

THE INEXORABILITY OF CHANGE. THE IMPORTANCE OF PRESERVING HISTORIC STREET LAMPS IN LISBON'S 21ST CENTURY URBAN LANDSCAPE.

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ABSTRACT

The purpose of this paper is to illustrate the importance and significance of historic street lamps in Lisbon's heritage, and suggest that the preservation and conservation of these notable elements, far from being a burden in economic, environmental and social terms, can be a critical vehicle to make our cultural heritage tangible to future generations and, thus contribute to the sustainable development of the city. This paper is not intended to be an exhaustive discussion of economic and environmental sustainability criteria, such as to proof of energy savings and subsequently cost reductions through new outdoor lighting concepts. Rather it is hoped to be an approach of looking to our heritage and see the importance of the preservation of early streetlamps as a way to contribute to long-term sustainability of cities and also as way to increase, recover and secure knowledge which otherwise may be lost.

RESUMEN

El propósito de este artículo es ilustrar la importancia y el significado histórico de las farolas en el patrimonio de Lisboa, y sugiere que la preservación y conservación de estos importantes elementos, lejos de ser una carga en la vida económica, social y medioambiental, puede ser un vehículo para hacer nuestro patrimonio cultural tangible para las generaciones futuras y, por tanto, contribuir al desarrollo sostenible de la ciudad. Este documento no pretende ser una exhaustiva discusión de los derechos económicos y los criterios de sostenibilidad ambiental, como la prueba de ahorro de energía y, posteriormente, la reducción de los costes a través de nuevos conceptos de iluminación al aire libre. Sino que más bien se espera un enfoque de mirar nuestro patrimonio y ver la importancia de la preservación de las primeras farolas como una forma de contribuir a la sostenibilidad a largo plazo de las ciudades y también como manera de aumentar, recuperar y garantizar los conocimientos que de otro modo podrían perderse.

Keywords: preservation, historic streetlamps, sustainable development.

Preservation - the activity of protecting something from loss or danger; an occurrence of improvement by virtue of preventing loss or injury or other change.

Historic - of what is important or famous in the past; belonging to the past; important in history.

Sustainable - to maintain; to keep alive; to support; to subsist; to nourish².

INTRODUCTION

“The quality of life of all people depends on the physical conditions and spatial characteristics [of society]... Conservation, rehabilitation and culturally sensitive adaptive re-use of urban, rural and architectural heritage are also in accordance with the sustainable use of natural and human-made resources” (Habitat Agenda, 1996)³

Why worry about preservation and conservation of monuments, historic urban centres and old street lamps when people are starving and dying because of unjustifiable wars, terrible diseases and lack of fundamental rights? Heritage issues are regarded as mainly a concern of the economically developed world, since derelict structures and environments are related with backwardness and poverty and seen as barriers to the desired modern development. But preservation of past is, nowadays, more than just old impressive buildings. And even if the preservation and conservation of distinctive historic environments, cultures and traditions should be justified on its own merits, as a universal value in itself, it may actually also play a significant role in promoting sustainable environmental, economic and social development.

According to United Nations Population Fund 2007 report by next year, more than half the world's population, or about 3.3 billion people, will live in towns and cities, a number expected to swell to almost 5 billion by 2030. Therefore *“the future of humanity itself, all depend very much on decisions made now in preparation for this growth” (UNPFA, 2007)⁴*. And these decisions also run through how we will preserve our urban cultural heritage since it provides citizens with landmarks that reinforce their social bonds and their sense of belonging and identity.

BACKGROUND

The work done in the last two years – Study of the Foundation and Evolution of Public Lighting in the city of Lisbon: 1755-1928 – established the importance of public lighting and streetlamps on Lisbon's character

and history. One of the objectives of that work was to understand the genesis and development of streetlamps, as objects that characterize and distinguish the urban landscape, as objects that reflect in its origin, the social movements and the urban thinking of each epoch, as objects that had an important role within mental paradigms of each historical moment.

