

# Codes, art and design: promoting educational dialogues

*Polise Moreira De Marchi*

*polise@uol.com.br*

*polise.mmarchi@sp.senac.br*

*SENAC University Centre*

## Abstract

For the most part of the 20th century the tension between art and design was conducted by the industrialization process demands. Because of that, the idea of systematization, modularization and rationalization were incorporated, particularly, in the design educational guidelines as response for an industrial and technological world.

The teaching model based on logical-mathematical and analytical was widespread during the industrial period incorporating deductive and inductive methods. But, these methods are very restrictive when applied to the new demands of production which has been shifted from goods to services and interactive objects.

In this way, it is not enough a curricular structure that covers fundamentals of design and which is exclusively directed to a productive system of things and objects, but subjects which develop the ability to express and perceive the environment around us.

This paper aims to address some questions related to the intersection between media art and interface design which were developed during the experimental design discipline in the graduation course of digital interface design. By means of using Quick Response Codes (QR Codes), mobile phone cameras and a semiotic stimulus, the design students were challenged to deal with the urban environment designing interaction through technological experiences of art.

**KEYWORDS:** digital interface design, city, art-technology

## Introduction

The ready-made of Duchamp brought to the arts sphere, as to industry, technology and design, successive concerns during all along the 20th century that are still increasing in these first decades of the 21st century. More than proposing a definition or distinction between utilitarian and artistic objects, Duchamp presented a reflection about our way of looking,

noticing and consequently providing a meaning to things, which are products of a world that, at that time, was claiming to be technological.

The 21st century was inaugurated within a restructured industrial scenario in which productive territories were transferred and others created in a new global order motivated by the information and communication technology improvements. This moment of inflection was originated in the last decades of the 20th century, a time in which society, with solid bases geographically localized through industrial productive chains, turned to be pulverized through new space-time logics based on information and communication flows, responsible for the dematerialization of the concrete perception of places and objects, transforming the relationship between space and time into an infinitive network of connections.

For these reasons, the relationship between art, design, science and technology turned to become narrow and to muddle experiments with experiences, causing hybrid representations at the frontier of material and immaterial, proportioned by the human involvement within the pervasive computational technologies especially in the urban environment.

Nearly hundred years after Duchamp's provocations, several questionings are still made regarding the consolidated technological world and its relationship with arts and design. These concerns become even more critical when it is driven to the education field.

In times of complexity as well as global demand for creative and innovative goods and services, the design education emerges as a challenge, especially when the design discipline has assumed the responsibility of developing a society project based on openness, participatory and inclusive.

## **The role of art in design education: the digital interface course experience**

For the most part of the 20th century the tension between art and design was conducted by the industrialization process demands. Because of that, the idea of systematization, modularization and rationalization were incorporated, particularly, in the design educational guidelines as response for an industrial and technological world.

The teaching model based on logical-mathematical and analytical was widespread during the industrial period incorporating deductive and inductive methods. But, these methods are very restrictive when applied to the new demands of production which has been shifted from goods to services and interactive objects.

In this sense, the demand of design education regards new methodological strategies that address the world in order to place the students in its complexity and to allow them to build up relationships, interactions, innovations and practices. Therefore, by means of a hybrid and transdisciplinary approach, design should be understood as emotional, and semantic value, and thus intangible as well. Thus, the deductive and inductive methods have been replaced by abductive thinking which has its roots on the phenomenological way of understanding the world around us.

As the issues become increasingly complex, it requires more simplicity to solve them, and for that it is necessary to experience the world and to comprehend each phenomenon by means

of observation, perception and learning. Only after this approach, it is possible to formulate questions to be solved through design solutions.

The digital interface design is a discipline which reflects the current requests of the complex production systems, because it deals with tangible and intangible aspects, as well as abstractions and technological services and products that enable new possibilities for interaction through physical or digital interfaces.

Thus, the digital interface design course is structured by the relationship between interface design and interaction, communication and electronic-arts, seeking to promote the development of digital media to access information and communication considering the human figure as a central point to where all the concerns converge.

By being a contemporary area of design, it incorporates the self-questioning and self-construction methodology which is reflected in the processes of drawing up scenarios taking into account contexts, cultures, local and global identities.

