Concept of a technological, portable and intuitive interface, for the 3rd Grade of Basic Learning System

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This Study purpose is to analyze the different portable technological interfaces usually used in School. It is also proposed a concept of a technological, portable and intuitive interface for the 3rd Grade of Basic Learning System.

It is widely recognized that the Learning System has been subject to many and deep changes. These changes have a profound impact in the Public Schools of the Portuguese Basic Learning System, being caused by not only the political reforms of the Learning System, but also influenced by the Society of Information and Knowledge. The inclusion of the use of TIC[1] – Knowledge and Information Techniques - in the curriculum of the Basic Learning System, the implementation of the Education Technological Plan [2] and the widespread use of portable electronic devices in School[3], especially amongst youngsters, makes it urgent to think about the use of technological interfaces in the School System. This Study also proposes a concept of a technological interface, using resources widely available in the school, as support of communication between student, teachers, parents and school community.

The first part of the study comprises the research and analysis of the different aspects related to the general concept of interface. Debates concepts and projects in the area of the Education and new technologies, as case studies, such as the Technological Plan - *Magalhães*, OLPC, command Wii and the Student Card SIGE3 and analyzes the results obtained in the diagnostic study of GEPE[4]. On a second phase, it evaluates the interfaces in a context of use, the needs and anxieties of the user towards the product. In this context, it is very important to identify and evaluate how and under which way these products and respective interfaces contribute or may contribute to the acquisition of competences. As already mentioned, this Study wants to presents solutions using the available resources that comply with the elements mentioned in the diagnostic study of the GEPE, finding optimized ideas of a technological, portable and intuitive that may be applied in the school context of the 3rd Grade of the Basic Learning System. The aim is to take full advantage of technological tools, using small gadgets commonly used by the students and to obtain an integration of the different devices in a network.

References:

[1] The teaching of TIC in the Portuguese Learning system starts in the 8th Year in the curricular areas out of mandatory subjects, preferentially in the Project Area and as a mandatory subject in the 9th Year.

[2] The Education Technological Plan is a plan that, through a different set of policies, aims to update technologically the Portuguese Schools.

[3]Moura, A (2008), *Manual de Ferramentas da web 2.0 para professores*, M.E., Direcção Geral de Inovação e de Desenvolvimento Curricular. In "A Web 2.0 e as Tecnologias Móveis"

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Portuguese architectural publications: spaces of contamination and (re)production

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The creation of social structures depended mainly on communicative developments. The theories on communication by Mcluhan and other authors conclude that the *media* were essential to this process by allowing an interaction between humans and a complex reality. With the *mass media* phenomena, the impact of those instruments became more relevant, being our reality not only mediated by them, but mainly validated within their processes. The architectural content is not immune to this *media* contamination. Our aim is to explore the symbiotic relation between *media* and architecture in order to understand the extents and consequences of this contamination.

The subject on architecture and mass media was developed by authors such as Renato de Fusco, Beatriz Colomina, more recently Pedro Gadanho, Andrew Higgott, among others. Our theoretical research will highlight in the beginning their main arguments, crossing them with contributions from communication, linguistics and semiotics theories. After contextualizing our subject through an historical analysis on *media* evolution, we'll study the mechanisms by which printed *media* interfere with the reality and, particularly, with the architectural content. We consider that an architectural reflection based on a mediation mechanism can reinforce the thesis of the press impact on architecture. Therefore, the architectural magazine will perform the paradigm of our analysis, as it is simultaneously a *mass media* instrument and a privileged vehicle for architectural diffusion. The Portuguese architectural publications, whose context is particularly enticed for our purposes, define our space of research.

One of the arguments that our research reveals is that by encompassing the present, the architectural magazine is forced to renew its contents on each publication. Thus, it is considered an important material for updating the architectural knowledge of its audience, with its contents generically accepted as faithful to the reality they evoke. In this perspective, the magazine function is to "reproduce", being a translation instrument, spreading and documenting the history of architecture. Another argument is that as these publications select and organize fragments of an architectural scene rich in plurality, they are instruments for critical interpretation. Furthermore, as B. Colomina states, "journals (...) invent 'movements', create 'tendencies', and launch international figures, promoting architects from the limbo of the unknown, of building, to the rank of historical events, to the canon of history."[1] We assume that the architectural publications are autonomous enough to produce, create and legitimize architectural content according to their logics.