Public lighting had a huge impact in Lisbon's character. It took a definitive role in Lisbon's landscape definition – it became a symbol – both on a level of its urban and architectonic dimension, as also in its aesthetic perspective and its historical, social and cultural vision. Nowadays, the so called “lanterna portuguesa” make part of our city identity. But does this kind of streetlamps contribute to the sustainable development of the city? It is known that old fixtures are based on energy inefficient lighting systems that consume a lot of energy. That they are not conform basic energy efficiency requirements that should be better than current-day high pressure mercury vapour lamps and open optical systems. So, in order to contribute to the sustainability of a place they should be converted. Their conversion can be done in three ways: by replacing the high pressure mercury vapour lamp in old luminaries by a retrofit HP sodium lamp; by changing the ballast and lamp in the same luminaries; or by replacing the luminaries by new ones for an energy efficient, tubular, clear lamp. According to several European studies⁶ only the last solution can provide a significant saving in energetic terms.

This paper addresses other factors of sustainable development (besides purely energetic requirements) and suggests that the preservation of these notable elements, far from being a burden in environmental, economic and social terms, can be a critical vehicle to make our cultural heritage tangible to future generations and, thus contribute to the sustainable development of the city.



PRESERVING THE PAST

The call for preserving the past is centuries old, with many civilisations maintaining artefacts from the past for future generations. The Greek marble temples preserved in stone the old architectural forms that had been present in their earlier wooden temples. The Japanese temples have survived for long time due to careful replacement of worn-out parts. But conscious ongoing interventions by governments, individuals

and organisations are more recent (Jamieson and Buchik, 1988)⁷. In general, the preservation and conservation activity began with a concern with the protection of individual monuments and imposing buildings, that is to say, with the protection of isolated examples of history, converting many buildings into museums and isolating them from its surroundings. But in the 1950's the arguments for monuments preservation shifted from a mainly symbolic and artistic point of view to a broader argumentation for protection of our cultural heritage. Since the 1960's, that the monuments and sites which symbolized the historical conditions concerning ordinary people, gained equal importance as sources of knowledge and experience, as cathedrals and castles.

The modern interest for the preservation of the past is indebted to certain key developments in the Western culture, characterized by the relativity of values and the introduction of the modern concept of historicity as related to specific cultures (Jokilehto, 1998)⁸. The two world wars have forced the protection and preservation movement to touch practically all regions of the globe, as shown by the success of the 1972 UNESCO (United Nations Educational, Scientific, and Cultural Organization) *Convention for the Protection of the World Cultural and Natural Heritage*. The establishment of UNESCO and ICOM (International Council of Museums) at the end of World War II, ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property) in 1956, and ICOMOS (International Council on Monuments and Sites) in 1965 have promoted international collaboration and guiding principles applicable to diverse realities. These movements also took advantage of the 1960's and 70's developing point of views based on environmental psychology with its social evaluations and considerations of the economical benefits. The Brundtland report in 1987 and the UNCED Rio Conference in 1992 confirmed that the preservation of cultural identity of cities was an important aspect within the sustainable development of cities as a whole.

The different views on which parts of our cultural heritage are most worth preserving were and are associated to both political and technical priorities. Today, the focus on the preservation and conservation of integrated cultural environments, monuments and sites that tell something about ordinary people's lives and activities, depend also on political and technical issues, but with a huge difference from the past, that is the interest and participation of the community within the all process and an easier and simply access to relevant data (mainly through media and internet) concerning these subjects.

HOW DOES HISTORIC PRESERVATION CONTRIBUTE TO URBAN SUSTAINABLE DEVELOPMENT?

Nowadays there are several movements and organizations concerned with sustainable development, that want to stop building endless sprawl and start building better cities. They all have different names for it – *New Urbanism, Smart Growth, New Community Design, Neotraditional Design, Traditional Neighbourhood Development, Location Efficient Development, Transit Oriented Development*, etc – but, in general, they have the same final objectives and principles. These are: mixed use, compact development, pedestrian friendly/walkability, community interaction, connectivity, street design, sense of place and so on. But if we take a glance at our historic areas we can actually find this list of principles within its system. However the paradox is that most of these organizations do not evoke “historic preservation” as a principle by itself.