The course is structured on the basis of project activities that make up a creative chain that seeks to immerse the student into the complexity that the area provides. Thus the course is structured around action-reflection (Teixeira, 2011 apud Schon, 1984) divided into six thematic projects: "to experiment", "to narrate", "to inform", "to play", "to interface" and "to experience" which all together figure a cycle of observations, perceptions, reflections and generalizations enable to provide design experiences which will allow students to build their own self-methodology in a metadesign process, that will converge to the final graduation thesis.

The project "to experiment" constitutes the first design experience and because of that, it acts as the course metaphor, introducing the students to the complexity of the design field.

As a starting point the students should recognize themselves as part of local and global identities by stimulating the perception and the analysis of individual characteristics, as well as of collective behaviour in the complex urban context. The goal is to introduce them to issues related to contemporary thought about the urban environment.

Taking into account these premises, the tripod project conceptual was established considering three issues: design, art and technology. The city was introduced as a main theme. The idea is to evaluate the importance of the city as a repository of experiences, memories, influences and transformations, most of them created by designers.

## Methodological Strategies

Phase 1: "how I present and represent myself" and "we as nodes of connection"

According to the idea of "how I present and represent myself" (Fig.1), the students were asked to build panels with semantic references of themselves, and from them to tell their stories of life, tastes, beliefs, habits and cultural repertoire. In this first stage, the objective was to address the designer as a social, cultural and political subject as well as a transformation agent.



Figure 1 - how I present and represent myself

Following the project methodology "we as nodes of connection" (Fig. 2) aimed to amplify the discussion to the system of flows and fixes (Castells, 1999) in the city. Through mapping, students were asked to record their flows and connections with the urban fixes: their paths, displacements, origin and destination achieved in the physical environment. They were also encouraged to map their flows in cyberspace, producing an infographics with their sites, social networks and so on.

The methodological strategy of phase 1 allowed mapping person's individual repertoires, at the same time it promoted the awareness of belonging to networking connections, whether they are materialized in the city's physical space or in the virtual global network.





motivated to formulate questions based on the observations, perception and understanding (Fig.3) of the different urban situations in a specific urban environment in the Sao Paulo city.

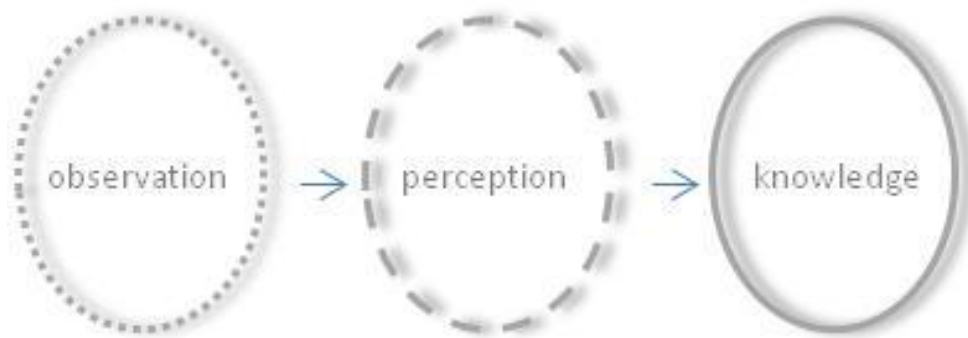


Figure 3 – phenomenological approach

Called "Fixes and Flows", the project took as its starting point a physical location in town - Augusta Street - traditional meeting point and space of flow in Sao Paulo, attended by various cultural groups and individuals that occupying it during 24 hours through different uses and appropriations.



Figure 4 – urban expedition

The intervention methodological purpose was based on three steps: urban expedition, urban safari and urban intervention from the confrontation between physical and digital interface. The importance of dialogue between both it is an important ongoing discussion within the digital interface design course and for this reason was the core of the project.

The "urban expedition" (Fig. 4) was proposed as a way of understanding the city as a phenomenon, exercising observation and experience. During the "urban expedition", it had been appreciated the discovery and documentation of the physical environment and the different ways of urban appropriation as well as the detection of physical interfaces present

in the explored area. The documentation was made by drawings, photographs, notes, videos and sounds. The collected material was organized by the students in taxonomies related to the fundamentals of design and to the concepts detected in the urban environment.

After the presentation and discussion of the collected material, the electric poles were chosen among the physical interfaces as the support for the future intervention. They have the function of supporting the electric grids as well as they are used as communicative surfaces, since there are all kinds of material attached to them.

Subsequent to this first approach the students were split into groups and they are invited to visit a specific area of the street. The Augusta Street was divided in eleven sections. Each group was assigned to one of them (Fig.5).

