

ENGLISH ABSTRACTS

GREECE AT THE PARIS UNIVERSAL EXHIBITION OF 1878

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This article deals with Greece's participation in the Universal Fair held in Paris in 1878. After giving a general view of Greece's participation in this event and the various reactions that it generated, especially abroad, we shall focus on two specific documents that encapsulated the goals the Greek state was pursuing through its involvement in the Paris Fair. By focusing on this "local" event, the authors seek to participate in more general debates revolving around the modern nation-building process. During the 19th century, nations were crafted in a transnational arena. They were forged against a backdrop of many types of circulation (of people, ideas, institutions and artifacts). They were also constructed by comparing themselves to one another, and technological achievements were an essential part of the comparison process. The participation of Greece in the Paris Universal Exhibition provides a good illustration of these two above-mentioned processes (circulation and comparison) that participated in the forging of modern nations.

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THE SCIENCE OF ARCHITECTURE REPRESENTATIONS OF PORTUGUESE NATIONAL ARCHITECTURE IN THE 19TH CENTURY WORLD EXHIBITIONS: ARCHETYPES, MODELS AND IMAGES

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In the second half of the 19th century, influenced by the positivist philosophy, the Portuguese architectonic theory and culture established a determinist connexion between the historic and territorial specificities of the nations and the formal singularities of the national architectures: a building was seen as a organic structure created by the specific social, moral and physical char-

acteristics of a given environment.

This connexion led to the recognition of the national architectonic archetypes in the monuments of the past and allowed to explain scientifically the formation of those archetypes. The world exhibitions were privileged displays for the affirmation and advertisement of these national architectonic archetypes. Portugal did it by erecting pavilions with an architecture inspired in its more representative historic monuments.

INVENTING A MODERN PARIS THE DYNAMIC RELATIONSHIP BETWEEN EXPOSITIONS, URBAN DEVELOPMENT AND MUSEUMS

Miriam R. Levin

Between 1855 and 1900, Paris was the site of five major expositions. These temporary agglomerations of stuff not only served to showcase scientific and technological innovations. They were stimuli to the embedding of science and technology in the fabric of modern life on a long-term basis. They not only altered the development of the city, but helped through the design and content of exhibits to restructure time and space.

This paper explores some of the ways in which this dynamic played out in the Parisian context, focusing on the expositions of 1889 and 1900.

THE 19TH CENTURY WORLD'S EXHIBITIONS AND THEIR PHOTOGRAPHIC MEMORIES BETWEEN HISTORICISM, EXOTICISM AND INNOVATION IN ARCHITECTURE

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The series of World Exhibitions that occurred in the second half of the 19th century was essential to the dissemination and popularization of technical advances. The photography, one of the novelties, played a precise and fundamental role right from the beginning: the first world exhibition held in London in 1851 at the Crystal Palace, gave great visibility to photographic practices through the exhibition of this new technique, as well as through photographic surveys of the exhibition itself. Furthermore, photographic techniques allowed the presentation of images from several countries, thus introducing new landscapes, people and artistic culture. This paper aims to analyse how the photography and the photographers - both the anonymous as well as the well known, like Aurélio da Paz dos Reis, one of the photography and cinema pioneers' in Portugal - contributed on one hand to the display of Portugal in the World Exhibitions and, on the other hand to the dissemination of the images of World Exhibitions through newspapers and magazines. A special attention will be given to the Portugal's pavilions. Since the World Exhibition of 1867, Paris materialized a new kind of exposition where the National Pavilions, became one of the most important attraction to the visitors. These pavilions offered the idea of a *world museum* and simultaneously, introduced new references for the architects of eclecticism, to whom the exhibitions were places for manipulation and experimentation. On a whole the pavilions were designed following models of national architecture likely to be easily recognized abroad. Such is the case of the Portuguese Pavilions and this paper analysis how Portugal with its evocative imagery of the discoveries give an image of wealth and exoticism, associable to the mythical times of glory of former Portuguese Empire.

WORLD EXHIBITIONS: A GATEWAY TO NON-EUROPEAN CULTURES?

Christiane Demeulenaere-Douyère

The universal and international exhibitions were not only fêtes for trade and technology. They have focused the nation's attention around the world who wished to participate and thus allowed their millions of visitors to discover through their presence and their flags, distant horizons and often exotic... Moreover, the need to invest in these events led the organizers to increase the "attractions" that would appeal the public and attract numerous visitors, changing the exhibitions in magnificent "dream machines".

