



Energy and Cultural Heritage: How Values Change

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ABSTRACT

Barry Lord's presentation applies the thesis of his forthcoming book *Art & Energy* to the way in which energy sources have affected the perception and appreciation of cultural heritage. As each energy source has become dominant it has influenced public awareness and interpretation of the meanings and priority of cultural heritage. The present situation of multiple energy choices, each with very different cultural implications, offers a range of attitudes toward cultural heritage, with the renewable energy culture of stewardship forming the present cutting edge of cultural change.

KEYWORDS: *Energy, Culture(s), Coal, Production, Electrification, Transformation, Oil, Consumption, Nuclear, Renewable, Anxiety, Stewardship*

INTRODUCTION

Everyone knows that all life depends on energy. What has very seldom been acknowledged is that each source of energy brings with it certain cultural values that as users of that source of energy we are all obliged to accept—not necessarily to approve, but we have to live with the energy sources of our place and time in order to survive. But energy sources are not value-neutral; each one generates certain meanings and priorities that we have to understand in order to access, use and maintain it. Since the energy source is essential to the very existence of our culture(s), it follows that the values that accompany each energy source have a powerful effect on the values of the culture(s) that they make possible. Because energy is necessary to everyone, the values that accompany each source are pervasive but almost invisible—usually taken for granted and unconsciously assumed as obvious once that energy source becomes dominant. Yet if we are denied the life-sustaining energy, we are likely to articulate the underlying values, and if necessary to fight for them.

Each energy source foregrounds certain cultural values at the expense of others. The values that accompany incoming new sources of energy (such as renewable energy today) are seen as 'cutting-edge' values within the culture, while the values that accompanied previously dominant sources of energy remain relevant as long as those energy sources are still in use. This directly parallels cutting edge and traditional values of cultural heritage—although the cultural changes accompanying energy transition often take decades or centuries and may last for hundreds or even thousands of years. These values affect all aspects of our lives; this paper focuses on the influence of these cultural values on the perception and evaluation of cultural heritage and its preservation.

METHODOLOGY

The methodology of *Art & Energy* and this paper is empirical and inductive. It depends on identifying the values to which each energy source gives priority as an underlying assumption for its implementation. For example, over thousands of years in many cultures the energy of slaves depended on the belief that some people are privileged to be slaveholders while others have no control over what is done with their lives, nor with their children's lives—a culture of absolute domination. Most of us no longer accept that culture, yet for thousands of years in most ancient and many feudal cultures it was taken for granted as the necessary foundation of civilization—and it was. The energy of slaves built many of the ancient monuments that are considered important examples of cultural heritage today.

The values that other energy sources bring with them may be less obvious, but they are no less pervasive. Identifying them requires a combination of empirical energy history with wide-ranging cultural studies, searching for the underlying assumptions about priorities that each energy source implies with an observation of its effects on the societies that have adopted it.

DISCUSSION

The mastery of fire was our earliest energy source. It facilitated not only a communal culture of the hearth but also made possible control of the flame in a concave stone lamp in which an animal oil that burned relatively smoke-free enabled our earliest artists to find their way through the darkness of the caves to create the cultural heritage sites of the Ice Age.

Another very early source of energy for *homo sapiens* was the discovery that cooperation made the use of our kinetic energy far more effective—both among women to make childbirth safer and among men who were poor hunters alone but who could become successful hunters and fishers if they collaborated. Almost certainly accompanied by the beginnings of languages that would originally have been distinctive for each collaborating group, cooperation as a source of increased energy efficiency necessitated a culture of collective identity—distinguishing those who were cooperating from ‘the others’. Cooperation also required leaders to decide not just where to hunt but how to distribute the temporary surplus that resulted from its success; as leaders increasingly took control, this collective identity was reinforced by religious beliefs that justified the social stratification that increasingly characterized each collective identity. Eventually these collective identities became kingdoms, empires and nations.

