect of the wider archaeological research and preservation agendas for some decades now. Many universities and other training and education providers now offer heritage management programmes, either as degrees in their own right or as courses as part of other programmes. Examples of master’s degree programmes

CONTACT

Annemarie Willems \eg@Annemarie.willems@helsinki.fi
© 2019 Informa UK Limited, trading as Taylor & Francis Group
in Europe include, for example: Archaeological Heritage Management in Asia at University College London (UK); Cultural Heritage in the 21st Century: Management and Research at Complutense University of Madrid and Polytechnic University of Madrid (Spain); Heritage Management in a World Context at Leiden University (Netherlands); International Heritage Management at the Ironbridge International Institute for Cultural Heritage (UK); Sustainable Heritage Management at Aarhus University (Denmark); and Cultural Heritage Management and Sustainability at the University of Budapest (Hungary). It is noteworthy that none of these master’s programmes have ‘archaeology’ in their titles, however a significant number of the course lecturers are archaeologists and at least two of the programmes are situated in archaeology departments. This raises the question of whether we should be talking about AHM in a more general sense, or just HM. These terms are often used interchangeably in practice, suggesting that the emphasis is commonly on archaeological aspects of ‘heritage’ (see also Smith and Waterton 2009a for critique of this apparent conflation). It is important to investigate the terminology of AHM, in order to help frame what HM actually is, hence defining its position in the tertiary education spectrum.

We focus especially, but not exclusively, on archaeological heritage in this article, acknowledging the holistic nature of both ‘archaeology’ and ‘heritage’, and attempting to determine the position of archaeology within HM. When we refer to AHM, we mean the care of archaeological material and the connected intangible values and traditions of past and present communities. AHM includes all activities that arise from dealing with the past in the present, including research and fieldwork (academic, state-managed and development-led); legislation; site conservation; management; administration, and tourism, on local, regional, national and global scales. Incorporated in these processes are issues such as stakeholder management, participatory processes, values and rights-based management, ethics, sustainability and feasibility of site management planning, ethnographic studies, among others. We also include archaeological objects out of context, or collections, some of which are on the fringe of AHM, as site management activities often require at least some awareness of objects related to the site even if they are stored elsewhere. AHM can be divided into the processes of planning, inventory, assessment, selection, preservation, conservation, interpretation, presentation/interaction and monitoring (e.g. Querol and Martínez 1996; Willems, Kars, and Hallewas 1997; ICOMOS-ICAHM 1990; Demas 2002; Querol 2010; ICOMOS-ICAHM 2017). Ultimately, it is a strongly interdisciplinary endeavour practiced on a variety of scales (international, regional, national, local) and levels (UNESCO, transnational, state, communities).

A holistic approach is inherent to AHM, with multiple focuses from individual sites and structures to the historic environment and landscape, and from material aspects, to the inclusion and consideration of the immaterial and intangible aspects as expressed, experienced and maintained by particular groups (Ahmad 2006; Araoz 2011; Howard 2003). As noted in the ICOMOS-ICAHM Charter for the Protection and Management of the Archaeological Heritage (1990): ‘The protection of this heritage cannot be based upon the application of archaeological techniques alone. It requires a wider basis of professional and scientific knowledge and skills’.

Despite the apparent familiarity of AHM within global discussions (e.g. SpringerBriefs series in AHM; European Archaeological Council (EAC) Occasional Papers), it would appear that the content delivered to learners and trainees in master’s programmes together with HM’s position in various disciplines, may suggest that there are challenges
concerning consensus within the HM community regarding what frames the discipline, as well as questions concerning the focus of heritage management education (HME) programmes. To what extent should such programmes focus on global issues, national issues, or specific regional or local ones? How much importance should be given to archaeology and its methods? What balance should be sought between research and ‘transferable skills’? And, how widely should the set of these skills be taught? To what extent does it matter that courses across the globe may vary significantly in content?

To address these questions we organised an innovative working-conference titled ‘Development and Best Practices of (Archaeological) Heritage Management as a Course’ (as of 10 December 2018, available at https://blogs.helsinki.fi/ahmtampere/) in Tampere, Finland from 7 to 9 June 2017. Its primary purpose was to initiate a debate on what components of AHM should be included in university and tertiary courses and curricula. We brought together 46 specialists from 16 different countries, both developed and developing, to discuss issues around policy, practice, research and teaching/training, at local, national, transnational and World Heritage (WH) levels, and to share their experiences of teaching HME. Several of those participants are co-authors of this article.

It became evident during the working-conference that the educational preparedness of future heritage managers, practitioners, and advocates is largely an underdeveloped and underexplored field, in spite of growing discussion and debate on the state and status of HM itself (e.g. Smith 2000; Orbaşlı 2013). In this article we reflect and build on the Tampere discussions, focusing especially on the meaning, necessity, implications and prerequisites of interdisciplinary HME provision for current and future heritage professionals. The methodology used stems from the key ideas and approaches of the Delphi Method, or more precisely from its Estimate-Talk-Estimate technique, based on alternating phases of an interactive exchange of ideas and envisioning between a group of experts and summarising the key views of the group by facilitators (Nelms 1985; Rowe 1999). Through this interactive method, we offer a vision on what the next steps could be in order to develop HME programmes that reflect the contemporary aspects of heritage and its management requirements, based on active discussion and the collective knowledge and experience of the working-conference participants. While acknowledging, as mentioned above, that there are many courses with a range of different approaches and learning outcomes already in operation, we propose that HME needs to be delivered, taught, and conducted within a more ‘applied’ sphere where scholars are not the only, or main, points of reference. Furthermore, HME must continually take cognisance of the increasingly complex sociopolitical aspects of heritage.