Nevertheless, we can assist throughout the world, cities centres reclaiming their historic roles as the multifunctional, alive, heart of the city. Moreover, in almost all historical centres revitalizations, historic preservation was a key component on the renewal strategy (Rypkema, 2005)⁹. Therefore along with the myriad of centenarian buildings and impressive environments that one can find in historic places, there is an innumerable of meaningful and historic urban elements that are rich and diversified ingredients of cities legacy. These elements commonly called “street furniture” or “urban furniture”, take part of citizen's memory and affinity of the place and should, therefore, be preserved. Moreover, Remesar *et al* (2004)¹⁰ argues that some of these objects with historical value can exceed its purely functional dimension to become into “public art pieces”.

In Lisbon one of the urban elements that has transformed significantly de city environment was the appearance of public street lighting. The furtherance of the daylight through the artificial light of the lamps definitively changed the habits of the inhabitants of Lisbon. These elements became a reference within the urban landscape and a new urban culture arose with them (Braga, 1995)¹¹. Streetlamps became structural items of Lisbon's cityscape and are actually testimonies of social and cultural customs of different periods, and an evidence of past aesthetic and culture.

At the present time the importance and significance of historical street lamps in Lisbon's heritage is paramount, and can be a critical vehicle to make our cultural heritage tangible to future generations. But



how can preservation and conservation of historical street lamps contribute to the numerous responsibility components of sustainable development?

The Brundtland Commission has formulated the term that has become the most often-quoted definition of sustainable development as the development that “meets the needs of the present without compromising the ability of future generations to meet their own needs.”¹² This characterization includes **environmental, economic and social responsibilities** and presumes that development takes place without depletion of the resource base of society. So, the whole purpose of sustainable development is to keep what is important, valuable and significant. Therefore we need to use our cities and our historic resources in a manner that they are available to meet the needs of future generations as well (Rypkema, 2005).

Environmental Responsibility

First we have the concept of *Embodied Energy*. Embodied energy refers to the quantity of energy required to manufacture, and supply to the point of use, a product, material or service. It is a

methodology that aims to find the sum total of the energy necessary - from the raw material extraction, to transport, manufacturing, assembly, installation as well as the capital and other costs of a specific material - to produce a service or product and finally its disassembly, deconstruction and/or decomposition (Wikipedia, 2007)¹³.

Basically, this means all the energy required to make an object, such as a cast iron lamppost. Shortly, this includes the energy to extract the iron, transport it to industry, make the pattern (the original template from which the mould is prepared), make a mould of the pole, fill it with liquid metal, solidify the metal, remove it from the mould and cut the excess metal, make the necessary finishing coatings, transport it to the place and put the lamppost into position. It also includes all the indirect energy required, i.e., all the energy required to manufacture the equipment and materials needed to manufacture a lamppost, e.g. trucks, furnace, mining equipment, etc. All have a proportion of their energy invested in that lamppost.

As a result, when we substitute historic streetlamps with modern ones, we are throwing away the embodied energy incorporated into them. And sometimes we are replacing it with streetlamps whose materials are more energy consumptive, like plastic or aluminium that are among the most energy consumptive of materials. Additionally, recurring embodied energy savings increase dramatically as a building life stretches over fifty years (Rypkema, 2005). The Association for Preservation Technology International states that “the energy embedded in an existing building can be 30% of the embedded energy of maintenance and

operations for the entire life of the building. Sustainability begins with preservation” (cited in Coons, 2006)¹⁴. Jennifer Buddenborg (2006)¹⁵ explains, “At a time of rapid resource depletion and world population growth historic preservation rests at a pivotal point in the advancement of sustainable development and design. Historic preservation is inherently sustainable”. The World Bank, whose mission is to end world poverty, also recognizes the role that historic preservation plays in a sustainable society. They specifically relate the concept of embodied energy with historic buildings stating that “... the key economic reason for the cultural patrimony case is that a vast body of valuable assets, for which sunk costs have already been paid by prior generations, is available. It is a waste to overlook such assets.” (World Bank, 2001)¹⁶

Economic Responsibility

Besides environmental responsibility another component of the sustainable development field is economic responsibility. And within this area, heritage tourism has a great impact on historic preservation. According to Rypkema (2005) “heritage visitors stay longer, visit twice as many places, and on a per trip basis spend 2 ½ times as much money as other visitors. Wherever heritage tourism has been evaluated this basic tendency is observed: heritage visitors stay longer, spend more per day and, therefore, have a significantly greater per trip economic impact”.

