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## Understanding the Concept of Sustainability as Applied to Archaeological Heritage

Sarah Howard

Over the last 20 years there has been a drive in international government policy to make our economic, environmental and social endeavours more sustainable. However, without fully understanding this concept and its current and future applications, it risks being reduced to a meaningless buzzword.<sup>1</sup> This paper will investigate the key issues for understanding sustainability within an archaeological heritage context, including the difference between defining and understanding the meaning of sustainability; the historical development and compatibility of 'heritage' and 'sustainability'; the meaning or 'value' of sustainability in a heritage context; and finally, the duality of sustainability. As with the concept of heritage, sustainability is not a subject but a collection of ideas. These ideas were formally combined in the report *Our Common Future* (1987) commissioned by the United Nations to produce a "global agenda" for economic development that did not negatively impact upon already fragile ecosystems and finite environmental resources. Key components of the concept are environmental protection, renewable resources, economic development (progress), social equity (ethics) and the equilibrium of these constituent parts.<sup>2</sup> This report inadvertently created a definition or context for understanding sustainability in relation to development in the latter part of the 20th century. It has since, however, been used to frame sustainability within a number of subjects and disciplines including archaeology. If an historical approach to understanding sustainability is taken, it is clear that definition alone is not fit for guiding sustainability as applied to archaeological heritage, and there is the necessity to re-conceptualise or at least re-contextualise the concept to give it meaning within this context.

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<sup>1</sup> Scoones 2007.

<sup>2</sup> World Commission on Environment and Development (WCED) 1987.

## Problems with definition

The definition and categorisation of objects and information enables us to make sense of them and understand how they fit into existing frameworks or systems of knowledge. There have been various calls to better define sustainability,<sup>3</sup> but as soon as we define a subject we often inadvertently restrict what it can encompass. At face value, the definitions of heritage and sustainability are reasonably straightforward; heritage refers to something that is 'inherited', and sustainability is 'the ability to sustain'. All words have certain lexical meanings imbued in them, but without being placed in context they are essentially meaningless. Definitions alone do not help us to fully understand or clarify the meaning, significance or implications of words or concepts, which often have multiple values, discourses and possible outcomes. In the case of sustainability, the concept has been applied to a diverse range of subjects where it has often undergone context-specific definition to give these abstract ideas meaning or value. For example, the first formal attempt to define the concept of sustainability was within the report *Our Common Future* and the context of global 'sustainable development'.

'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'<sup>4</sup>

Despite this particular definition being specific to an economic development context, it has since become the most commonly cited definition of 'sustainability' within a range of subjects including heritage studies.<sup>5</sup> Although *Our Common Future* was the first step towards making the concept of sustainability more accessible, the lack of redefinition started the process of limiting the possibilities and scope of the concept. There has been little attempt to further investigate the meaning of sustainability within a heritage context, and as such the concept and its applications remain abstract and simply a branch of sustainable development. For sustainability to be more than a buzzword, it must first be understood as a concept or collection of ideas that have developed over a long period of time that are subject to change between different contexts. To understand the definition of sustainability embraced by *Our*

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<sup>3</sup> For example see Kajikawa et al 2007: 221.

<sup>4</sup> WCED 1987.

<sup>5</sup> For examples see Landorf 2009; Labadi 2011; Stubbs 2004.

*Common Future*, it is first necessary to understand the historical development of the ideas that would later become an integral part of the sustainability concept as portrayed in that report.