Hence, as an outline of conclusion, the architectural publications are (re)production systems. However, as a *mass media* instrument, they are also able to distort reality following other questionable criteria (commercial, political, etc), being a powerful mechanism of propaganda that can affect the autonomy of architecture. In addition, the Portuguese publications cases of study might enhance this interference and other contaminations between architecture and mass publications.

[1] Colomina, Beatriz (1988), *ARCHITECTUREPRODUCTION*, Princeton Architectural Press and Revisions

Architecture in Portuguese Culture Space
Analysing the Contribution of Eduardo Prado Coelho

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The undergoing research intends to analyze and evaluate the contribution of the Portuguese scholar Eduardo Prado Coelho to the promotion of Architectural Culture.

Eduardo Prado Coelho (1944-2007) was a well-known and influential intellectual. He graduated in Roman Philology [1], developed a PhD in Theory of Literature related to the notion of paradigms in literary studies [2], and was a university professor in Portugal and France. In addition, he assumed several public roles, amongst which must be highlighted his roles as General Director for the Cultural Action of the Portuguese Ministry of Culture (1975-76), and Cultural Adviser at the Portuguese Embassy in Paris (1989-98).

Throughout his life, Eduardo Prado Coelho was a very prolific writer and always paying attention to what was happening in the cultural scene. He accomplished a significant work, mostly of essays and literary critic, discussing areas such as literature, music, dance, theater, photography, politics, and of particular interest to this study, Architecture. It seems obvious that his importance in the matter is crucial, as he used to write a column everyday in one of the most popular newspaper of the country, let it be said, a column well-known by the cultural milieu [3]. This research analyses his writings (published in books, newspapers and magazines), and it is previewed to be complemented by an exhaustive archival research of his personal library, as well as a series of cultural events related with it. At last, but of relevance, one is preparing a series of interviews to people close to him.

In a first part, one focuses on his early work, and noticed an absence of architectural references during his early work. However, we can easily find traces of some spatial thought and reflections about living spaces, which are usually related to architectural metaphors present in the literary discourse. In a second part, one focuses on his subsequent production. In this connection, it is noticed that, at that point, he indentified a phenomenon of massive adhesion to the fields of Architecture, he got interested in this realm along with its vast practical and theoretical production, associating it to the possibility of a better knowing and understanding of the emergent ways of thinking, as well as to the ability it has to be used as a powerful tool to improve several aspects of everyday life. From that moment on, he used the tools he possessed in order to contribute to the divulgation of architectural culture, mainly through articles, columns and short essays, and even through the organization and participation in public events (for example as a Cultural Adviser in Paris). The previously mentioned forms the third part of the research, characterized by a more analytical and critical tone.

Overall, the research's aim is to analyze how the preoccupations surrounding the field of Architecture came to take shape in the unique Portuguese intellectual Prado Coelho discourse; and finally, advance an evaluation of his contribution related to the divulgation and promotion of this discipline in the cultural and artistic milieu, and its renewed importance for the whole of Portuguese culture.

[1] Branch of knowledge that deals with the structure, historical development, and relationships of a language - a means to study a culture through its writings. - [2] See: Eduardo Prado Coelho, "Os Universos da Crítica: Paradigmas nos Estudos Literários", 1983 - [3] See: EPC's column titled "O Fio do Horizonte" published in "Público" from 1998 to 2007.

Spatial and Functional Analysis of a UP'S Faculty and its Surrounding Area – A Space Syntax approach

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This paper presents a research that is being carried out by Tatiana Nunes Trindade. The research arises from two contexts: the first is related with a LIDERA Project title "Caracterização espaço-funcional dos pólos da UP e áreas adjacentes" which is being conducted under her leadership (supervised by G. Furtado and M. Serra); and the second is related with the development of her own dissertation titled "Spatial and Functional Analysis of FAUP and its Surrounding Area – A Space Syntax approach" (supervised by G.Furtado).