The impact of streetlamps in the character and image of historic places is notorious. Cities like New York or Vienna that have passed through re-qualifications and renewals of heritage areas placed faithful copies of historic lampposts in their new projects. Others cities employ lampposts that resemble the historic ones but are actually a new design. One can agree or not with this design options¹⁷, but the important issue to retain, is their option to maintain the heritage atmosphere of places. In other words these cities do not want to break with the formal aesthetic of past lampposts as they think it will affect the overall heritage environment.

Social Responsibility

The third factor of the sustainable development field is social responsibility. Over the last years, the arrival of considerable groups of foreign immigrants leads to profound transformations within Portuguese society. Portuguese cities are now very diverse places where it is possible to encounter people of many different races, nationalities, cultures, languages and religions. But at a neighbourhood level they are not diverse at all. Many neighbourhoods are all white or all black, all rich or all poor, but the exception is in historic neighbourhoods. There we can find rich and poor, Russian, Croatian, Slovenian and African people, university educated and high school failure, living in closer proximity. This is social integration and cultural diversity that should be maintained and sprawled to other places of the city.

FINAL REMARKS

“Heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage are both irreplaceable sources of life and inspiration (UNESCO World Heritage Centre)¹⁸.

When we think in a city, we reflect of something significant to us personally. Urban furniture is one of the things that identify a city. Moreover a city can be recognized by its street furniture when an affective, sentimental and durable relationship is established between its citizens and the objects placed within public space. Urban furniture can lend a city its identity, making it recognizable to people: Britain’s telephone booths, Paris’ metro entrances, New York’s industrial paper containers, Portuguese’s tile pavement of black cobble stone, modernist lamps and benches of Barcelona, are examples of objects that identify each city. This appropriation of urban furniture by the population, when it happens, should be preserved because it facilitates their comprehension and enriches the collective memory.

But if we take away our memory none of these things will be significant to us. What would happen if we took off all the historic streetlamps from Lisbon’s historical centre like Baixa or Chiado? It will lose its significance and meaning. As stated by Rypkema (2005) “Without memory nothing has significance, nothing has meaning, nothing has value”. We acquire memories from images, sounds, conversations, flavours, odours, etc. Italo Calvino in his book *Invisible Cities* discusses memory and its relationship to a place. Calvino¹⁹ says “The city, however, does not tell its past, but contains it like the lines of a hand, written in the corners of the streets,

the gratings of the windows, the banisters of the steps, the antennae of the lightning rods, the poles of the flags, every segment marked in turn with scratches, indentations, scrolls.”

A city can tell its own past through the fabric of the built environment, through its urban elements, through every single piece of its ground. Everything historic is the physical manifestation of memory and “it is memory that makes places significant” (Rypkema, 2005). As we can see, a city can be also defined through memory. Cities and memory are interconnected just as people are linked with memories and memories with objects. Objects in turn can define places. Furthermore sometimes it is objects that bring knowledge about places that have already disappeared. And likewise, objects can define people: reflect their past existences, with their own social and cultural customs, with their own aesthetics and essence of living, with their own uniqueness.

Therefore, historic preservation of significant urban elements like our streetlamps might help to protect continuity of the cityscape over generations and provide a link to the past. It might contribute to the reinforcement of citizen’s sense of place. Nevertheless, the judgment to preserve streetlamps must be decided with cautious and in a holistic way. These elements should not be preserved at the price of stifling innovation. Remesar *et al*²⁰ argues that “*design and novelty*” are characteristics of objects that are capable of creating symbolic value, and consequently economic value. Indeed, the idea of uniformity in our street furniture is relatively modern. A typical view of a street corner in the 1920’s might show an old gas fixture near a *modern* electric streetlamp, some only a few feet away from one another. Moreover, the 19th and 20th centuries were remarkable by the experimentalism and innovation on street furniture. In fact public lighting was an arena of technical experimentation with a great ability to bring innovation in both materials and design. Therefore 21st century should continue this modernization spirit of the past, but if the aim is to maintain historical streetlamps within historical places, then it is better to preserve the original ones. They preserve the spirit and uniqueness of its age that one can experience not merely intellectual, but sensory and emotional. They speak eloquently of those who created and used them before. They are testimony of past cultures and aesthetics. They possess the effects of time upon them. They provide references to the past, which people need in order to deal both with the present and the future. They indeed, can make the difference in our irrational world.

