Design in the complex context of media

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Abstract

This paper presents a reflection and discusses about the role of design in the complex context of media. Such environment encompasses information and communication technologies and the cultural communities where they have origin and develop. It also encompasses protocols, practices, products and institutions and power involved in creating and disseminating this media. Such reflections and discussions are important and necessary in order to understand the social responsibility of designers as producers and creators of systems, information and communication, as well as of aesthetic standards that will, certainly, have influence in the culture and structure of the society. Design, as producer of contemporaneous languages – among them the hypermedia and the transmedia – has an active and determinant role in the society where it acts, as one of the main builders of culture. To make flourish, unequivocally, the perception and awareness about this role of design is one of the main objectives of this research project. A Workshop will be presented, aimed at investigating the interrelationship between Design, Communication and Technology. It was performed during the event entitled Intentions: Conversations, Experiences and Knowledge held in the School of Communication – RCA Participants had opportunities of understanding how much transformations of the visual represent an instigating and challenging social interaction.

Keywords: Design, communication, technology, interdisciplinary, workshop

Introduction

This paper presents a research project named "Design * Technology: Contemporary Design in Digital Environments", which is being developed in the School of Communication of the Royal College of Art (RCA) in London, with the support of CAPES[1].

This work is an unfolding of the research work that resulted in a book named "Design, Education and Technology", which received support from CNPq[2] and FAÈRJ[3], and was published in two versions: in format of printed book[4] and of digital hypermedia book[5].

Project "Design * Technology" will be composed by series of books:. In 2017 the digital book "Design, Education and Technology" went through a revision and redesign to become, in its 2nd edition, the first book to integrate the series of "Design * Technology". The second book, entitled "Design Communication and Technology" is under development with release previewed for the next year,

In this paper the second book "Design, Communication and Technology" will be more specifically presented, whose content will follow the same strategy of production of the first one, in other words, the process of constructing the book itself will consist in applying concepts of hypermedia design, making possible to transfer the theoretical content of the book in practice. The presentation of information is made in a multi-linear way, as hypertext, and structured in two semantic nodes linked between them (in network), offering alternatives for browsing.

The content that will be presented in the new book has as its theme the reflection and discussion about the role of design in the complex context of the environment of media. For McLuran and McLuran (1988), such environment, named by them of "ecology of media", encompasses information and communication technologies and the cultural communities where they originate and develop. It also encompasses protocols, practices, products and institutions involved in the creation and disclosure of those media. Those reflections and discussions are important and necessary in order to understand the social responsibility of designers as producers and creators of

information and communication systems, as well as, of aesthetic standards that will, certainly, have influence in the culture and structure of the society.

The research has the main objective of fostering the exercise of reflecting, debating and criticizing, propitiating for the professional an overall view of the characteristics and possibilities of the inter-relation of design, communication and technology focused on hypermedia languages enabled by information and information technologies.

This investigation has a qualitative bias and will be developed in the mold of an exploratory research, in consonance with other sources that will give foundation to the theme approached, such as bibliographic and documentary research, text reading and analyzes, as well as other techniques.

This paper will also be presented, a workshop. It was performed during the event entitled Intentions: Conversations, Experiences and Knowledge[6] held in the School of Communication – RCA | White City Place London, which occurred from the 5th to the 12th of December 2017. The theme of the workshop was the project "Design * Technology" with the purpose to discuss about the content of the book "Design, Communication and Technology" by means of creating conceptual and dynamic maps with the participants.

Brief reflection as justification for this project

The proposal of making available a project involving the subject Design and Technology as a series of books for reflecting about characteristics and possibilities of the inter-relationships of design, education, communication, services and technology in the complex context of the environment of media is opportune. According to Santaella (2013), the expression "ecology of media" became current since we started to live in a mediated and mediatic society. The two words are distinct. Mediated comes from mediation, an epistemological concept translated by signs of all natures – verbal, visual, sonorous and all their mixtures – which incarnate, circulate and are spread by mediatization (SANTAELLA, 2013 p. 13).