In the first part of this article we ‘set the scene’ by, first presenting the current situation of teaching and training in HME and AHM as informed by the working-conference discussions and the literature and, second, briefly addressing the terminology of AHM, explain our suggested working parameters and discuss AHM’s current place within the educational spectrum in different parts of the world. It is emphasised that our purpose is not to formulate a new definition of AHM nor to dismiss earlier ones, but to use current professional experience to clarify the general understanding of AHM and take a step forward by sharing our vision of this still-evolving discipline and proposing an educational framework for its development. Bringing together so many diverse AHM specialists for several days specifically to discuss HME requirements presented a rare opportunity to interrogate this issue from a global perspective. The content, form and
main outcomes of the Tampere working-conference are discussed in the second part of this article. We conclude with our vision of developing a fitting educational framework for the next generation of heritage professionals based on the discussions in Tampere.

**Previous Work on AHM and HM**

Over the past decades, the development of thinking about the past and research into its tangible and intangible aspects has gone through many stages. Thought and theory have developed and expanded from a focus largely on material culture to inclusion and consideration of the immaterial and their relationship to people, landscape and environment. Along with this, archaeology and HM have moved from the exclusive domain of academia into a far broader field of stakeholders, ushering in greater criticality in heritage studies generally (e.g. Harrison 2013; Ashley and Frank 2014). Furthermore, this has been associated with the emergence of a discipline called Heritage Management (but see below for other terms used) that has been accompanied by the expansion of interest in the past, widening of the definition of heritage, increased professionalisation, the development of policies, insights and techniques, the inclusion of Indigenous, local and tribal community perspectives, the identification of the multiple threats to heritage (such as war, looting, climate change, natural resource extraction, development, and transformative societal development), acknowledgement of the political nature of heritage, recognition of the importance of participatory approaches (Heras et al. 2018), and the impact of digital developments (Morrison and Secker 2015). These developments have combined to create the need for a new type of professional, the exact profile of which has not yet been fully determined. There is now an increased focus on practical training and applied skills coupled with encouraging students to think critically about the agendas of different stakeholders ranging from, for example, governments and private sector businesses to minority groups and socio-environmental, non-governmental organisations (NGOs).

Since the emergence of AHM in Europe, also known as cultural heritage management (CHM), many descriptions and definitions have been formulated (e.g. Cleere 1984) some of which were informed by the London Convention (1969) and (revised) Valletta Convention (1990). In the US, cultural resource management (CRM) is the preferred terminology (e.g. King 2002), whereas outside the US, the favoured terminology is generally AHM (e.g. Carman 2012) or HM. The proliferation of definitions, and the lack of consensus on terminology and status has promoted a scattered academic and educational field. In this article, however, we take archaeological heritage as our point of departure, because if we were to focus on all heritage, it would be an endless list of possibilities, and would cover definitional ground already debated elsewhere (e.g. Lowenthal 1998; Howard 2003; Ashworth, Graham, and Tunbridge 2007).

Archaeologists often implicitly claim HM as a natural component of their wider discipline (e.g. Colley 2004; King 2002) but there has been criticism of the conflation of heritage with archaeology (Smith and Waterton 2009a; Skeates 2002, 17; Willems 2014, 107; Seif 2017, 128). Smith and Waterton’s (2009a) argument against the conflation of archaeology and heritage is that the dominance of archaeology freezes out other approaches and other forms of heritage. Their main point of concern is with the dominance of archaeological concepts when dealing with heritage in a political, practical, or community context. Willems
(2014) argues that not all heritage is archaeological and not all archaeological resources are heritage. Willems, Smith, and Waterton all emphasise that archaeological resources are the material remains of the past and that heritage is what we make of the past by ascribing certain values to it. Increasingly, heritage is seen to include the intangible heritage and cultural associations connected to these resources and the wider landscape (UNESCO 2003). A resource generally becomes ‘heritage’ when someone (usually in a position of expertise or authority) decides that it holds cultural value for an individual, a community, a group, a nation, or even the global community. In essence, the decision-making role does not lie solely with the archaeologist, but with a range of actors and interested parties. Ideally the values should be determined with ‘as many stakeholders as possible’ (Willems 2014, 107). Hence, heritage can be described and understood in many ways; it is more than archaeology alone. Managing archaeological cultural assets/resources/properties/goods, therefore, requires considering a wide range of dimensions, from scientific to social aspects (Castillo and Querol 2014).

The dominance of archaeology and its methods and ethics in HM, nationally-based tradition and understandings, top-down approaches, and emphasis on tangible heritage is manifest in what Smith (2006) has labelled the Authorised Heritage Discourse (AHD). Schofield (2008, 20–21) describes HM as ‘putting in place systems to oversee and control the heritage, as well as providing opportunities for it to contribute to quality of life and sustainable living’. He points out that this can be a top-down (AHD) approach, or a bottom-up approach directed by the community. Ndlovu (2011, 129) recognises this shift to a more balanced approach as driven by postcolonial archaeology. According to Willems (2014, 117) this shift represents the emergence of a ‘transnational heritage regime’, meaning a transnational way of dealing with heritage, that replaced the predominant ‘European heritage regime’. The transnational regime uses ethical frameworks derived from the policy of global organisations – both public and private – and does not rely solely on experts as stewards or caretakers, but actively seeks to empower local populations and groups. It can also be referred to as ‘engaged archaeology’ (e.g. Pyburn 2011), ‘decolonised archaeology’ and ‘public archaeology’ (e.g. Richardson and Almansa-Sánchez 2015; Moshenska 2017). This change in HM requires a specific approach which includes a wide range of considerations but maintains reference to the principles of past practice. This approach has to be tailor-made and should/must be based on regional and local contexts and philosophies (Aslan 2014). This is not a new suggestion. According to Ndoro and Wijesuriya (2015, 145–146), ‘the only consistent thing in heritage is change, which may be historically or context driven. The trajectory it takes is dynamic and cannot be standardised through international instruments that are narrowly constituted from one part of the globe’.