NOTES

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² Webster’s Revised Unabridged Dictionary (1913) and WordNet (r) 1.7 in <http://dict.die.net> (12 July 2007).

³ The Habitat Agenda. The Istanbul Declaration on Human Settlements, 1996, art. 30 & 152.

⁴ UNFPA state of world population 2007. *Unleashing the Potential of Urban Growth*. http://www.unfpa.org/swp/2007/presskit/pdf/sowp2007_eng.pdf (10 July 2007).

⁵ Translation: “Portuguese lantern”

⁶ See www.eup4light.net that has the purpose to publicise the findings from EC projects related to the Eco-design directive on energy using products (EuP) for street lighting (lot 9), office lighting (lot 8) and domestic lighting (lot 19).

⁷ Jamieson, W., Buchik, P. (1988) Training in Historic Resource Management: The Development of an Approach for Western Canada *APT Bulletin*, Vol. 20, No. 1 (1988), pp. 50-61.

⁸ Jokilehto, J. (1988). *International Trends in Historic Preservation: From Ancient Monuments to Living Cultures*. *APT Bulletin*, Vol. 29, No. 3/4, Thirtieth-Anniversary Issue (1998), pp. 17-19.

⁹ Rypkema, D. (2005). *Economics, Sustainability, and Historic Preservation*. National Trust Conference Portland, Oregon. October 1, 2005. <http://www.ptvermont.org/rypkema.htm> (10 July 2007)

¹⁰ Remesar, A., Lecea, I., Grandas, C. (2004). La Fuente de las Tres Gracias in Barcelona. *On the Waterfronts*. Polis Research Centre. Universitat de Barcelona. Ajuntament de Barcelona

¹¹ Braga, P. B., (1995). *Mobiliário Urbano de Lisboa : 1838-1938*. Dissertação para a obtenção do grau de Mestre no Mestrado em História da Arte Contemporânea da Universidade Nova de Lisboa.

¹² United Nations (1987). *Report of the World Commission on Environment and Development*. General Assembly Resolution 42/187, 11 December 1987. Retrieved: 2007-04-12.

¹³ http://en.wikipedia.org/wiki/Embodied_energy (10 July 2007).

¹⁴ Coons, A. (2006). *Reflections* Quarterly Newsletter. Summer 2006 - Volume 37, Issue 3. Historic Preservation. The Greenest of Conservation Solutions.

¹⁵ Buddenborg, J. (2006). Changing Mindsets: Sustainable Design in Historic Preservation. <http://hdl.handle.net/1813/3388>.

¹⁶ Orientations In Development Series. Cultural Heritage and Development. A Framework for Action in the Middle East and North Africa. The World Bank Middle East and North Africa Region June 2001. http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2001/08/04/000094946_01072504014633/Rendered/INDEX/multi0page.txt (10 July 2007).

¹⁷ See the article from Ignasi de Lecea: *Mobiliário Urbano. Entre la globalización y la identidad* on *Waterfronts* Nr, 8, April, 2006. Here he refers three attitudes regarding street furniture design: the first advocate restoration of 19th century designs, the second support specific street furniture design for each project (as making part of the overall environment) and the last tells that Municipalities should assume the role of promoters of new designs.

¹⁸ <http://whc.unesco.org/en/about/> (2 July 2007)

¹⁹ Calvino, I. (2003). *As Cidades Invisíveis*. Editorial Teorema. Coleção Estórias, n° 53. Tradução de José Colaço Barreiros.

²⁰ Remesar *et al* (2005). *Do Projecto ao Objecto*. Manual de Boas Práticas de Mobiliário Urbano em Centros Históricos. Centro Português de Design. 2ª Edição. Lisboa, 2005.