Also, according to the author, in order to live in the current extremely complex society it is necessary to be able to distinguish between different languages and media, their specific communication natures and political-social injunctions. From this

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[6] Intentions: Conversations, Experiences and Knowledge : Available at: https://www.rca.ac.uk/news-and-events/events/intentions-conversations-experiences-and-knowledge/. Access 12 narch 2018.

understanding it is possible to have the conditions for developing the capacity of criticizing and raising questions about everything that we read, watch and listen, in other words, to become critical of the received information.

In words of Bonsiepe (2011), knowledge considered as accumulated experiences should be communicated and shared, with presentation of information/knowledge being a central task of design.

We live in a time where the Internet, as well as the many equipments and technologies available to connect with it, enabled the construction of a new paradigm of generating content and accessing information. Moura (2003), emphasizes this idea noting that besides the agility of change of systems and processes, we may perceive that digital technologies exteriorized and pushed four qualities of the human being: curiosity, creativity, cooperation and the living of the ludic. Interactivity is pointed as one of the best openings for those questions and for the creative thinking (MOURA, 2003, p.206).

It is important to mention that the relation with knowledge changed itself and allowed a differentiated action of the user by means of information and communication technologies. According to Silva (2012), the interactive disposition allows the user to be actor and author, making communication not only the work of the emission, but co-creation of the message itself and of communication. It allows the participation understood as exchange of actions, control over events and modification of content. The user may listen, see, read, record, return, go ahead, select, treat and send any tipe of message to any place. In short, interactivity allows overcoming the condition of passive viewer to the condition of operative subject (SILVA, 2012, s.p.).

Thus, elaborating a digital book in network that allows readers to obtain information and tips about processes and tools available to create hypermedia and transmedia environments, is an initiative that arises as an opportunity for inserting the study of Design in this new information model: hypertextual and multimedia.

Jenkins (2009) supports this idea, when pointing to the need of reflecting about the theme of this research. For the author, we do not have yet very good aesthetic criteria to evaluate works being developed by means of multiple media. There were few transmedia histories for the producers of media to act with some certainty about which ones would be the best uses of this new method of narrative, or for critics and consumers to know how to speak, with knowledge of cause, about what works or not on those franchises.

This reveals the fragility of a behavior lacking criteria for developing hypermedia and transmedia languages. Thus, according to Portugal (2013) it becomes indispensable for the field of Design and related areas to reflect about the articulations between those multiple means made available by text (including numbers, tables and others), image (photo, icon, 3D image and others), video (moving image), sound (music, human voice, sound with special effects, and others), animation (cartoon, gifs and others) and graphics (info-graphics), in order to give meaning to the content being released, aiming to dynamically create attractive and significant information.

In this same line of reasoning, Drucker (2014) problematizes that:

> We can argue that visual knowledge can be considered codified as soon as the graphic forms of triangles, squares, circles, and arcs are described in drawings and texts. These treatises are not drawing or design manuals, but they are graphical expressions of mathematical, logical, knowledge in a systematic visual and verbal form. By contrast to such mathematical treatises, the works that comprise the "language" of graphic communication centuries later are more rhetorical than logical, and their features can be described in terms of visual principles that relate to sight, perception, cognition, cultural conventions, and norms. All of these investigations of visual forms as a systematic expression of knowledge contribute to the search for a "language" of graphics. (DRUCKER, 2014, p.19).

Thus, transmitting and sharing knowledge in the form of research works about studies in design focused on different media languages in an interdisciplinary way and that, according to Bomfim (1997) words, understands "interdisciplinarity as an inherent and essential condition, inherent to the practice of design", becomes timely.

Workshop about the interrelationship between Design, Communication and Technology

A participatory experience was held aiming to discuss about design in the complex context of medias, including "building up" ideas, during a "brainstorming" about the value of design. Aiming to investigate the interrelationship between Design, Communication and Technology. The workshop was performed during the event entitled Intentions: Conversations, Experiences and Knowledge held in the School of Communication – RCA | White City Place London, which occurred from the 5th to the 12th of December 2017.