Just like AHM, archaeology as a discipline has had difficulties in establishing a clear, culturally secure position within cultural heritage. Within academia and in practice it ‘crosses the traditional Humanities/Science divide and therefore it has a greater breadth and diversity than other professional disciplines’ (Beck 2008, 6). In some countries with weak AHM regulation and enforcement, the management of archaeological resources is often relegated to NGOs with a mandate in community-based natural resource use and landscape management (Schreckenberg et al. 2014; Makuvaza and Chiwaura 2014; Ndoro and Wijesuriya 2015). Furthermore, as noted by Lafrenz Samuels and Lilley (2015, 221), ‘In many parts of the world there is no such thing as “pure” academic archaeology, and has not been for decades’.
Also pertinent to understand the current situation is that the place of archaeology within the university framework depends upon the geopolitical framework of the university influenced by its historical and cultural academic tradition as will be shown through this brief review of international patterns. Throughout Europe, and its former colonies, archaeology has often been placed in history or antiquities departments or have its own department or even faculty. In his historical overview of Archaeological Resource Management (ARM), Carman cites Trigger’s explanation for this in the definition of ‘colonialist’ archaeology: ‘that which developed either in countries whose native population was wholly replaced or overwhelmed by European settlement or … where Europeans remained politically and economically dominant for a considerable period of time’ (Trigger 1984, 360–363, cited by Carman 2015, 23).

In the US, however, archaeology is based primarily, but not exclusively, in anthropology departments. According to Polk (2012, 132), placing archaeology with anthropology stems from a notion in the early 1900s that ‘anthropology should be more holistic in its approach, to include the study of all aspects of the human’. Therefore, archaeology was placed within the anthropology departments as a sub-discipline, often referred to as ‘the four-field approach’ (e.g. Hicks 2013). This also explains the holistic nature of CRM, which integrates cultural, linguistics, archaeology and biological approaches.

In the US, despite over 40 years of AHM practices, there remains a significant disconnect between the requirements of professional archaeological practice in a consulting context and the formal training that aspiring archaeologists receive (Jameson 2013, 13). In the Arab regions of the world the most prominent obstacle for heritage preservation is a lack of trained and qualified individuals, and a lack of skills in the application of internationally accepted principles and knowledge. According to Seif (2017, 128), ‘Heritage management as a field of study and practice in its own right has not been recognised or adopted by academic institutions in Lebanon’. Aslan (2014, 123) suggests that this lack of suitably trained heritage conservation and management experts in the Arab regions can be ascribed to ‘an inadequate definition’ of HM locally and lack of knowledge on related subject areas which have emerged in the last decade. They contend that it is important to identify and clarify what is required to achieve ‘effective training requirements and education methods at various levels, and to encourage interdisciplinary conservation work in the training and education processes’ (117).

A survey of professional Australian archaeologists in 2005 showed that more than 70% found employment within the HM sector. According to a study by Ulm, Nichols, and Dalley 2005, 22–23) there is an urgent need to ‘facilitate greater involvement of industry groups, the private, government and museum sectors and Indigenous groups in the archaeology teaching and learning design and management process’.

In 2009, the Society for American Archaeology (SAA), which covers archaeological work and research in the Americas, published a special issue of their magazine, The SAA Archaeological Record, about curricular reform. According to the SAA Committee on Curriculum there is a lack of ‘fit’ between the current academic/training curricula and the job market (Neusius 2009, 18). The SAA has been involved with the issue of curriculum reform for a long time and in 2003 established the aforementioned permanent committee. Other national and transnational professional bodies have taken an interest in curriculum reform, such as the European Association of Archaeologists (EAA).
Committee on the Teaching and Training of Archaeologists, and the Australian National Committee for Archaeology Teaching and Learning. While these are all concerned with enhancing archaeology as a discipline, they are not focused on the recognition of HM as a discipline in itself. Their focus is on a remodelling and perhaps a major reorientation of archaeology. The possibility of building something completely new and separate to archaeology from the ground-up is not entertained in these contexts.

According to Castillo Mena (2006) and Carman (2015), AHM has grown to be an area of study in its own right with its own growing body of literature. It can therefore be considered a distinct discipline, notwithstanding its perceived position as a sub-field of archaeology. Students in higher education can find themselves in a transitional stage where AHM or HM is sometimes taught as a part of a traditional archaeological academic programme. Otherwise they might follow one of the few master’s level programmes in HM that already exist, most likely within a department of archaeology or anthropology and most likely within a university in a ‘Western’ country.

The Working-Conference in Tampere

This was organised by Annemarie Willems (University of Helsinki/Friends of ICAHM), Suzie Thomas (University of Helsinki), Visa Immonen (University of Helsinki in 2017, now University of Turku), Tuija-Liisa Soininen (Pirkanmaa Provincial Museum) and Aron Mazel (Newcastle University). Specialists from five continents gathered together with many of the leading heritage professionals in Finland. The specific objectives were: (1) to identify and discuss the key components or common denominators for teaching AHM, (2) to identify possible teaching and training needs in HM, (3) to share best practice, and (4) to discuss whether or not there is scope to develop specific teaching and education dedicated to cultural (and especially archaeological) HM.

The working-conference programme (as of 10 December 2018 available at https://blogs.helsinki.fi/ahmtampere/conference-programme/) was divided into four sessions addressing distinct but connected themes: Policy, Practice, Research, and Teaching and Training. The first three are basic components of AHM (Carman 2015), the fourth deals with the methods and techniques of delivering knowledge about these subjects. A keynote speaker introduced each theme, after which there were four breakout sessions to discuss the theme from different perspectives, facilitated by chairs. The discussion sessions then delved deeper into these themes. The sessions were divided into the different geographical scales on which one can deal with HM: World Heritage; transnational; national, and local heritage. Each theme challenged participants to consider how AHM and HM is conceived and practiced in their respective countries. The participants shared their experiences and perspectives, both from developed countries with established archaeology curricula and well-tested policies, and developing countries where AHM is a relatively new concept with little academic or political traction. Within each of the four main themes, WH has its own dynamic with its own research requirements, as stated in the UNESCO World Heritage Convention 1972. In addition, there are specific master’s degree programmes (e.g. WH Studies at the Brandenburg University of Technology in Cottbus, Germany; WH Studies at the University of Birmingham, UK; and WH Management and Conservation at University College Dublin,
Ireland), chairs and training that are primarily aimed at dealing with WH, the WH Convention and related legal instruments and policies.