### **Historical development of ideas pivotal to sustainability**

The main components of sustainability as outlined in *Our Common Future* are not entirely modern concerns and, contrary to popular belief, sustainability is not a modern concept. Although sustainability has become an intensely debated topic and sought after goal, the foundations of the concept developed over a long period of time from a number of subjects with different and sometimes seemingly conflicting paradigms. The same is true for heritage, or rather heritage studies, which has developed out of a number of parent subjects and only recently been amalgamated back into the all-encompassing concept of 'heritage.'<sup>6</sup> When trying to reconcile the concepts of sustainability and heritage it is necessary to take an historical perspective - to examine similarities and differences in their development in order to enable a better understanding of how they might be mutually beneficial, and create a deeper understanding and meaning to the phrase 'sustainable heritage'. For example, ideas such as balancing economic and social factors, conservation of limited resources and the redistribution of wealth can be shown to have originated in early economic theory or 'political economy' that developed during the latter half of the 18th and early 19th century. The importance of natural landscapes and finite natural resources can also be traced back to the conservation movement in Britain and America during the 18th and 19th centuries and the development of the discipline of Ecology.<sup>7</sup> Although modern ideas of sustainability are not too dissimilar from their 18th and 19th century counterparts and the desire to improve the 'human condition' by improving the world around us, what has changed is their political, economic, social and environmental context.

The 18<sup>th</sup> century discipline of 'political economy' promoted the ideas of free markets and *laissez-faire* economics as a reaction against mercantilism and the influence of

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<sup>6</sup> Carman 2002: 26.

<sup>7</sup> Callicott & Mumford 1997: 35; Edwards 2005: 12-13.

the merchant class over the state and trade.<sup>8</sup> In his seminal work *The Wealth of Nations* (1776), Adam Smith proposed a self-regulating market system whereby an 'invisible hand' guides individuals in pursuit of self-interest, or rather the 'illusion of self-interest, in a way that benefitted society as a whole.<sup>9</sup> Smith's idea of individuals unconsciously working towards a greater good or goal is often compared with ideas of 'moral sense' in Darwin's *Descent of Man* (1871),<sup>10</sup> and both concepts rely on the idea of altruism, whereby the work of an individual can benefit the group as a whole.<sup>11</sup> It is clear that 18<sup>th</sup> and 19<sup>th</sup> century philosophers considered social responsibility to play a crucial role in improving society for all people. This belief also formed a vital part of the declaration within *Our Common Future* and outlined the United Nations commitment to improving human rights and social equity through development or 'Social Sustainability.'<sup>12</sup> It was also this social component of sustainability, and particularly the politics of New Labour in the mid-1990s, that first utilised the concept of heritage in the sense of built space and 'inheritance' of those spaces by future generations to improve 'social inclusion' and foster 'sustainable communities.'<sup>13</sup>

In the 19th century concern regarding the impact of humans on the natural world emerged as a major topic of debate in both Britain and America, and with it two different approaches to understanding and solving this issue. The preservationist perspective saw the natural environment as something spiritual that humans could learn from and draw inspiration from in its wild and unspoilt form.<sup>14</sup> A resourcist perspective placed greater emphasis on the conservation of natural resources due to their fragile and finite nature<sup>15</sup>. Over time the resourcist perspective of the environment has come to dominate the rhetoric of western nature conservation and this is reflected in *Our Common Future*, where natural resources are seen as "resources for development" with the report emphasising the need to balance preservation with development to ensure the survival of natural systems and the

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<sup>8</sup> Lumley & Armstrong 2004: 12-13, 370.

<sup>9</sup> Smith 1776, book IV, chapter II.

<sup>10</sup> Darwin 1871: 70-106.

<sup>11</sup> Lumley & Armstrong 2004: 374.

<sup>12</sup> See Dempsey et al 2011.

<sup>13</sup> Smith & Waterton 2009: 21.

<sup>14</sup> Edwards 2005: 12-13.