The workshop had the participation of several groups of emerging researchers in communication. In order to start the workshop, one of the participants read the text of Burdick, [et al.]. (2012) to allow a first immersion in the theme of the workshop.

First words

> Like the word "writing," the word "design" encompasses an array of activities from the everyday to the highly specialized. "Big D" design ranges from the business plans and systems of "design thinking" to the "design sciences," which include engineering and human-computer interaction, to the cultural critique and speculative provocations of "critical design." In between are myriads of professional specializations and academic domains. Digital Humanities projects most closely involve communication/graphic/visual designers who are concerned with the symbolic representation of language, the graphical expression of concepts, and questions of style and identity. Interaction/user experience designers, with their focus on interface, behavior, and digital systems, and media designers who combine communication and interaction also bring expertise that is critical for the design of operations and environments that structure the ways in which ideas come into being. (BURDICK, [et al.]. 2012 p. 12)

Participative experience

For this participative experience three assistants helped me by representing these three areas, Design, Communication and Technology. The activity was divided into seven stages, which will be described below:

1. Each leader represented one of the fields: Design, Communication or Technology. They invited other participating students to join them in their field of interest.

2. Group leaders encouraged their group to do a brainstorm about disciplines, areas, topics, methods, authors and others, belonging to the field they had chosen: Design, Communication or Technology. After that, in a sheet of paper, the group drew a conceptual map (mind map) in order to schematize what was discussed in the brainstorm. The activity lasted 15 minutes and each group did its own conceptual map.
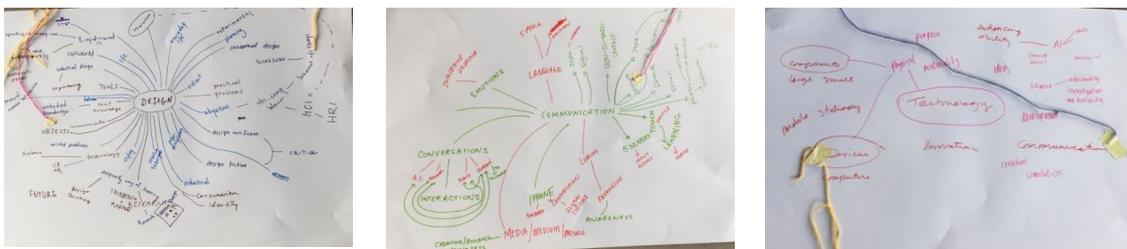

Figure 1: Conceptual maps of three areas Design, Communication and Technology resulting from the workshop. Source: author's file

3. Strings of three different colors were given to the leaders of the groups that helped me. Each String color represents an area of knowledge within the previous fields.

4. The leaders encouraged each participant in their group (they may choose to represent one or more subjects in their field of knowledge) to search in the other two groups for disciplines, areas, topics, and others, which should be worked in an interdisciplinary way within their field. Participants made circles and joined the person who represented the disciplines, areas, or topics throwing the string and making a node with both colors of strings. Then, each participant within its own group will do the same within those areas of knowledge that have relationships with one or two of the three fields: Design, Communication and Technology.