The theme ‘transnational heritage’ did not just aim to address serial and transnational heritage sites and their management, but we also considered the growing role of multinational companies, institutions, and development organisations (including development banks) and their influence on HM. These companies, institutions, and organisations often have their own guidelines, practices, and reasons for dealing with cultural heritage or for providing funding towards cultural heritage where they work (Willems 2014). They often have a greater influence on HM in developing countries than national governments who lack statutory or other forms of regulation and enforcement. In developing countries with weak AHM legislation, policies and regulations, there is a significant reliance on international conventions, mandates, and policies (i.e. UNESCO and ICOMOS) to hold multinational companies accountable for their actions. More pointedly, companies beholden to the World Bank’s International Finance Corp (IFC) Performance Standards must be seen to implement international AHM frameworks. IFC Performance Standard #8 explicitly states that companies must apply international standards in the absence of national guidelines. In this context, multinationals effectively become ‘de facto’ facilitators for community-based HM and the preparation of inventories of tangible and intangible heritage. A repository of this information can be beneficial to the collective memory of groups of peoples that are often left out of the national heritage discourse (IFC 2012). Furthermore, there was a recognition that emerged in several of the working-conference discussions, that graduates themselves are becoming increasingly transnational. They are frequently educated in one or more countries before perhaps gaining employment in yet another country.

The sessions with foci on national and local levels examined issues such as: the role of the community; the national or local inventory selection processes (for protection listing or other designations); the national and local research agendas; legislation and policy.

All the keynotes and thematic discussion sessions addressed the following questions that the organisers formulated beforehand:

1. What is AHM?
2. Is AHM now accepted generally as a new discipline?
3. What does a future heritage professional look like and what is the basic skill set that they need?
4. How is AHM currently being taught?
5. Is there a need for a dedicated teaching programme/curriculum/course for this relatively new discipline?
6. What should or could this programme look like?

The term ‘course’ that we used in the title of the working-conference could also be exchanged for programme or curriculum and was for this meeting understood as ‘a completed series of learning units that leads to a qualification or award’ (O’Neill 2015, 7). The discussions in Tampere went beyond thinking about courses and also formed a first step in a wider conceptual process and context of curriculum design. This working-conference can also be described as a ‘needs analysis’, because one of the main questions was: ‘Is there a need for a teaching programme/curriculum/course for this relatively new discipline?’.
Different methods were used to document the discussions and debates during the working-conference. A team of six student volunteers took notes and wrote reports on the sessions that they attended. All the sessions were audio-recorded, and in order to ensure use of the data from these sessions in future research and publications, the participants were asked beforehand to sign a consent form. In addition to the reports and recordings, the data also consists of the notes and observations of the chairs and two of the organisers (Willems and Thomas) who sat in on several of the discussions (as of 10 December 2018 available at http://blogs.helsinki.fi/ahmtampere/2017/08/10/conference-reports-online/).

Working-Conference Outcomes

Based on the discussions and debates, the working-conference organisers’ evaluation of the notes and reports produced, and an assessment of the key viewpoints, the main outcomes of the conference are summarised as follows:

1. the potential and significance of education for graduates preparing for employment in HM is a largely undeveloped and unexplored field
2. there is a need for a curriculum in AHM that is better aligned with practice
3. there is a shortage of fully trained professionals in AHM
4. the people teaching AHM may sometimes lack practical experience
5. the disconnect between academic archaeology and HM practitioners needs to be bridged
6. education and training in AHM need to be developed, both for university students, and in the form of Continuing Professional Development (CPD)
7. any new curriculum should be interdisciplinary and teach so-called ‘soft’ skills, such as communication, presentation, and negotiation
8. the requirements of AHM are not the same in all parts of the world, although there is commonality in many of the issues addressed

Ultimately, there was a strong consensus at the working-conference that a new kind of AHM curriculum is needed. In the following subsections we detail further the key issues that emerged from our discussions.

Need for More Professionals

The professionals that are now in leading positions in AHM were mostly trained in the 1970s and 1980s when HM was just emerging. These people were not trained as heritage managers but were educated as academics and learnt AHM ‘by doing’, through practical experience, or by taking additional courses. While this is obviously not the case for all professionals, the concern was expressed by the participants that there is a need for many AHM professionals to broaden and update their skills. This also applies to some of those currently teaching AHM courses and developing new university degree programmes in AHM. The expanding and increasingly professionalised field of AHM, the growing demands of cultural heritage tourism and the need to respond to the growing range of threats to heritage, have resulted in an increasing demand for heritage-related
professionals and for HM-related courses (personal observations). In many developed countries where AHM has not yet emerged as a programme in its own right, as in Finland, there is an obvious requirement for education and training as acknowledged by the Finnish working-conference participants. There appears to be a lack of awareness in this regard in Finland, because while HM practice exists, it is not often recognised or labelled as HM (Enqvist 2014, 111). Three Finnish universities have a degree programme in archaeology, but only one, the University of Turku, has offered one specialised course in HM continuously since 1995. Although training in HM could and should be embedded into internships or working life practice courses, that rarely happens. In effect, it may be that much of academic archaeology perceives HM as ‘separate from the “real” business of archaeological research, or at least as an adjunct area of archaeological practice’ (Smith 2004, 1). Consequently, it was strongly suggested by the working-conference participants that one of the tasks of current heritage managers is to promote HM strongly as a discipline and raise its profile in such a way that it becomes increasingly acknowledged within academia as a topic in its own right. This is a pressing issue because of the growing need for professional HM, while at the same time there is, as observed by the participants, a significant decline in support for the humanities in many countries, and a consequent decline in the number of humanities students.