<sup>15</sup> Callicott & Mumford 1997: 34.

resources they contained.<sup>16</sup> This shift from preservation towards resourcism is also mirrored in the development of cultural resource management in heritage during the 1990s.<sup>17</sup>

The academic study of eco-systems can be traced back to the work of Charles Darwin and Alfred Wallace. Darwin's theory relied on the idea that 'natural selection' allowed individuals with useful adaptations to survive and reproduce, passing on those beneficial adaptations to the next generation,<sup>18</sup> and Wallace proposed that this could help to explain the distribution of species in relation to environmental conditions, which placed selective pressure on individuals to adapt to niche habitats.<sup>19</sup> The ideas engendered in these theories were the precursors to the scientific study of ecology and how components of an environment interact to maintain equilibrium.<sup>20</sup> It was the idea of biological systems and their components sustaining themselves over time via adaptation and evolution that provided the inspiration for the ecological/economic reading of sustainability, and led to the word becoming synonymous with the idea of self-sustaining or self-renewing systems.<sup>21</sup>

Although the disciplines of ecology and economics are often regarded as in opposition, both developed out of a period when humans increased their impact and influence on the environment and world economies. Both economy and ecology are derived from the Greek word *Οἶκος* (*oikos*) meaning 'household', suggesting that there should be some degree of common ground between the two disciplines, with ecology being the 'study' of the environmental household and economics the 'management' of the household.<sup>22</sup> Essentially the two disciplines complement one another, with the study of the global household helping to better understand its components and resources so we can best manage those resources.<sup>23</sup> If you consider the early development of the two disciplines, it is apparent that perceived modern tensions were not considered to be in opposition for Victorian philosophers.

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<sup>16</sup> WCED, 1987.

<sup>17</sup> See Hunter & Ralston 2006; Carman 2005.

<sup>18</sup> Darwin 1859.

<sup>19</sup> Morrone 2009: 27.

<sup>20</sup> Levin 2010.

<sup>21</sup> Carman forthcoming.

<sup>22</sup> Odum & Barrett 2005: 2.

<sup>23</sup> Costanza 1989.

The generation of wealth was not held in opposition to notions of moral duty, ethics, justice and conservation of the natural environment, and where conflicts did occur they believed that justice should always prevail.<sup>24</sup>

### **The influence of legislation and policy on our understanding of heritage and sustainability**

Although the very idea of heritage or 'inheritance' can be traced back through thousands of years of human evolution and history, this word has only recently become the preferred terminology for the tangible, and later intangible,<sup>25</sup> components of past, present and future human culture and the natural environment. The use of heritage as a catch-all phrase collapses a rich and diverse history of subject specific and interdisciplinary development into a single term, which has mostly been used within the context of national and international government legislation and policy.<sup>26</sup> If we look at the discipline of archaeology, there have been a number of significant paradigm shifts which have allowed the subject to evolve from an antiquarian pastime between the 16th and 19th centuries, to an academic and later scientific discipline in the 20th century, and over the last 30 years a 'brand' easily accessible for mass consumption.<sup>27</sup> It is this rich disciplinary heritage that has helped the discipline of archaeology avoid stagnation and be constantly reinvigorated for contemporary audiences.

In 1865, politician and archaeologist John Lubbock published *Prehistoric Times*, taking inspiration from contemporary developments in politics, science and economics.<sup>28</sup> During a time when the educated middle classes were embracing the idea of altruism and a concern for the welfare of others, Lubbock believed that, as technology improved, so would ethics and standards of living with education playing a key role in achieving 'cultural evolution.'<sup>29</sup> Between 1873 and 1880 Lubbock proposed a parliamentary bill for the protection of ancient monuments, which was

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<sup>24</sup> Lumley & Armstrong 2004.

<sup>25</sup> See UNESCO 2003.

<sup>26</sup> Carman 2002: 16.

<sup>27</sup> Trigger 1989; Holtorf 2007.

<sup>28</sup> Lubbock 1865.