Cultural heritage was and remains the most visible sign of collective identity. When it is threatened or destroyed (such as the icons of other religions), its enemies intend to repudiate the collective identity of those who created that cultural heritage. But each energy source creates new bases for collective identity: coal created working class consciousness, whereas oil and gas resulted in the universalization of credit so that we all see ourselves and others today as consumers. The preservation of cultural heritage inevitably saves the visible evidence of some collective identities, while allowing others to perish.

Slavery was the default energy mode of the ancient world. The ability to amplify the energy of slaves through conquest or breeding made it unnecessary for most ancient societies to develop other energy sources. The ships that transported slaves and spices to market used wind energy in their sails. The high risk of their voyages created a culture of investment as the world’s first joint stock companies were formed in England and the Netherlands in the 17th century. It became possible to create comparable non-profit corporations to support cultural heritage preservation. Thomas Coram, for example, made his fortune as a slaver in colonial Boston before returning to 18th-century London where he was offended by the sight of newborn babies left to die on garbage heaps and established England’s first orphanage for the children of single mothers; since he could not count on the support of the aristocracy who suggested that such an institution might encourage promiscuity, Coram invented the endowment fund—a way for himself and others to support an institution not just once but over many years, even

after the death of the donor due to investment of the fund. Coram Fields was (and still is) in Bloomsbury where many hospitals and Britain's first entirely secular university were subsequently established with funds of this kind. The idea went back to America where it provides the core means of support for most cultural heritage institutions today.

The countries of Western Europe made super-profits from the slave trade, but they did not use it on a large scale at home. Keeping slaves warm through the winter would have worsened the perceived threat of deforestation, the world's first energy crisis. Serfs were expected to gather their own firewood, but only where the monarchs and nobles who owned and controlled the land would permit. So while the culture of investment and individualism that came with the high-risk world of sailing ships was invigorating many other aspects of cultural heritage, the threat of deforestation and the rapid increase of population due to improvements in agriculture made the threat of deforestation more and more urgent. Firewood and the charcoal made from it were the energy sources that had sustained the culture of private property as the sole source of wealth for a thousand years. Cultural heritage was private property in the age of wood, the Church and common lands excepted. The enclosure of the Commons privatized the last remaining source of firewood within reasonable access. Especially to feed the furnaces of the increasingly important fire crafts such as the smelting of iron it became necessary to resort to the underground forest— substituting coal for wood.

Coal required massive investment in infrastructure—digging and draining deep mines and building rail lines to get the coal to ships or to where it could be burned. Still more important, it required large numbers of men (and originally women and children too) to work together intensively, relying on each other for their very lives and having to exercise self-discipline on a scale never before conceived for human beings. To show investors sufficient profits and to achieve a surplus commensurate with the labour force involved, the cultural values of coal were focused on mass production and the mass market for the goods that steam-powered factories could produce. The distinction between high and low art was intensified around the difference between the culture of the investors and the class consciousness of the workers. As Karl Marx observed, everyone was now increasingly defined in relation to the culture of production. If cultural heritage stood in the way of production, it had to be sacrificed; and the sharpest distinction was made between the cultural heritage of those who owned the new means of production and that of those who toiled there. Yet for everyone, capitalist and proletarian alike, the work ethic was extolled and universal education was instituted not merely to ensure that workers were basically literate and numerate, but also to inculcate the self-discipline that was necessary to achieve the requisite high levels of production. Despite the long hours of exploitation, even for children, the textile mill hands and other factory workers profited from the availability of the mass-produced commodities that had never been available before.

The aesthetics of this period are often characterized as a Romantic rejection of the culture of production and the work ethic. In fact, there were two strains of romanticism, one that was deeply engaged in the revolutionary changes that necessarily accompanied this complete change in the way human beings relate to each other (think of Delacroix, Dickens or Victor Hugo) and the other that was nostalgic for traditional values that were being trampled in the rush for production. The nostalgic trend resulted in the serious beginnings of cultural heritage restoration, even if today we cannot share the assumptions on which much of the restoration was done.