**Skill Development**

Academic institutions and their role in society are constantly changing. The questions surrounding the role of the traditional discipline of archaeology, the place of HM, and the balance between research and other skills can be seen in this same light. According to Andrus (2016), ‘A common complaint is that the institution does too little to prepare students for careers in or outside academia’.

There was a strong consensus across the working-conference sessions about the importance of ‘soft skills’ when working in AHM as well as transferable skills, such as participatory skills, communication, project management, financing and budgeting, marketing, active listening skills, knowledge about legal and administrative frameworks, mediation, and political and diplomatic skills (see also Sutcliffe 2014). How these skills should be taught needs to be addressed. There was no consensus during the discussions about whether they should be taught during primary degree programmes or master’s-level programmes. Furthermore, there was no consensus as to whether a bachelor’s degree in archaeology should be a requirement for entry to a master’s-level AHM programme. In addition, the feasibility for students to undertake AHM programmes from other academic backgrounds such as history, sociology or even philosophy require in-depth research, which is beyond the scope of this article.

‘Transferable’, ‘portable’, or ‘key’ skills, are all terms that refer to skills taught at universities from an employability perspective, keeping in mind that universities are also employers. This includes the transferability of research skills, which are applicable, outside the academy (Bridges 2000, 44). Transferable skills usually include, for example, communication, presentation, project management and grant writing. For AHM, the working-conference consensus was that it is not enough to offer these courses as optional extras for credit purposes. It was felt that they need to be included as an integral part of HME. A question that arose in this context is whether mainstream
universities provide the best context for teaching these portable skills or whether applied science universities and polytechnics are not perhaps better suited to teaching these courses. It was pointed out if we take curricula in architecture in general as an example, we see that the practice-oriented field of architecture is traditionally studied at mainstream universities and most of the teaching and learning happens through practical projects (Nicol and Pilling 2005). Still, the theoretical and academic approach is an important framework, as it is for HM.

The balance between research and transferable, portable skills, and a concern that the emphasis may be too much on these skills at applied science universities, is another consideration raised by the participants. It is clear that the ideal context for teaching AHM requires further deliberation because, as it stands at present, neither the traditional conceptual frameworks of the mainstream university or the applied science university neatly fit the requirements of AHM. Discussants in Tampere appreciated, however, that different countries or regions might address this issue in a variety of ways.

**Research and Heritage**

In the foreword to Cleere’s book *Archaeological Heritage Management in the Modern World*, Ucko (1989, xi) wrote that ‘archaeology as a discipline would be foolish to allow the current divisions which exist in many countries between the academic, the field worker and the legislator, to continue’. In 2018, this divide still exists, and furthermore it is clear that more disciplines than archaeology alone are needed for effective training in HM. This point was emphasised in Tampere, as participants included specialists from subjects such as cultural studies, ethnology, tourism, conservation studies, museum studies, and architecture. This emphasises a point made earlier: that heritage is a concern not only for archaeology.

General agreement emerged at the working-conference that the distinction between research and practice in HM, albeit contrived, has caused a deep universal disconnect between academic archaeology and HM practitioners. There has been a tendency that demonstrates a lack of critical understanding, to assume that research is not part of HM, while research needs to be integrated with HM and is critical to its validity and integrity as a management process. In the literature, HM and research are often treated as separate entities (e.g. Byrne 1991). This is clearly an issue which requires critical evaluation within the emerging fields of cultural and critical heritage studies, where academic discourse is favoured, perhaps sometimes with little reference to ‘heritage professions’ (see Witcomb and Buckley 2013). Nonetheless, many graduates in archaeology hope to (and will) enter HM in their professional life and, in that context, they require applied skills as well as the ability to conduct research.

There was consensus in working-conference discussions that research should be the foundation of AHM although there was no agreement as to how this could be achieved and integrated into a 1 or 2-year master’s-level programme (with all the other skills that need to be taught). It was accepted, however, that AHM professionals must be capable of conducting well-structured, focused, and appropriate research.

Research is an essential foundation and support for the rationale for, and long-term focus on the protection, conservation and management of, cultural heritage resources. It
was argued that it therefore must have a key place in HME. Research cannot be considered as something primarily done at the universities, instead it must be regarded as the essential basis and groundwork for HM. As with accepted conservation management principles, it is critical that HM professionals have the best available knowledge about a site before, for example, any archaeological, conservation or visitor-focused planning or development interventions begin. In the context of developing countries with limited options for academic financing, NGOs with a heritage mandate often fill the vacuum. They provide opportunities for site-focused and area-focused research that often intersect heritage studies with the natural sciences, sustainable development, and policy implementation. This dynamic ipso facto can create a situation where heritage professionals working for NGOs may lack sufficient academic training, ability and time/resources to publish their research work within traditional scholarly outlets. Appropriate academic preparedness in HM requires better qualified graduates with research skills that are able to bring an elevated quality of work to the available employment market.

Turning to Finland, commercial companies, regional museums, universities and the Finnish Heritage Agency (FHA) conduct excavations and surveys. For example, in the Tampere region the majority of development-led surveys and excavations on public land have been carried out over the last couple of years by private archaeological companies, followed by the regional museum and the FHA, with the least amount by the universities (Lähdesmäki 2018, 286). The FHA is the national agency responsible for the national site inventory. It used to conduct the majority of excavations in the country, but the situation has changed during the last two decades as more and more excavations are carried out by commercial companies. In Finland, whether the fieldwork is conducted by the FHA or commercial companies, the majority of their records, results and analysis of this work is contained in technical reports and grey literature and is unpublished academically (Lavento 2014; Enqvist 2016, 102–119). This situation is similar in other parts of the world. During discussions, the question arose as to whether the work of the FHA and similar agencies should be considered ‘research’ or not. The working-conference acknowledged that ‘grey literature’, in countries where it exists, constitutes an important record in itself, but that it often simply describes the findings of survey and excavation and data and lacks detailed and insightful contextual research and analysis. Furthermore, it has often been ignored by academic archaeologists (Aitchison 2010). It thereby sometimes fails in its contribution to knowledge.