<sup>29</sup> Trigger 1989: 115-17.

rejected on various grounds and particularly the unnecessary ‘invasion of property at the expense of the taxpayers.’<sup>30</sup> In 1882 a compromise was reached and the Ancient Monument Protection Act was finally passed.<sup>31</sup> This legislation formally protected monuments included on a schedule and ensured government intervention should there be wilful damage to those monuments. In ascribing archaeological monuments value by including them on a schedule, governmental departments, and later non-departmental public bodies acting on behalf of government, had ‘legal authority’ over those heritage ‘assets’ and therefore control over the physical subject of study - archaeology. Just as environmental heritage was valued and formally protected as much for its resources as for its enlightening and spiritual qualities, prehistoric heritage was valued by the educated middle classes as much for its ability to mobilise political power as it was as an academic pursuit.<sup>32</sup>

Although it was the rise of the educated classes that led to popular, and later political, interest in the physical remains of the past, the context of this legislation was the Industrial Revolution, a period of increased development not just within cities but also rural areas. Crawford (1932) suggested that infrastructure works and mining led to an increased awareness of archaeology.<sup>33</sup> It is also likely that the very development seen to be advancing society was known to be destructive and polluting. As with the push to conserve National Parks in America, it is possible that the threat of losing a finite resource valued by emerging middle class professionals was reason enough to provide legal protection. Legislation is more often than not reactive rather than proactive - in the first instance it can be seen to protect the interests of a select few, only later appearing to have served a wider section of society.<sup>34</sup> This can be likened to Smith’s ‘invisible hand’ and the notion of altruism, which is one of the major principles behind modern heritage protection; sites are designated by a select few for the benefit of everyone now and in the future.

The shift away from site and artefact based studies of archaeology towards understanding of wider ‘landscapes’ from the 1970s onwards led to archaeological

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<sup>30</sup> Ancient Monuments Bill 1874.

<sup>31</sup> Public Bill 1882.

<sup>32</sup> Carman 1996: 80-84, 92, 96.

<sup>33</sup> Crawford 1932.

<sup>34</sup> Carman 1996: 80, 92.



sites being considered part of a 'historic environment'.<sup>35</sup> The large scale infrastructure works following the Second World War can be likened to those accompanying the Industrial Revolution. This, coupled with growing unemployment in the 1970s and 1980s, led to a national scheme of 'rescue' archaeology under Manpower Services.<sup>36</sup> This approach to archaeological heritage can be compared to the preservationist approach to the environment whereby excavation of this finite resource meant that it was not lost to future generations. Since the introduction of PPG16 in 1990 there was a shift towards archaeological mitigation as a key component of the planning process, with excavation and investigation primarily to fulfil planning conditions. In this sense, archaeological heritage is supported by the capitalist framework of development with revenue derived from heritage 'consumers', such as visitors to heritage attractions as well as large commercial developers, used to conserve and protect both heritage assets and the professional practice.<sup>37</sup> It was also during the 1990s that sustainability started to receive attention within national and local government heritage literature.<sup>38</sup>

If we consider how sustainability within a heritage context has developed in government legislation, guidance and policy, it is apparent that only certain ideas have been embraced from the wider concept, with particular emphasis on heritage as a self-sustaining economic system. For example, Planning Policy Statement (PPS) 5 for the Historic Environment (2010) uses the broad term 'heritage assets', which collapses the concept of heritage into an economic practice to be moderated by reports on financial viability and economic value.<sup>39</sup> It is likely that the reason heritage literature and legislation embraced a development-oriented definition of sustainability was because of the way professional and curatorial archaeology became inextricably linked to the development industry. This might also explain the shift from preservationist perspectives in archaeology towards an economic or resourcist view of archaeology as a process to enable (or sometimes prevent) development.

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<sup>35</sup> Fleming 2006: 267.

<sup>36</sup> Everill 2009.

<sup>37</sup> Everill 2007.

<sup>38</sup> Stubbs 2004: 301.

<sup>39</sup> Carman 2002: 154-5.