Electrification is not technically an energy source, but an application of energy, the source of which may be hydro-electric power, coal, oil, gas or nuclear. However, its culture of transformation has been decisive in changing the world we live in today. Thomas Edison's perfection of the first commercially available light bulb changed night into day—and if we could do that, what couldn't we change. The successive waves of change due to electrification—the transformation of kitchens as well as factories so that the role of women could change substantially, the provision of new media for education and entertainment that have completely changed our awareness of ourselves and others around the world, the ability to control the climate with air-conditioning and most recently the digital revolution have all assured us over the past 135 years that we can change our lives and our societies for the better. As a result, for the first time in human history during the 20th century millions and millions of people believed in and were ready to die for movements of total transformation—political, social and cultural. International modernism was the aesthetic expression of the culture of transformation that electrification inspired.

In the 1960s, the high point of the culture of transformation, Che Guevara rhetorically suggested that each of these movements aspired to create a 'new man.' At the end of the last century, French philosopher Alain Badiou observed that in order to make way for this 'new man' the old man had to be eliminated, with the result that the 20th century was necessarily an extremely violent one. International modernism and other transformation movements impatiently swept much of the previous cultural heritage aside.

During the 1950s and early '60s much Victorian and Edwardian cultural heritage especially was destroyed. Ironically, many of the monuments of modernism are the ones that most require preservation today.

Much of the colonial heritage of Singapore -- the shop houses and the go-downs - were being destroyed as late as the 1980s because Singapore - a country that gained its independence in 1965 - was striving to create "new men and women" who were not downtrodden colonials but active citizens of a modern state. As a museum planner in Singapore in the 1990s one of my principal challenges was to persuade the government that it was worth preserving the vernacular architecture of their colonial period - which they did so effectively that a group of museum professionals visiting from elsewhere in Southeast Asia a few years later were delighted to see the extent to which Singapore was preserving its architectural heritage as an attraction in the oil age. A similar scenario is happening in developing countries worldwide today.

Oil and natural gas are knowledge industries that do not require large numbers of men to work together on extraction. Once a well is sunk and a pipeline is connected, there is no ongoing daily work required as there is for coal. The culture of oil and gas shifts the value nexus to the other end of the energy transaction—to its consumption. The automotive industry generated the universalization of credit when Henry Ford enabled his customers to buy cars on time, and confirmed it in the early 1960s when oil was becoming the world's dominant energy source by inventing the credit card, which was first used to pay for gasoline in petrol stations before being adopted by the rest of the commercial world. Brands are the primary visual manifestation of the culture of consumption that came to us with oil and gas. Its impact on cultural heritage is to encourage everyone to see themselves as consumers of cultural heritage experiences, which has facilitated the creation of cultural heritage attractions, often with limited regard for authenticity.

Yet credit is all about future expectations (by both debtor and creditor) of sustaining one's ability to pay. So the culture of consumption is much more concerned about the future than were the cultures of the two preceding modern energy sources. So consciousness of the effects of industrialization on the environment characterizes the oil and gas culture, not the coal culture from which the pollution originated. Similarly, the culture of consumption has actually fostered far more concern for the preservation of cultural heritage for the future than did the coal culture of production or the culture of transformation that accompanied electrification. Hence Margaret Thatcher, a powerful advocate of the culture of consumption ("There is no such thing as society", she said), made Britain's museums responsible for their own financial management, giving them the right to use self-generated profits and sponsorships directly. On both sides of the Atlantic, throughout Europe and increasingly in Asia as well the model of mixed public and private funding for cultural heritage preservation prevails.

All these challenges to our fundamental cultural values—including our personal and collective identities—have caused anxiety, a culture which is embodied in nuclear energy, the only energy source since fire that first came to us as a weapon, and remains a subject of acute concern as to its short- and long-term safety. The 'security' industry is the mirror image of this culture of anxiety. Security cameras teach us that we are all potential victims. One of the many causes of anxiety today is concern about the loss of cultural heritage.