Many conditions were gathered for the fact that "display" fits into the process of "revelation" of non-European cultures: public taste, formed in Orientalism; the establishment of a French colonial empire that was to promote the views; the development of anthropology and ethnology accessing the status of scientific disciplines... For this "revelation", the exhibitions have played an increase role.

But it also shows that some of these remote countries, long folded in on themselves but open in the late nineteenth century, such as the Far East (Japan, Korea, Cambodia, China) were able to express their culture and their artistic productions, and the lasting influence Western art (Japanese).

Moments of shared history between the West and exotic worlds, exhibitions have helped shape the Western gaze on the world and the otherness, even if the light appears as marked by its time and very "European-centred". But they were also occasions of mutual discovery and sharing of cultures, including the artistic, because they consist of "gateways" for cultures that was a strong influence on Western art movements.

ITALIAN WORKERS AND THE UNIVERSAL EXHIBITIONS OF THE 19TH CENTURY IMAGINARIES AND REPRESENTATIONS OF TECHNOLOGY AND SCIENCE

Ana Pellegrino

This article aims to analyze the reports written by Italian workers during their visits to the World Expositions of the Nineteenth century. The stories of the workers express at the same time the astonishment and the enthusiasm face to face with the latest “wonders” of progress. The relationship with technology and with the machines is one of the most recurrent topics in the accounts of workers. The new machines and new technologies are described with metaphors that range from the mysterious to the fantastic, as “fairies” or as “monstrous devices”. On the one hand, technology has a spectacular value in itself and it summarises the essential values of the idea of progress. It is the pivotal subject of the message conveyed by the exhibitions, and the workers are very interested to this subject. In their writings, they express, in a naive and innocent way, their amazement for the phantasmagoric demiurgic strength of technology, especially when she appears as a direct expression of the science. Electrical energy may be considered as an emblematic case in this regard, as it only becomes visible through technological applications. Through the spectacular play of lights arranged for the Exhibition, electricity comes to represent the triumph of science and takes on a metaphorical value. Indeed, it personifies the deepest values and the most typical ideas of progress itself. On the other hand, the Exhibitions are the place where workers’ professional profile is greatly undermined. The reactions are numerous and varied, but rarely take the form of an uncritical acceptance or a radical opposition. By far, the most common reaction is a cautious and critical approval, accepting the dominant message of positivity and strength of the technology and the inevitability of scientific and technical progress, but at the same time strongly suggesting the theme of the preservation and protection of workers’ prerogatives.

PORTUGAL AND THE 1876 SOUTH KENSINGTON INSTRUMENT EXHIBITION

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Universal exhibitions were a privileged forum for countries either to confirm or to improve their international standing. Exhibitions also allowed visitors to overview different national developments and reinforce prejudices by contrasting the leaders artistic, scientific and technological achievements with those of lesser industrialised nations. Paralleling these colossal events smaller thematic and/or local exhibitions took place.

In 1875 the Committee of the British Council on Education approved an exhibition of apparatus for teaching and for investigation as well as those possessing historic interest. Although the event was not a Universal Exhibition it was planned as an international affair to allow “those interested in education an opportunity of seeing what was being done by other countries”. Portugal was one of the countries invited to participate in the exhibition entitled Special Loan Collection of Scientific Apparatus in spite of its poor 19th century scientific and technological track record, as recognised, amongst others, by the country elite. In response two instruments were sent to South Kensington, London in 1876 and António dos Santos Viegas (1837-1914), a Coimbra University professor, and João Carlos de Brito Capello (1831–1901), the director of the Lisbon D. Luiz Meteorological observatory, were commissioned to visit the exhibition and report to the government.

In this paper we try to understand the reasons behind the Portuguese lack-luster participation. In particular, we discuss a possible impact of the almost simultaneous occurrence of the 1876 Philadelphia Centennial International Exhibition. We conclude an early misunderstanding of the true scope of the exhibition and the separation of the national higher and technical instruction establishments between two different government departments hindered the Portuguese.

THE THOUSAND AND ONE NIGHTS OF PARIS: AN INDIAN TRAVELLER AT THE 1867 UNIVERSAL EXHIBITION

Filipa Lowndes Vicente

In 1867 the Goan historian and physician José Gerson da Cunha went to the Parisian Exposition Universelle and wrote an article on his experiences in a popular Portuguese language Goan newspaper. He had left Goa, the main Asian Portuguese colony, as a young man in order to study medicine in Bombay and then in Edinburgh and London, within the usual circuits of medical education taken by many men who came from the British colonies. But still it was with the Goan intelligentsia that he wanted to communicate through his personal narrative of his European journey, on the return to India after having concluded his studies. In this article we will analyze his approach to the visual and ideological discourses displayed by the exhibition in accordance with the widespread tradition of writing on exhibitions during the second half of the 19th century. Gerson da Cunha comes from India, but as a Goan, a place that by this period had been a Portuguese colony for many centuries, he was also educated within an European culture. This can help to understand the easiness with which he embraces and identifies with the values of progress and modernity promoted by the exhibition, that he describes as a site for *A Thousand and One Nights*, the title of the book that by this time already served to describe anything that was related to the East or the exotic.