5. Participants of each group were united creating connections between the three areas as a network of knowledge - metaphorically speaking, just as the contents are available on the internet. The activity lasted 15 minutes.
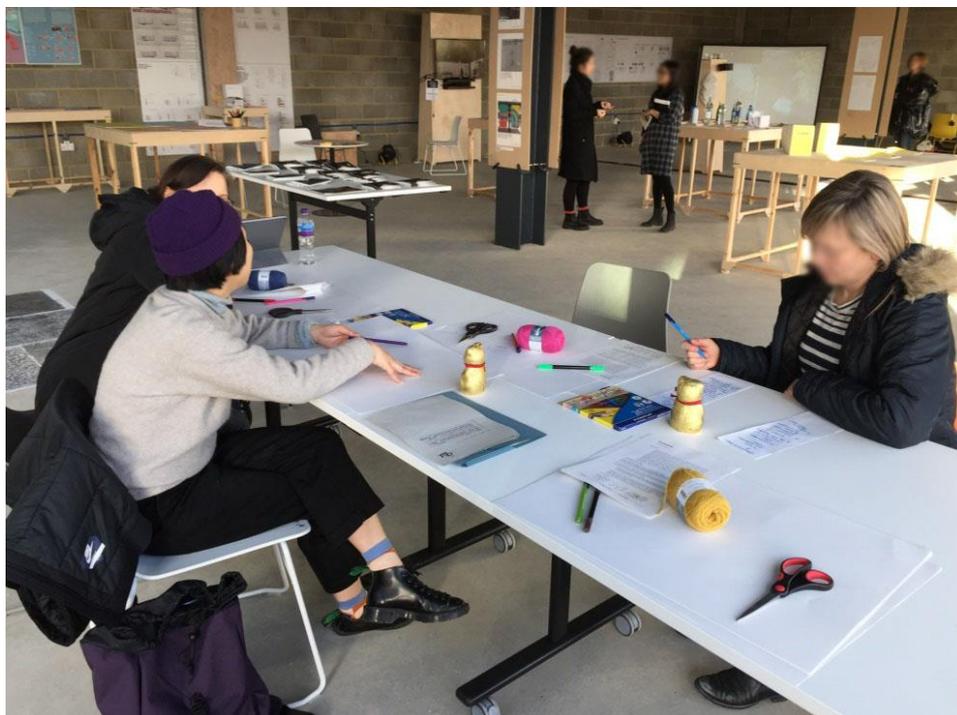
Figure 2: Preparation for beginning the workshop. Source: author's file

Figure 3: RCA doctoral students creating the conceptual maps. Source: author's file.

Figure 4: Activity to interrelate the themes of the three areas. Source: author's file.

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6. Finally, the discussion between participants was open. The groups made a new conceptual map with the main topics which should be made available in

order to discuss the three fields: Design, Communication and Technology. This activity lasted 15 minutes.
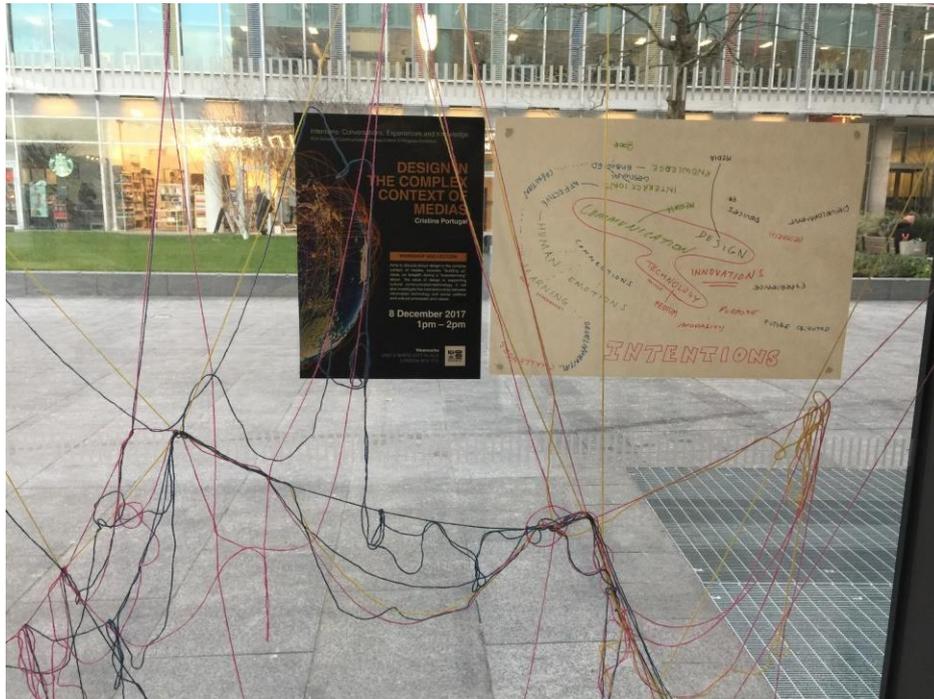
Figure 5: Conceptual map with results from the workshop. Source: author's file.