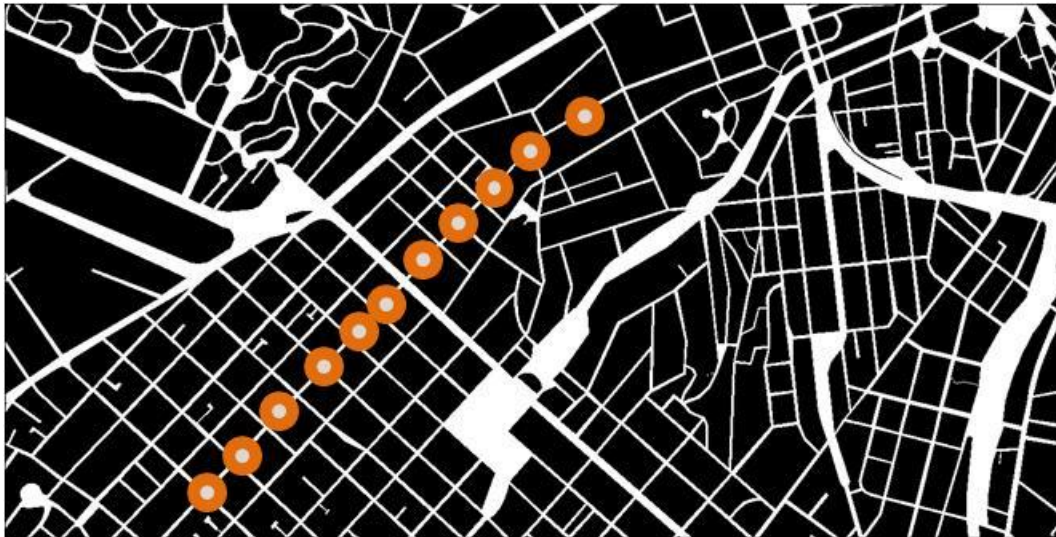


Figure 5 – Augusta Street

So following the methodology of bringing together research, discovery and design, the students went to the specific site to develop an “urban safari” (Fig. 6).

The difference between the “urban expedition” and “urban safari” is that during the second one the students should investigate and detect possible modes of interaction and configuration of new informational layers which should be able to establish a communication channel which extend and amplify that specific urban context (11 sections) in an inventive and creative way through artistic intervention. At this stage what was collected by the students was organized into three visual panels: design elements, concept and context.

As a challenge, it was proposed the creation of a project that involved creative freedom and at the same time could dialogue specifically with the characteristics of the place. The proposal should establish a communication channel with the city through an artistic project that would combine the digital media and the physical interface promoted by the electric poles which would receive QR Codes stickers. The QR Codes provided the link to the virtual informational projects created by the students.