Reference to the results of the Discovering Archaeologists of Europe 2014 (DISCO) project (as of 10 December 2018 available at http://www.discovering-archaeologists.eu), a ‘transnational project, examining archaeological employment and barriers to transnational mobility within archaeology across twenty-one European countries’, has revealed that the composition of European professional archaeology is changing rapidly. The projects show:

The absolute numbers employed in archaeology has fallen significantly between 2008 and 2014 in the twenty-one participating states; organisations employing archaeologists have typically become smaller; a slight decline in sectoral transnational mobility; archaeologists are increasingly educationally mobile; and vocational education and training (VET) in the sector is almost universally delivered by universities through academic degree programmes. (Aitchison et al. 2014, 6–8)
Yet the results of this repeated survey of the profession in Europe did not reveal significant changes in approaches in teaching and training as only few relevant university curricula and programmes were developed or modified as a direct consequence of the survey’s findings (Aitchison et al. 2014).

As a consequence of heritage protection policy development around the world (e.g. 1972 UNESCO World Heritage Convention; 1992 European Convention on the Protection of the Archaeological Heritage; 2003 UNESCO Convention for the Safeguarding of Intangible Cultural Heritage) and related development of national policy and statutory instruments for the protection and management of heritage, there is an increase in the number of students undertaking courses in heritage studies and a decrease in students that are doing traditional archaeology across Europe (e.g. Geary 2013; Shepperson 2017). The same dynamic can be observed in Australia (Beck 2008). In Finland, only one university offers a degree programme in heritage studies and one in cultural environment research, but neither of them qualifies the student to work on archaeological sites. In some other countries, such as Suriname (where one of the conference participants works), a developing country and former Dutch colony where heritage has very complex meanings and limited resources, the relative infancy and scale of AHM studies has meant that university students do not have the luxury of concentrating on one subject. They are involved in traditional archaeological research, but also work with NGOs with an explicit mandate to represent aspects of tangible and intangible heritage of Indigenous groups. The Suriname example shows how national circumstances influence educators to organise their curriculum differently, which can be positive, if this results in a broader range of experiences for the students.

There are now cohorts of graduates entering professional life who are likely to oversee the HME programmes and initiatives in 10–15 years’ time. Discussions at Tampere emphasised that the divisions between academic research and HM need to be addressed. Curricula focused simply on statutory policy and legal instruments, technical protection, conservation and management, and public outreach are insufficient. It is essential to merge research activity and knowledge-building research agendas within HME. The historical, artificial distinction that still widely exists between academic research and HM needs to be addressed and efforts need to be made to integrate both aspects in heritage studies and HM programmes. Discussants felt that students and practitioners in archaeology and HM all require a strong foundation in academic research. The skills of how to communicate research knowledge and findings, it was felt, need to be included and integrated into the more applied domain of archaeological and heritage-related professional practice outside academic institutions.

The tardiness of integrating research knowledge within HM rests to a great extent in the failure to disseminate quality research derived from HM practice (Gowen 2013), (although see Aitchison (2010) for a critique of the assumption that grey literature research is always of lower quality). In addition, many tertiary educators with a solid knowledge of academic research may have little understanding or experience of HM practice in the field. If the teachers are not experienced in HM, then it is likely they will have insufficient practical knowledge to teach HM programmes, particularly if they have little or no knowledge of, for example, working with policy, legislation, modern development, and the HM environment.
**Interdisciplinarity**

According to Holley (2017, 3), ‘Multidisciplinarity is characterised by disciplinary juxta-position rather than disciplinary integration, the hallmark of interdisciplinarity’. Traditional archaeological research and practice is multidisciplinary in nature and involves or engages with a wide range of disciplines. In order to interpret the material remains of heritage structures and places and establish a cultural context for the findings of archaeological investigations, expertise is required from disciplines such as anthropology, history, physical and political geography, and a wide range of environmental and technical sciences (e.g. zoology, osteology, archaeobotany, chemistry, and mathematics). The consensus ascertained from the working-conference participants is that AHM is still practiced and taught in a multidisciplinary way with archaeology as the point of departure, bringing in experts from disciplines other than archaeology, to teach and share knowledge, ideas and experience. However, these disciplines are generally not integrated in the AHM curriculum.

In order to better serve the purposes of education and training in AHM, HME probably requires a more rigorous interdisciplinary version of heritage studies as it appears to be currently taught, which, at its core, should be taught by specialists from different disciplines. Thomas King (2002) writes of extradisciplinarity, which goes beyond interdisciplinarity and includes not just experts from different disciplines, but all those that are involved with the management of cultural heritage in one way or the other. If HME is to be truly inter- or extradisciplinary, its place within the educational spectrum requires careful definition and planning. As it is, it has not developed much during the last few decades, and this may be due to the fact that it does not fit comfortably within current tertiary educational systems. It is, therefore, an apt time to rethink existing HME teaching provision and analyse its existing frameworks and structures. It was felt that consideration should be given to the role of AHM in relation to socially relevant policy topics such as: sustainable development; socially responsible natural resource use and extraction; control and management of natural environmental degradation and degradation caused by people; heritage protection in conflict settings; addressing human rights and land rights violations; and land use planning. All of these affect HM on multiple levels and present a range of issues and challenges to HM practitioners and stakeholders. Each topic bears its own complex series of terms, definitions, policies and implementation strategies, many of which currently fall outside the realms of academic knowledge and teaching. Students of AHM need to be aware of and familiar with them in order to be prepared for professional activity and interaction.