### **The meaning or 'value' of sustainability in a heritage context**

There have been a number of calls for heritage, and particularly the way heritage processes are funded, to be more sustainable.<sup>40</sup> There has, however, been little or no appraisal of why heritage should be sustainable, and indeed what it might mean if archaeological heritage were sustainable. The increased interest in sustainability as a concept within heritage legislation, policy and guidance is most likely due to the fact that 'heritage assets', whether they are local authority services such as museums, individual buildings or artefacts, usually require some form of external capital to maintain conservation efforts and public services.<sup>41</sup> In the current economic climate, this way of supporting heritage is itself not sustainable, and there is now an emphasis on finding alternative sources of labour and funding. For example, since 1994 the Heritage Lottery Fund (HLF) has become a major source of funding for heritage projects, especially those that engage the public, which is a major criterion for grants.<sup>42</sup>

The last 30 years has seen a surge of popular interest in archaeology due to film and media coverage of the subject, and the opening up of the discipline to non-academic audiences through community engagement and outreach projects. The last few decades represent a paradigm shift, whereby people feel more engaged with the past because they value opportunities made available for hands-on learning and 'experience' of 'doing' archaeology rather than merely observing 'professionals'.<sup>43</sup> As a result the voluntary sector has expanded over the last decade with support from organisations such as the National Trust and English Heritage. With recent cuts to government spending on heritage, the last five years has seen the rise of projects that 'build up the capacity and commitment of local communities to champion the conservation and enhancement of their own local heritage.'<sup>44</sup>

The social and cultural value of heritage is regarded as a powerful tool in sustainable development, economic regeneration and creation of 'sustainable communities' by contributing to a sense of local collective identity, sense of belonging and social

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<sup>40</sup> See Cassar et al 2001; Clarke 2008.

<sup>41</sup> Stubbs 2004: 292.

<sup>42</sup> HLF n.d.

<sup>43</sup> Smith & Waterton 2009: 138-9.

<sup>44</sup> English Heritage 2009; DCMS 2011.

cohesion.<sup>45</sup> In an attempt to regenerate inner city areas, various projects have been setup to either remove or renovate old housing stock and attract people back to these areas. For example, the Urban Splash project at Chimney Pot Park in Salford, Greater Manchester renovated a block of Victorian housing to provide modern family homes, showing that terrace housing could be successfully adapted to make the most of limited space as viable modern dwellings. Although the latter was a success as far as conserving the exterior of the historic terraces, one of the major issues that affects the success of these schemes in terms of social sustainability is the displacement of existing populations and 'gentrification' where prices of renewed structures means they appeal to more affluent sections of society.<sup>46</sup> A number of regeneration schemes over the last 20 years have not delivered in terms of social sustainability resulting in the displacement of original communities, and also in terms of economic regeneration and conservation due to the demolition of viable housing with historic character.

Current applications of sustainability to the historic environment often cite the re-use of historic buildings as one of the main ways in which (built) heritage can contribute to a sustainable society. This is because 'material conservation is [perceived as] an inherently waste-avoidance activity', which conserves a heritage asset by retaining 'environmental capital' and lessening the environmental impact of building a replacement.<sup>47</sup> Although conservation literature provide examples of why and how built heritage should be more sustainable,<sup>48</sup> other heritage assets and disciplines such as archaeology have been neglected and left behind in the sustainability debate because it is less obvious how they might contribute to a sustainable future. The extract below is taken from the Government's Statement on the Historic Environment for England (2010). Built heritage takes precedence in sustainable approaches to heritage with the idea that when compared to 'other types of evidence' it is inherently more sustainable, with archaeological remains merely serving to increase our understanding of how low carbon economies in the past operated with minimal impact upon the environment.

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<sup>45</sup> Vileniske 2008: 435.

<sup>46</sup> Cameron 2003; Atkinson 2004.

<sup>47</sup> Cassar 2009: 6.

<sup>48</sup> See English Heritage 2008.