The research focus is marked by a specific approach to architecture according to which, more than the visual stimulus or physical attractors, are space effects that produce the urban and architectural phenomena [1]. In this sense, the analytical techniques to model and explore spatial morphology of urban spaces known as Space Syntax, developed by Bill Hilier and colleagues's, will be applied. The project intends to access, on spatial and functional terms, the urban area close to a specific UP's Faculty (at this point FAUP). Both local spatial structures as well as its insertion in the global urban territory are being focused. The configurational analysis of urban space will be carried out on Space Syntax software. The next step will read the configurational properties in two directions. On one hand, it will define the present context and spatial functioning of the chosen area. On the other hand, it will try to identify values and/or spatial problems. The analysis method proposed by "Space Syntax" aims to integrate social and functional analysis and morphological analysis. The first one will be mainly undertaken in an empirical procedure. The morphological analysis will study the configurational structure of the building and its immediate surroundings. Space Syntax Laboratory from UCL provides the tools: "DepthMap" and "Confeego" will be the programs where the analysis will be run. The spatial analysis parameters will be connectivity, control value, integration (accessibility/ centrality) and intelligibility (wayfinding determinant) [2]. At the end, the research will investigate the correlation between variables as movement flows of pedestrians and other space uses, with the findings of the configurational analysis. This will highlight how space morphology affects the use of the chosen area and will provide information related to spatial use and performance. Other urban activities, equipment and uses are also important guides to access the strengths or weaknesses of the system and to relate spatial configuration with social and functional aspects.

The conclusion expects to show the current image of the considered area and its potential for transformation, correction or intensification. The whole research seeks to define and provide architectural and urban facts and proposals as well as policy questions about built environment and spatial organization. All topics belong to the architectural awareness which whether architects or urban planners might have.

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Spatial and Functional Analysis –
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Abstract

This paper presents a research that is being carried out by Tatiana Trindade, supervised by G. Furtado and M. Serra. It comes from two contexts: the first related with a LÍDERA project which is being conducted by her leadership and the second is related with the development of her own dissertation.

The study arises from the need to value the context of a university building and its operability in its user's life.

General Terms

Design, Parameters, Graphs

Keywords

Space Syntax, Spatial Analysis, Urban and Architectural Spatial Structure, Movement

The research intends to understand urban and architectural phenomena as the most important generator of social life. In this sense, it will analysis spatial patterns and the effects of space as an independent entity. Besides, it is suggested that it is the configurational structure of the urban space the main producer of movement flows[1].

The analytical techniques to model and explore spatial morphology of urban spaces, known as Space Syntax, developed by Bill Hillier and colleagues', will be applied. The project intends to access, on spatial and functional terms, the urban area close to a specific Faculty building. Both local spatial structures as well as its insertion in the global urban territory are being studied, in order to retain vital features of various layers of the city.

The configurational analysis of urban space will be carried out on Space Syntax software. The tools: "DepthMap" and "Confeego" will be the programs where the analysis will be run.

The next step will read the configurational properties in two directions:

1. Define the present context and spatial functioning of the chosen area.

2. Identify values and/or spatial problems.

The analysis method proposed by "Space Syntax" aims to integrate social and functional analysis and morphological analysis. The first one will be mainly undertaken in an empirical procedure. The morphological analysis will study the configurational structure of the building and its immediate surroundings.

The spatial analysis parameters will be connectivity, control value, integration (accessibility/ centrality) and intelligibility (way finding determinant).[2]

At the end, the research will establish the correlation between variables as movement flows of pedestrians and other space uses, with the findings of the configurational analysis. This will highlight how space morphology affects the use of the chosen area and will provide information related to spatial use, its performance and dynamics. Other urban activities, equipment and uses are also important guides to access the strengths or weaknesses of the system and to relate spatial configuration with social and functional aspects.