During the Tampere discussions, the terms multidisciplinarity and interdisciplinarity were used interchangeably, showing that there is a need to clarify the distinction. Moreover, some participants felt strongly that academics need to reassess their humanities, archaeology, and scientific archaeology courses and scrutinise other undergraduate programmes such as environmental sciences to see which of these may have relevance for HME.

In countries where archaeological heritage constitutes a significant tourism resource, especially in relation to WH Sites, there is an opportunity to innovate in education and training through a focus on these archaeological resources. In this context, interpretation and tourism management models may form part of the interdisciplinary mix in HM
and be linked to tourism studies where appropriate. Where tourism professionals are responsible for managing WH sites they must be suitably technically trained to understand ‘their’ site and appreciate the principles, parameters, and practical requirements of archaeological preservation and conservation management especially when opening these sites to the public. Such knowledge is also crucial for the integrity of interpretation and underpins the rationale for their promotion and conservation (Pérez et al. 2015; Comer and Willems 2018).

Archaeologists, it was suggested by participants in Tampere, need to be more technically educated and nuanced in their use of language and terms when dealing with the broad variety of professional and other interactions they will have in HM that range from other scientific and technical disciplines, business and political personnel, and community stakeholders. Moreover, they may need to be more nuanced in the way they articulate and explain the rationale of archaeological preservation, research methodologies and principles of conservation, and how these contribute to cultural heritage as a whole. In a report on benchmarking archaeology degrees in Australia, Beck (2008, 15) underlines that diversity is one of the potential strengths of archaeology. It is suggested that universities could ‘investigate further collaborative practices, such as joint teaching programmes, particularly across specialist sub-fields, as well as the sharing of facilities or equipment where practicable’.

While there was strong emphasis on interdisciplinarity, some of the working-conference participants felt strongly that archaeology must remain a recognisable profession within the professional environmental management process. They argued that archaeologists have to defend the relevance of archaeology to culture and understand where archaeologists add value to interdisciplinary professional conservation discourse. It was proposed that, in many areas, archaeologists are the most appropriate professionals to articulate what is required in the framework of overall HM.

Given the highly interdisciplinary nature of HM the emergence of interdisciplinary teaching programmes in new centres of interdisciplinary expertise can be explained. These include for example: Media Culture Heritage at Newcastle University, UK; the LDE Centre for Global Heritage and Development at Leiden, the Netherlands; the Centre for Critical Heritage Studies at the University of Gothenburg, Sweden; The Heritage Consortium shared across several universities in the UK; the Center for Cultural Heritage Studies of Kyoto University, Japan; and the Center for Heritage and Society in Massachusetts at the University of Massachusetts Amherst, USA. Besides these university centres, there is also the ICCROM International Centre for the Study of the Preservation and Restoration of Cultural Property in Rome and the Getty Conservation Institute in Los Angeles, which focus among others on training for mid-career professionals.

**Visions and Conclusions**

Heritage management has rapidly evolved since the 1970s, but the educational provision for this new field of professional activity has not kept pace with this development. How such educational provision should be designed remains undecided and a persistent question. Given the strongly interdisciplinary nature of HM, the traditional organisation of universities and their departments does not provide scope for a ‘fit’ with this new discipline and needs to be rethought with regard to HME. In order to broaden the scope
of AHM, efforts also need to be made to introduce students and perhaps even practitioners to HM in non-academic environments. They should be encouraged to explore how international and national NGOs address the management of heritage and be aware of the large range of policy and governance issues related to it, e.g. community rights, community engagement and the pressures of modern land use in relation to conservation generally. In addition, curricula should include student exposure to development issues such as unsustainable use of natural resources, the impacts of the extractive industry, and learn to understand their compliance mechanisms and issues that arise for heritage management. These are examples of areas within HM and AHM that require specific knowledge and different sets of skills.

The outcomes of the working-conference at Tampere, the growing number of heritage-related courses at universities, the broadening of the heritage discourse, expanding knowledge and understanding about the management of archaeological heritage, and the growing concern for the gap or ‘artificial divide’ between research and heritage practice, all point to a need for new ways of teaching about the material, immaterial and intangible remains of the past. The strong interdisciplinary requirements of HME do not fit in most traditional university structures. The question still remains how HM and archaeology can be most effectively integrated, and how the traditional discipline of archaeology could be transformed into a discipline that fits better with the reality on the ground.

The Tampere working-conference was a starting point for a robust discussion about how university teaching and training can contribute to the shaping of a new all-round heritage professional that can operate effectively in different contexts. Many of the answers of how this can be achieved do exist, and there was general consensus among the participants about the types of courses that should be integrated, although reasons can be identified as to why this ‘dreamed of’ curriculum has not been set-up until now. HME is a new interdisciplinary phenomenon which must establish itself in a time where the higher education structures are changing, as described by Bridges (2000) almost 20 years ago, to meet current challenges. The structures are changing, and the university is not the only place to obtain non-archaeological professionally-focused knowledge. Moreover, universities’ position in society and their place in the mix of tertiary educational provision are changing. Questions arise about the selection of knowledge to be taught to upcoming students, and how that knowledge should be represented, organised, constructed and imparted in the university setting (Holley 2017, 19; Bridges 2000, 41). Interdisciplinary teaching and learning, sharing knowledge in other disciplines and cooperating with different kinds of educational facilities does not fit in the traditional university and tertiary system. This is changing, however, and there are now universities, such as Duke University (USA) for example, that have established interdisciplinarity as a cornerstone of their institutional mission (Holley 2017, 17). From an academic perspective, there is no straightforward or logical place for HME, given its applied nature and poorly defined role of research within it. In spite of the expressed need for an interdisciplinary curriculum for HME, there are challenges that need to be overcome to achieve this, ‘Since the university curriculum is commonly structured by academic disciplines, and faculties are socialised to their respective disciplinary norms’, the challenges include: ‘developing interdisciplinary courses, sustaining interdisciplinary initiatives, and financing interdisciplinary programs’ (Holley 2017, 1). Also, different
disciplines have different teaching and training methods and maintain different ethical and professional working methods. In addition, they frequently use different technical language, which may make interdisciplinary teaching and work challenging and time-consuming, and cause friction (Uzzell 2010, 327).