‘By promoting the inherent sustainability of historic buildings and their surroundings and by learning from them and the other types of evidence left by the low carbon economies of the past, we can make real progress in helping to mitigate and adapt to climate change.’<sup>49</sup>

It is the restrictive discourse surrounding the applications and outcomes of sustainability within a heritage context that diminishes the meaning and value of the concept to a buzzword. Due to the lack of philosophical appraisal regarding sustainable heritage initiatives, the legislation, policy and guidance produced by the government and English Heritage serves as the ‘authoritative’ reading of the concept and thus strengthens past biases and restricts future possibilities. In addition, pre-modern economies, which are seen as ‘models’ for sustainability in the future, are in many ways incompatible with contemporary society, especially with regards to population density and technological advances. The study of past societies can contribute to our understanding of climate change, alternative sources of power and land management regimes,<sup>50</sup> but this should be achieved through technical innovation and advancement rather than trying to shoe-horn modern society into what constituted a low carbon economy in the past.

In terms of sustainability, archaeological heritage can relate to both the materials studied to understand the human past, from the micro to macro scale (e.g. artefacts, buildings and monuments), and also the physical practice of archaeology such as excavation, artefact studies, conservation and exhibition.<sup>51</sup> We can conserve the materials of archaeology in a way deemed sustainable, but without the practice and appreciation of archaeology there would be no materials to sustain, nor reason to sustain them. This leads to the important questions of what are we trying to sustain about heritage? What is the value of making heritage sustainable? And who are we sustaining it for?

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<sup>49</sup> DCMS 2010: 1.

<sup>50</sup> Guttman-Bond 2010.

<sup>51</sup> Carman 2002: 44, 150-3; Carman forthcoming.

### **Conclusions: the nature of sustainable heritage**

The concepts of heritage and sustainability share many common elements; both developed during a period in western culture when it became clear that unrestricted exploitation of the environment would inevitably lead to the loss of finite natural and cultural resources. By the mid-20<sup>th</sup> century these concerns continued and finally reached their pinnacle in the 1970s and 1980s when sustainability became a global concern. If current heritage literature pertaining to sustainability is compared with the historical development of ideas later consolidated under the concept of 'sustainability', it is apparent that only one aspect has been fully embraced, the idea of a self-sustaining economic system. This economic or resourcist reading of sustainability as defined in *Our Common Future* and in later heritage legislation, policy and guidance, places emphasis on physical remains of the past and more often than not, built heritage reuse and adaptation as a means of achieving sustainability within a heritage context.

At first, one would believe that the potential of sustainable heritage had been held back by the definition of sustainability as understood in *Our Common Future*. However, on closer inspection, although the definition adopted by the report and later by conservation and heritage literature was limited in its scope, the context of that definition (i.e. the report itself) contained all the key themes and ideas present in the early 18<sup>th</sup> and 19<sup>th</sup> century 'pre-sustainability' literature. Since the inception of the concept, sustainability has been scrutinised for not having clear or well-defined principles. This misses the point of sustainability as a concept, which as mentioned previously, is and should be subject to change. Heritage professionals should not let definition determine the meaning and potential of sustainability. Ultimately, the importance of sustainability within a heritage context will be determined by the outcomes and the meaning or value of those outcomes.<sup>52</sup> The definition is the starting point not the end goal; calling something sustainable does not mean it has become sustainable. The concept of sustainability as defined in *Our Common Future* can be seen as limiting the scope of sustainability, but only if it is taken at face value. It is unlikely that the oft cited report passage was intended as a definitive or

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<sup>52</sup> Stubbs 2004.

'authoritative' definition or discourse on sustainability, but rather to condense key ideas behind the report into a few sentences that were memorable and accessible.

One of the major topics of debate within heritage literature is the notion of valuation.<sup>53</sup> To understand what it means for heritage to be sustainable we need to firstly ask *why heritage needs to be sustainable, and who are we sustaining it for?* As mentioned previously, archaeological heritage has received popular support over the last three decades and now appeals and is appreciated by wider sections of society. Various community heritage initiatives are encouraging the public to take 'ownership' of their own heritage and to help understand and protect what they value (e.g. Heritage Protection Reforms local listing). The continued public value of heritage is supported by visitor figures during the last two years where visitor numbers to heritage attractions have remained constant and even increased despite the economic downturn.<sup>54</sup> Archaeological materials might be considered to some extent a finite 'resource'<sup>55</sup> but the practice of archaeology has shown itself to be resilient through shifts in the underlying paradigms of the discipline to reflect the needs of contemporary audiences. Despite the potential for public value to have a positive impact upon the overall sustainability of the discipline and curatorial processes of archaeology,<sup>56</sup> 'social sustainability' is still very much thought of in terms of its contribution to economic regeneration.