The conclusion expects to show a picture of the considered area and its potential for transformation, correction or intensification. The whole research seeks to define and provide architectural and urban facts and proposals a s well as policy questions about built environment and spatial organization. All topics belong to the architectural awareness which whether architects or urban planners might have.

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Structures of Project and Architecture Profession

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The purpose of this research is to relate the implications of the design process in the characterization and evolution of architecture. Its focus is on the Portuguese and Anglosaxon context of the last century.

Self-construction, prefabrication and serialization are examples of the design and production processes that arise from the main theme. In this context, it seems important to begin the research by studying the main occurrences and thoughts which characterized the cultural background supporting the call into question of design processes that started in the 1960s and 1970s. Furthermore, we study important theories on creativity and design methodologies, such as those of Alexander's [1] and Jones' [2], in which informational systems have a close resemblance to the design process. Finally, our study concentrates on the analysis of the Portuguese architectural profession from, among others, the Gomes' master thesis [3], Brandão's Ph.D. Book [4] and the reports ordered by Ordem dos Arquitectos [5].

As a preliminary guideline and assumption we understand that there is a prevalence of Art on Techno-Science in the definition and defense of the professional disciplinary body. Such prevalence, manifested since the establishment of the figure of the architect as we understand it today, has been recently threatened by the increasing customization for the user in services and by the speed and efficiency of the global economy's demand. In these conditions, the technique and computer automation have allowed us to face the characteristic individualization of present society but defeat the foundations and boundaries of architectural discipline, revealed in the professional practice of architects.

Through this analysis we expect to somehow bridge the gap between the disciplinary discourse and the user orientated practice, achieving a balance between the power and the feasibility of the architectural discipline.

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PASK
PRICE
FRAZER
ARCHITECTURE
CYBERNETICS

Envisioning an Evolving Environment – Encounters of Gordon Pask, Cedric Price and John Frazer. A Brief Account

___\ The text is based in my PhD dissertation in Architecture titled "Envisioning an Evolving Environment: The Encounters of Gordon Pask, Cedric Price and John Frazer" (University College of London, 2007), supervised by Neil Spiller and Iain Borden and examined by Murray Frazer and Roy Ascott.

"This [study...] provides a history of exchanges between architecture and the fields of cybernetics, systems research and computation, throughout the period of the last half century. In particular, it focuses on the encounters of the British professionals - Gordon Pask, Cedric Price and John Frazer - and provides a [...] account of two outstanding architectural projects related to systems and computation - Generator and Japan Net. It also highlights the architectural relevance of these encounters and the importance of [...] the genesis of the systemic and computational paradigm in architectural design and the promotion of an evolving environment. The [study ...] is based mainly on research of Gordon Pask's personal archive [... mantained for many years by Ms. Amanda Heitler and partly held today at the University of Vienna] and Cedric Price Archives (held at the Canadian Centre for Architecture).

The [text...] is divided into three parts. The first part relates to early developments involving cybernetics and architecture. It includes Pask's career and the rise of a second-order-cybernetics, as well as Price's breakthrough posture and tireless promotion of an impermanent architecture opened to user participation. The second part provides a [...] account of Price's Generator. It [...] highlights John and Julia Frazer's contribution as systems consultants, which led this project to be acknowledged as the first intelligent building. The third part focuses on the [...] information environment and the later reencounters between and achievements of Pask, Price and Frazer. It includes revisits to the Generator project, a complete account of the Japan Net competition entry, as well as pointing out outstanding ideas [...] of both Frazer and Pask.

It becomes clear that the current architectural agenda, focused on the new techno-cultural order of the information society and an aesthetics of emergence can benefit from these seminal exchanges, encounters and projects."

(Excerpt from: Goncalo M. Furtado C. L., "Envisioning and Evolving Environment: The Encounters of Gordon Pask, Cedric price and John Frazer", PhD Dissertation, UCL, London, 2007; research supported by Fundacao para a Ciencia e Tecnologia).

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