THE COMMERCIAL PORT OF ARROYO PAREJA. A FRENCH PERFORMANCE IN THE ARGENTINE OF THE EARLY TWENTIEH CENTURY

Gustavo Chalier

At the beginning of the 20th Century, the French investments in the Blanca

bay were centered on a huge project based on both railway and port. Its fundamental idea was the construction of a commercial port of deep water in the Pareja creek, near the city of Punta Alta. Several factors (benefits overestimation, technical difficulties, and above all, the competition with the British monopoly which was established in Bahía Blanca previously) culminated in the erosion of the construction project of an economic space which was an alternative to the one outlined by the English capital.

EARLY JAPANESE LEYDEN JARS AND AIR PUMPS

Stanislav Južnič

The Japanese introduced vacuum technology and Leyden jar research in *rangaku* times, probably somewhat easier compared to China. The main reason is that at least the Leyden jar was essentially Dutch Discovery and the Dutch were the main sources for early modern Japanese technology and science between the years 1639 and 1720. The Japanese probably did not invent any new electrical equipment during the 18th century, but they used the Leyden jar and electrostatic generator in the same box as unique tool called *erekiteru*, which was not common in Europe.

THE FIRST DIRECCIÓN GENERAL DE MONTES (1833-1842)

Ignacio García Pereda, Inés González Doncel, Luis Gil Sánchez

The focus of our study is the development of Spanish Forest Policies in the 1830s. To this end, we have brought together some relevant information found about the figure of Antonio Sandalio de Arias (1774-1839), the first director of the Dirección General de Montes, the Spanish Public Forest Administration, between 1833 and 1839.

The development of forestry in Spain from the 1830s onwards can be explained by numerous scientific, technical, and political factors. Although the arrival of some French forestry ideas had already begun in the 18th century, it was only from 1833 that the need of a forestry Corps in the Spanish Administration made progress. Improvement in the knowledge of the agronomic and forestry technologies, Arias prompted to provide the Spanish government with the need of a new kind of engineer. It was only thanks to the efforts of Arias in the 1830s, that Agustín Pascual could more easily create the Spanish forester Corps in the 1850s.

THE PHONOGRAPH IN BARCELONA (1877-1880): TECHNOLOGY AND IDEOLOGICAL CONTROVERSIES

Xavier Vall

The great fascination with Thomas A. Edison and his phonograph is a significant example of the public incidence of technology. This article will analyse the introduction of this device into Barcelona at the beginning of the Restoration, a time of intense scientific and political confrontations. It will be studied, thoroughly, from several perspectives (technical, scientific, cultural, ideological, social...), supplying much previously unknown information from primary sources. It is especially remarkable that the innovative firm Francisco Dalmau and Son, imported phonographs (the first one from London for the School of Industrial Engineers of Barcelona), experimented with them and contributed to their demonstration. On 12 September 1878 the first phonographic session was held at the Free Athenaeum of Catalonia. This society, founded in that year, mainly as a reaction to the banning of positivist or Darwinist lectures at the Barcelona Athenaeum, needed an event that established it as a leading institution. The technician Tomàs J. Dalmau together with the controversial writer and scientific popularizer Joaquim M. Bartrina played a main role in that session. Other scientists and amateurs were also interested in the phonograph, which was used at other sites on various occasions, even in conjuring performances. This case of the circulation of technol-

ogy reveals a complex peripheral environment.

STUDYING ABROAD, AN INVESTMENT. NINETEENTH CENTURY SPANISH ENGINEERS

Aingeru Zabala Uriarte

This work has a double objective, on one hand analysing the training of young Spaniards as engineers abroad in the 19th century, and on the other to provide a list as complete as possible of those who underwent such training.

The analysis shows us that not all specialties were equally demanded nor did all those who received degrees have the same opportunities to become engineers, independently of the proven fact that many of them never pretended to become integrated in the productive system of their time. Those who did, however, were, in general terms, technically less relevant than those who obtained their degrees in Spain, and this was because the majority of them turned to the private sector instead of the public sector. The list of engineers is completed with the data obtained on their place and date of birth.