The way heritage is funded has come under scrutiny due to the global economic downturn and it is no longer justifiable to expend vast amounts of direct government funding to 'sustain', or rather maintain, the various outlets of heritage. As such government legislation, policy and guidance have called for heritage to be more sustainable and to contribute to a sustainable society, often by finding alternative sources of capital and labour to enable the way we currently practice heritage to continue in the future. Heritage has increasingly become a business and for businesses or 'industries' to survive they need physical commodities with which to trade. This economic reading of heritage value prevails in government legislation and

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<sup>53</sup> Carman 1996; 2002.

<sup>54</sup> BDRC 2010.

<sup>55</sup> For counter argument that archaeological materials are to some extent renewable, see Carman 1996, forthcoming; and Holtorf 2008.

<sup>56</sup> See Carman forthcoming.

policy, which stems from the need to justify and account for public sector spending on heritage. For example, the importance of heritage is often expressed in terms of national revenue generated from tourism and development.<sup>57</sup>

The heritage sector or system is seen as needing to be self-sustainable due to the lack of public funding available to sponsor the various outlets of heritage, but this is sustainability from an economic perspective, which means that the system essentially remains the same but supported by different sources of revenue and labour. In addition, the measurement of value as a purely economic phenomenon neglects the complex and often intangible values that can be placed on heritage and also leads to biases whereby the greatest value is placed on physical heritage as reflected in current government legislation, policy and guidance documents. The pairing of archaeological heritage, as part of the development control process with economic sustainability fitting within the existing framework that started with the 1990 PPGs and the 'Polluter Pays' ethos.<sup>58</sup> The various pieces of government heritage literature embrace the main themes of sustainability, but there is an unspoken assumption that changes to economic components of heritage such as funding and labour (for example, alternative sources of funding and greater public participation) will allow us to continue to operate within already established frameworks.

The concept of sustainability and the interpretation of that concept from a heritage perspective possess conflicting elements; being future orientated and encouraging progress is at odds with 'sustaining' established ways of 'doing'.<sup>59</sup> This conflict arises because an economic interpretation of sustainability places emphasis on finding new sources of capital to sustain existing systems and their components.<sup>60</sup> In contrast, an ecological reading of sustainability does not necessarily mean that all components of a system are sustained. Inefficient or ill-adapted components of an ecosystem might be replaced by more efficient components that perform a similar function but in a different way - the ecosystem continues but not necessarily in the same form.<sup>61</sup> This is the duality of sustainability, it can be a revolutionary concept able to change the

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<sup>57</sup> Carman 2002: 150-3; DCMS 2011.

<sup>58</sup> Everill 2009: 31.

<sup>59</sup> Carman forthcoming.

<sup>60</sup> Pezzy and Pezzy 2002.

<sup>61</sup> Callicott & Mumford 1997: 36.

way we practice and think about current systems,<sup>62</sup> or it can, and has more often been used to, prop-up existing systems and components that are essentially non-sustainable in the long-term. This has been termed 'weak' sustainability,<sup>63</sup> and it is this form of the concept that has been embraced by heritage institutions and literature. The main obstacle to overcome in relation to understanding sustainable heritage is the current discourse represented by government legislation, policy and guidance that restricts the ways in which heritage can contribute to all facets of a sustainable society.

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<sup>62</sup> Edwards 2005: 3-5.

<sup>63</sup> Pezzy and Pezzy 2002: 8.



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