7. After the workshop was carried the presentation of the project "Design * Technology", more specifically the structure of the book "Design, Communication and Technology", object of this study.
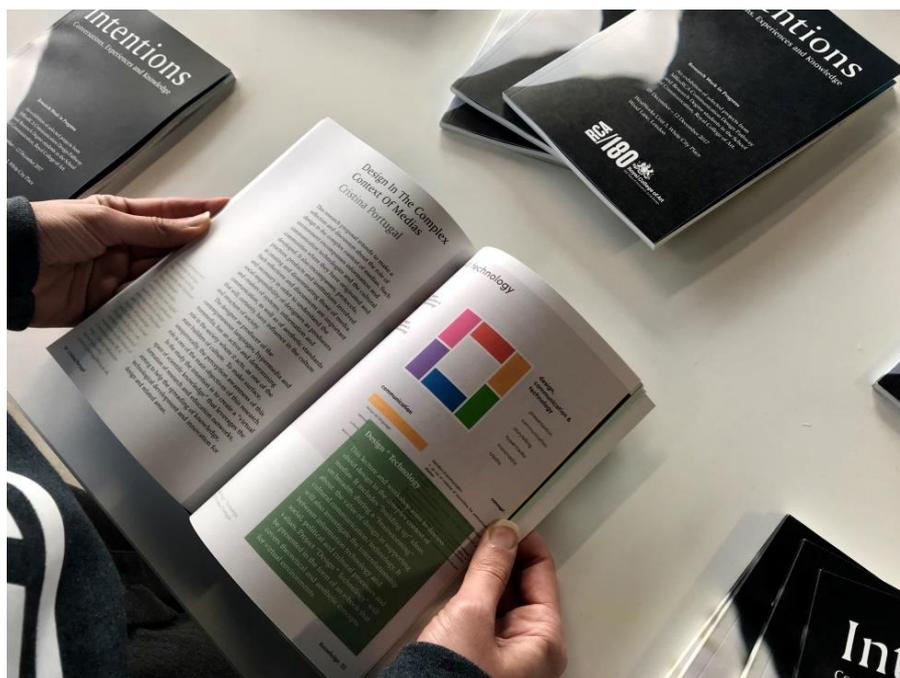
Figure 6: Desugn * Tecnolog, author Cristina Portugal (TRIGGS,; SIMMONS.; CANDELA,, 2017 p. 54)

In summary, during the workshop it became clear the understanding of design as a multidisciplinary activity and that design works with several areas of knowledge, allowing an encompassing view during the development of projects solving several problems and serves the most varied needs. As an activity of multiple approaches, design acts with several emphases in order to maximize the objectives of the project. Those ideas will be approached in project "Design * Technology".

About the project Design * Technology

As was previously mentioned, this project aims to make available a series of books, however the content of the new books will follow the same production strategy of the first digital book: "Design, Educação e Tecnologia" (http://www.design-educacao-tecnologia.com/), in other words, the presentation of information is made in a multi-linear way as hypertext, and structured in semantic nodes connected between them (in network), offering alternatives for browsing.

The content of the new book, object of this study, will be divided in four modules and each module will approach one of the following themes: Communication, Digital narratives, Hypermedia and Transmedia. The texts of each module will be supported by examples, bibliography and by a section called "Learn more". The texts will bring the theoretical foundation of each module; examples will be selected to illustrate the text and to exemplify its content by means of images, graphics, videos, animations, and others; the bibliographic references will be divided by theme in order to facilitate the research of the reader and the "Learn more" will have complementary information regarding the main texts, offering a selection of books, sites, applications, games and/or movies allowing the user of the book to go deeper in each particular theme.