The diverse heritage specialists’ participants in the Tampere working-conference all agreed upon the requirement for teaching transferable skills and the importance of research in AHM. There were also disagreements. Some participants felt, for example, that the focus of the curricula should be local, while others felt that knowledge and awareness of international policy, legislation and best-practice is essential in an AHM curriculum. Moreover, some participants felt that more disciplines should be brought together (hence our transition into referencing HME rather than ‘just’ AHM) and that the focus should be on local levels of heritage but using international policy concepts and tools. More discussion is required, especially as McCarthy and Brummitt (2013, 150) argue for increased flexibility in education programmes and to make it possible, or easier, for students to take courses from other departments that are relevant to their future careers in HM.

The title of the working-conference was Development and Best Practices of (archaeological) Heritage Management as a Course. The word ‘archaeological’ was placed in brackets as the organisers were not sure where the discussions would place archaeology; whether HM should be placed within archaeology as a subject or archaeology should be in a dedicated heritage management curriculum. Although HM is often taught by archaeologists in departments of archaeology, this does not necessarily mean that this is the best place for it. While HM can be seen as a sub-discipline of archaeology, it can also be regarded as a discipline in its own right. If we agree that the latter is indeed the case, then perhaps it doesn’t belong to any specific department and can be housed across various departments and disciplines. Even though it has been argued ‘to tighten the focus’ we spoke about AHM instead of HM, the working-conference discussions suggested that we should rethink this, because if we keep the ‘A’ of archaeology as it is currently understood, we narrow ourselves too much on the material aspects and research traditions of the subject. The points that were reinforced in Tampere where it was suggested that the heritage practitioner community needs to play a key role in developing HME; that ‘key transferable skills’ are very important; and that perhaps we can conclude that the material itself is not necessarily the most important (or at least not the only) aspect of HM. If the trend is to focus on a range of different attributes and values, instead of a sole focus on the material remains of the past, then this should be reflected in HME as well. The next generation of heritage professionals need to have this principle established as a starting point. ‘Archaeology’ can be taken out of HM course titles and does not need to be placed within the existing curriculum framework. We need to move towards a multidimensional, multiskilled group of professionals in HM and towards preparing better educated and better equipped professionals. HME requires a learning environment where interdisciplinary teaching is supported and encouraged.

Ultimately, the working-conference from which this article stems found some answers but also identified many avenues for further and deeper research. Thus the final outcomes for the future development of HME remain to be seen, although we feel we have
paved the way with both the working-conference and this article for further research and deliberations.

**Acknowledgements**

We gratefully acknowledge the University of Helsinki Future Fund’s support for the working-conference that led to this article. We also thank Pirkanmaa Provincial Museum, the City of Tampere, Friends of ICAHM and Newcastle University for in-kind support.

Finally, we thank all of the participants in the working-conference for their help in generating the debates and sharing their expertise and experience from which this article stems.

**Disclosure Statement**

No potential conflict of interest was reported by the authors.

**Notes on Contributors**

**Annemarie Willems** is the Executive Director for Friends of ICAHM, a non-profit that has been created to support the mission of the ICOMOS International Scientific Committee on Archaeological Heritage Management (ICAHM). She holds a MA in Cultural Heritage from the University of Utrecht, the Netherlands. Since 2016 Annemarie Willems has run her own consultancy practice in heritage management, AW Heritage Consultancy. Annemarie started her PhD research at the University of Helsinki on the development of Heritage Management Education.

**Suzie Thomas** is Professor of Cultural Heritage Studies and Docent in Museum Studies at the University of Helsinki, Finland.

**Alicia Castillo Mena** is Lecturer at the Complutense University of Madrid in the Prehistory Department. Her research lines and teaching include Archaeological Heritage and its relations to World Heritage.

**Viktorija Ėginskás** is a Postdoctoral Researcher in the Department of Music, Art and Culture Studies and currently working on the research project ‘Legitimation of European Cultural Heritage and the Dynamics of Identity Politics in the EU’ (EUROHERIT) at the University of Jyväskylä (JYU), Finland.

**Visa Immonen** is Professor of Archaeology at the University of Turku, Finland.

**Iida Kalakoski** is a university teacher and researcher in history of architecture at the Tampere University of Technology.

**Tuuli Lähdesmäki** is an Academy Research Fellow (Academy of Finland) and an Adjunct Professor/Docent working in the Department of Music, Art and Culture Studies, University of Jyväskylä, Finland. She is the principal investigator on the research project ‘Legitimation of European Cultural Heritage and the Dynamics of Identity Politics in the EU’ (EUROHERIT), funded by the European Research Council.

**Ulla Lähdesmäki** works as an archaeological researcher at the Pirkanmaa Provincial Museum in Museum Centre Vapriikki, Tampere.

**Margaret Gowen-Larsen** is an archaeologist and heritage consultant with a deep interest in World Heritage, archaeological research, and all aspects of heritage management.

**Arkadiusz Marciniak** is Professor of Archaeology at the Institute of Archaeology, Adam Mickiewicz University, Poznań.
Elena Pérez González is Lecturer at the Universidad Europea de Canarias. Her lines of research and teaching are focused on archaeological heritage management and cultural tourism planning and management.

Cheryl White is Senior Lecturer at the Anton de Kom University.

Aron D. Mazel is Reader in Heritage Studies at Newcastle University.

References


Comer, D., and A. Willems, eds. 2018. Feasible Management of Archaeological Heritage Sites Open to Tourism. Cham: Springer.