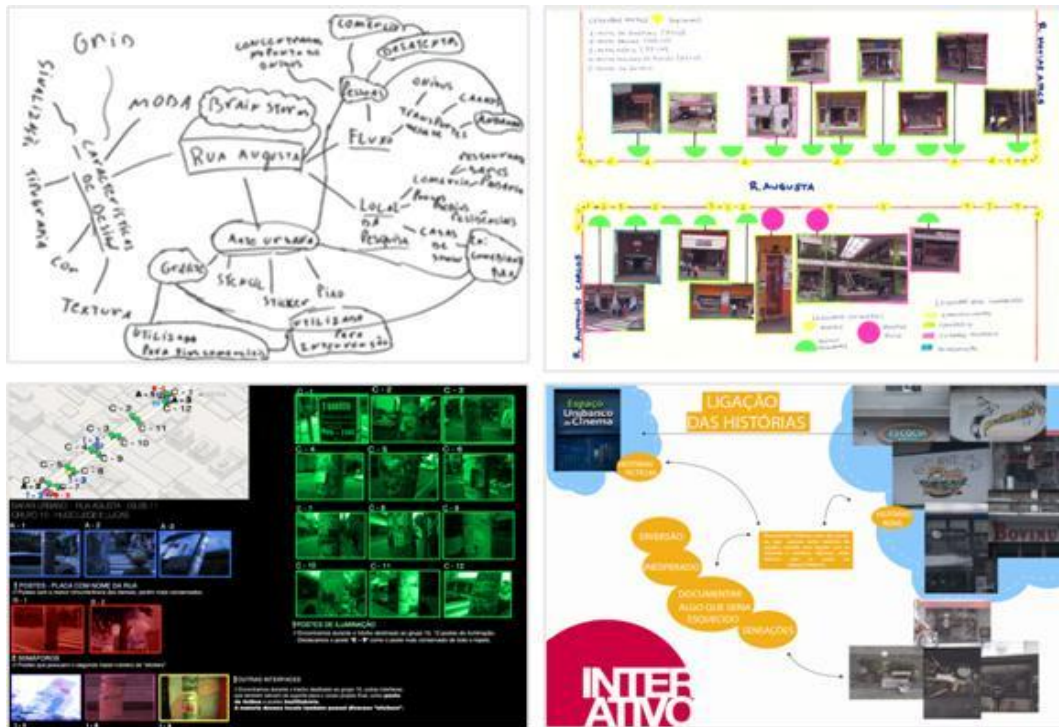


Figure 6 – urban safari

In addition, each team had mapped the physical interfaces present in the urban context. They had to choose the electric pole would receive the QR Code sticker.

From this stage, the students teams had organized themselves and started to build their collaborative diagrams integrating individual and collective perceptions (Fig. 7). In a process of metadesign, the students had conceptually made their artistic digital intervention projects, setting up a diverse and exploratory scenario of the city.



Figure 7 - metadesign activities

The possibility of integrating art and design allowed the students to have a freedom to act and intervene in the urban context. The goal was to expanding the repertoire of action and to promote the creative freedom of artistic expression. The mediation between design and art allowed students to rethink the existing city - the scene of all challenges to be faced by the students in their professional future.



## Results

In all, 11 projects were developed, each one corresponding to a street section which together compose a narrative accessible by mobile phones with QR Codes readers applications (Fig.8). The urban metarrative had not been presented in a unique syntax, since it could be read without a default order in space and time. The projects were hosted on a site so they could be accessed when QR Codes were decoded by the mobile applications. Also the students were motivated to create postcard with the photographs of QR Codes on the electric poles. The postcards could promote the metalanguage of the intervention, once through them it was possible to reach the place and the respective project, since it could be distributed in various locations in the city.



Figure 8 – QR Codes: postcards, stickers and mobile QR Codes readers

Thus the artistic intervention allowed students to dialogue with those who live in the city, establishing a first communication channel between the production and reception, between fixes and urban flows. Aside from stimulating creativity and the recognition of contexts, concepts and design elements present in the urban landscape, the students were able to get even closer to the urban reality as well as to learn how to deal with it.

At the same time, the discovery of QR Codes on the electric poles and the possibility of decoding their message also brought to the citizens the surprise that an inanimate surface like the electric poles could expand the perception of those who routinely pass through that location (Fig.9). Besides, by the postcards (Fig.8) the students had also the opportunity to articulate a communicative cycle into the city, as well.

As Ferrara (2002, p.21) pointed out “the constitution of a place depends on a reaction. On an answer to the global plan of human characterization”. Artistic interventions in the city reshaping “places” and their meanings. Evoke imaginaries that reflect waves of reorganizations of urban space.



Figure 9

Considering that the city is medium, media and mediation since it supports, communicates and promotes interactions between urban environment and its citizens. Each one of the eleven projects had total autonomy to intervene in its specific site attributing informational layers on physical reality, once the QR Codes enable users to transform any object into a digital art intervention.

Even if the QR Codes are something new and few people are used to use them, the possibility of surpassing the condition of physical and digital layers, takes QR Codes to another level, as it not only re-directs users to some website, but instead offers a platform for digital interaction with the physical city. A cross-channel among art, design, technology and city. By pasting a QR Code on a electric pole, it was possible to transform this object into a digital platform. By redesigning its use it was possible to go further into the Duchamp's discussion about the meaning of industrial and artistic objects.

## References

- Castells. M. A, (1999). *A Era da Informação: economia, sociedade e cultura*, vol. 3, São Paulo: Paz e terra,
- Ferrara, L. D'A. (2002). *Design em espaços*. São Paulo: Rosari.
- Flusser, V. (2007). *O mundo codificado*. São Paulo: Cosac Naify.
- Peirce, C. S. (2003). *Semiótica*. São Paulo: Perspectiva.
- Teixeira, C. (2011). *Prática reflexiva revisitada*. Cadernos de Estudos Avançados em Design. Barbacena: EdUEMG.