As mentioned before, each module will contemplate one theme. The themes however, should be divided in sub-themes, yet to be defined along the research process, for better organization of the content, making the reading easier and more objective.

Thus, each sub-theme will have a theoretical text and its respective examples. Bibliographic references and the "Learn more" will contemplate all sub-themes, thus representing the theme as a whole.

The Frame and Figure 7, next, will present the main themes and the structure of the content of the digital books.

Information architecture of the digital book

| DESIGN, COMMUNICATION AND TECHNOLOGY			
Communication	**Digital Narrative**	**Hypermedia**	**Transmedia**
Sub-themes	Theoretical foundation		
	Examples supporting the theory (images, graphs, videos, animations)		
Bibliographic references			
Learn more: Selection of external references about the theme (books, sites, applications, games, movies and others)			

Figure 7: Home page of the e-book Design, Communication and Technology. (PORTUGAL, 2017 p. 54)

Thus, this project is justified, since the information systems today are inserted in a new environment of permanent challenge, demanding update and development of new types of presentation, beyond the traditional ones – associating graphics, typography, movement, sound and interactivity and becoming understandable and usable by people. In this sense, it is essential to search for new ways of visualizing the information, contemplating the possibilities of the digital technologies considering that the social relations are mediated by a plural network of languages. Corroborating with this idea, Drucker (2014), presents in his book an important study about the language of form:

> Most information visualizations are acts of interpretation masquerading as presentation words, they are images that act as if they are just showing us in actuality, they are arguments made in graphical form.
> The phrase "language of form" expression as codifying knowledge in visual forms contains a rich inventory of examples on which to construct a fundamental understanding of graphics as systematic expressions of knowledge. With these concepts in play, our task is three-fold. First, to study in formation graphics and begin to understand how they operate; to de-naturalize the increasingly familiar interface that has become so habitual in daily use; and finally, to consider how to serve a humanistic agenda by thinking about ways to visualize interpretation. The task of making knowledge visible does not depend on an assumption that images represent things in the world. (DRUCKER, 2014 p. 9).

Santaella (2001) emphasizes the problematic about the question of the study of different languages allowed by the media. According to the author, the distraction that the apparent dominance of the language has in us most of the times we do not take in our conscience that our being in the world, as social individuals that we are, is mediated by an intricate and plural network of language, in other words, that we also communicate by means of reading and/or by the production of forms, volumes, masses, interactions of forces, movements, that we are also readers and/or producers of dimensions and directions of lines, traces, colors. Finally, we also communicate and orient ourselves by means of images, graphics, signals, arrows, numbers, lights. By means of objects, sounds, music, gestures, expressions, smells and touch, through the looking, feeling and touching. We are such a complex animal species as are complex and plural the languages constituting us as symbolic beings, in other words, language beings

Final words

With the avalanche of media, applications and systems with which we interactevery day, the technological transformations and their consequences (social,

ethical, cultural, educational, environmental and others) are processed in a fast pace, producing new forms of interaction, acquisition of knowledge and experiences..

In face of this fact, searching for new ways of conceiving and producing design becomes fundamental, as says Manzini (2004) about the need of thinking "design in a fluid world", in which products, services and information combine themselves generating ways of projecting, producing, consuming and using in unprecedented ways, resulting from the articulation of a multiplicity of actors. The author says that in order to act in this context, designers "have to change their professional profile, converting themselves in operators acting inside a network, assuming the role of providers in the inovation process". Considering the possibility of sustainable solutions, the activity of design that pushes the innovation process must be made easier by designers, instead of being directly executed by them (MANZINI, 2004, p. 17 - 20). Manzini intensifies its ideas stating that the designer, from its creativity and communication abilities, may contribute to promote a high degree of active social participation.

Design, as producer of contemporaneous languages – among them the hypermedia and the transmedia – has an active and determinant role in the society where it acts, as one of the main builders of culture. To make flourish, unequivocally, the perception and awareness about this role of design is one of the main objectives of this research project.

Acknowledgment

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