Renewable energy is the current cutting edge, bringing with it a culture of stewardship of the earth. Whether solar or wind power, geothermal or biomass, these alternative energy sources with their culture of stewardship are most favourable to preservation of both natural and cultural heritage. Sustainability is one of the chief values of all forms of renewable energy. Earlier presentations of this alternative tended to stress the need for conserving energy usage, and therefore implied a return to conditions of scarcity. Others however have claimed that it may be possible to construct a future of abundance if intelligent uses of natural energy sources are developed as fully as possible. Storage of energy and storage of data are two preoccupations of renewable energy and the culture of stewardship.

Although the culture of stewardship that accompanies renewable energy clearly favours cultural heritage preservation, at least one contradiction has thus far been observed: requirements for control of Relative Humidity aimed at reducing fluctuation to a minimum around 50%RH require a substantial commitment of energy. Museums are energy-intensive institutions for this reason. Recent moves to loosen standards of environmental controls are partly in response to this high-energy implication. Time will tell whether the culture of stewardship can reconcile its goal of cultural heritage preservation with its aspiration to reduce energy usage.

CONCLUDING COMMENTS

This is a unique moment in the history of human usage of sources of energy. Never before have we had such a wide array of disparate energy sources to choose from. All previous sources (unfortunately including slavery) remain in place, as do the cultural values that come with them. Especially due to 'fracking', oil and natural gas remain the dominant sources of energy worldwide, although coal-fired electrical power plants mean that coal is still a significant factor. The culture of consumption that is

associated with oil and gas is the dominant culture within which we are living and working, which means that the appreciation and exploitation of cultural heritage as a consumable experience remains primary. However, the incoming cutting-edge values of the culture of stewardship have put sustainability— environmental, financial, social and even cultural sustainability—firmly on the agenda. The California Academy of Science with its green roof is one measure of how far we have come at present. But a wide range of programs are being developed to reduce energy usage and convert to renewable energy where possible. The third edition of *The Manual of Museum Planning* that I co-edited with my wife and partner Gail Lord and Principal Consultant Lindsay Martin of Lord Cultural Resources included a chapter dedicated to sustainability, but in fact the theme recurs constantly throughout the 670 pages. It appears certain that the cutting edge culture of stewardship will grow steadily sharper as renewable energy continues to increase users and decrease prices. Meanwhile sensitivity to the cultural values that accompany our energy choices and a fully informed appreciation of the multiple choices available suggests that it should be possible to see a steadily increasing concern with the sustainability of cultural heritage facilities over the coming decades.

REFERENCES

Art & Energy, the forthcoming volume on which this text is based, includes a bibliography with approximately 165 references to texts on the history of energy, cultural change, archaeology, anthropology and art history. The complete document is available upon request.

BIOGRAPHY

Barry Lord is Co-President of Lord Cultural Resources, the world's leading firm specialized in the planning of cultural institutions and programs. Canadian-born, Barry initially studied Philosophy at McMaster University before undertaking graduate work in the History and Philosophy of Religion at Harvard. He has taught art history and museology in both Anglophone and Francophone universities in Canada and served as Curator, Director and Chief of Education Services for various Canadian museums before founding the company with his wife and partner Gail. He has directed hundreds of the company's two thousand planning and management assignments for museums in over 50 countries around the world. Gail and Barry together have co-authored or co-edited a series of five Manuals published by AltaMira Press in the United States, including *The Manual of Museum Planning* (3rd edition, 2012), *The Manual of Museum Exhibitions* (2003) and *The Manual of Museum Management* (2nd edition, 2009). In 2010, they wrote *Artists, Patrons and the Public: Why Culture Changes* (also published by AltaMira), in which the chapter on Art and the Environment anticipates the themes of this forthcoming book, *Art & Energy*.

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