Murals between Site-Specificity and Digital Technology Towards Innovative Mural Design

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Abstract:

In a previous work I have classified contemporary murals as site-specific art works. This classification evolved through a number of theoretical as well as practical evidences that address murals as integral parts of their architectural settings. To address the issue of site-specificity in murals, I investigated and developed a set of compositional structures through my mural practice that could be applied in the design, execution, and teaching of contemporary mural design. I have developed the notion of a deconstructive method of mural design in which the illusory space of the mural derives its compositional structure from the architectural space in which it is sited. In doing so, I had to contest and argue the traditional materials used in conventional murals in order to develop new methods and techniques that could cope with the notion of deconstruction and also to match the tremendous development achieved in modern architectural styles. Terms like Robotic, Iconic and Interactive Architecture are crucial to be considered in contemporary mural design. This paper endeavors to articulate innovative ideas and techniques in the realm of murals using modern and digital technology to fulfill both site-specificity and congeniality with contemporary architectural styles.

Introduction

The traditional definition of a mural painting is that it is a painting on a wall, ceiling, or other permanent architectural surface whether this surface is internal or external. Significantly in this definition Mural is consistently associated through the history of art with architecture where walls and ceilings are commonly considered to be important features of any architectural context. Therefore, the visual and conceptual aspects of a mural are likely to be affected by the architectural style.

The main concern of this study however is not the content but the form of the murals. The subject matter can change according to the inclinations of those who design or commission them but the formal qualities – the aspects of the murals that make them work visually - should be at least as enduring as the places for which they are made. The principles on which these formal qualities are based need to be as flexible as possible to accommodate the specific architectural conditions they encounter.

In order to address the main question of this study which concerns the aim to arrive at innovative techniques that can incorporate the specific architectural context within the compositional structure of the mural it is important to investigate the extent to which murals can indeed be regarded as site-specific.

(Cass 1988) for example, sees the mural as a decorative work for a specific area to expand the space we live in. He also claims that the mural at its finest should be a continuation of architecture. The fact that murals are always described and seen as integral part of the architectural context justifies why murals should be categorized as site-specific art forms.

The following pages will explore the notion of site-specificity in murals and how murals should be represented as an integral part of their architectural context. The study will also investigate mural techniques between conventionality and modernity in order to generate innovative techniques that could incorporate contemporary murals with modern architectural styles. In doing so, it is important to briefly highlight what is meant by modern architecture in this study and what are the specific features these new styles embrace. Moreover, it is crucial to explore how these features of modern architecture would affect the development of contemporary murals.

The idea of Site-specificity in Mural

According to (McIver 2009) Site-specific art, also site-responsive art is artwork created to exist in a certain place. The artist takes the location into

account while planning and creating the artwork. (Kaye 2000) sees that site-specific work might articulate and define itself through properties, qualities or meanings produced in specific relationship between an 'object' or 'event' and a position it occupies (Figure 01 & 02).

(Kwon 2002) articulates the aspects of site-specific art where she says:

'Whether inside the white cube or out in the Nevada desert, whether architectural or lanscape-oreinted, site-specific art initially took the site as an actual location, a tangible reality, its identity composed of a unique combination of physical elements: length, depth, height, texture, and shape of walls and rooms; scale and proportion of plazas, buildings or parks; existing conditions of lighting, ventilation, traffic patterns; distinctive topographical features, and so forth'.

Kwon's statement demonstrates how site-specific works should be fully integrated with their contexts, and this is the main aspect that distinguishes this type of art from other types.

It is very clear that the term site-specific does not refer to a particular technique or a standard form that would be attached to art forms produced in this approach, but it is a general concept that would identify any art forms that deal with a certain space. This definition, therefore, may include murals as site-specific art forms. Figures 03 and 04 explore the idea of site-specificity in murals. Figure 03 represents two of about eight artworks produced by art-world stalwarts like Richard Serra and Sol LeWitt, to decorate certain walls at Pearson International Airport in Toronto. (Blum 2004) described all these works as site-specific works.

Figure 01 M.D Anderson Bellevue, 1993, Washington Library Proposal, USA

Figure 02 Richard Wilson, 2008, Turning the Place Over, Liverpool, UK

In a project that "will astonish the commuters of Liverpool," sculptor Richard Wilson has turned part of a building's facade inside out. As if learning from Gordon Matta-Clark, Wilson sliced an "egg-shaped section" out of the building's facade – "fixing the eight meter diameter piece on a pivot" so it can spin

However, in terms of the compositional integration, I would argue one of the present examples to be a site-specific mural. In a glance, in (Figure 03) the artist developed this abstract painting to occupy the whole wall. Although the space has a significant characteristic, it is hard to identify any visual integration between the composition of the mural and that particular character of the architectural space. In other words, this abstract composition does not relate the mural to the space. It seems to consciously ignore the structure of the space treating it instead as a blank surface on which to paint thereby creating a formal tension between the painting and the architecture.

On the other hand, in (Figure 04) we can see that the technique used in this exterior mural is simple but succinct. The presence of the smoked glass depicting shadows of workers and builders bring this side of the building into life. The implementation of shadow in depicting figures makes the presence of the mural as a flat image very natural and justified. The pictorial composition used in this contemporary approach and technique has significantly integrated the mural with the architectural context as one of the modern buildings in an industrial environment. It appears as if someone has revealed this side of the building to showcase a cross-section of what is behind, or to indicate that some refurbishment works are under way. Moreover, the mural reflects the nature of the whole series of buildings as part of an industrial area, and that would attest the cultural and the social aspects. Subsequently, this mural seems to fulfill its site-specificity.

This study also raises the question of what makes a mural a site-specific? Throughout the literature review the elements that would fulfill the site-specificity of a mural can be summarized as follow:

1. The architectural context: as which refers to the structural characteristics of the architectural space. This includes any significant architectural features that distinguish this particular space, and it includes the functional aspect of this space.

2. Urban environment: particularly for outdoor murals, the consideration of environmental aspects such as weather conditions, the architectural environment and the functional character of the place, would affect and determine the physical elements of a mural, for example the weather conditions should determine what kind of materials to be used and the colors used of the mural is subjected to the color schemes of the urban space.

Figure 03 Katharina Gross, 2004, 75 foot mural looms above Air Canada Gate at Pearson International Airport, Toronto, Canada
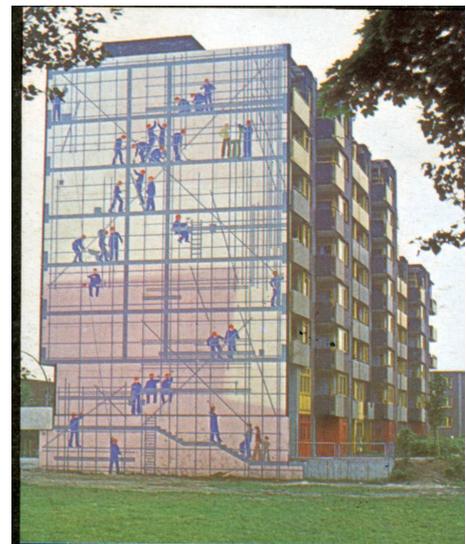
Figure 04 The Horizontal Group Mural, painted by an unknown painters, Hamburg, Germany

3. Conceptual influences: this includes the cultural, political and social elements that may be reflected in the conceptual aspect of a mural. In the Italian Renaissance, for example these conceptual issues were highly represented in their secular context. (Kwon 2002) says:
'To be "specific" to such a site, in turns, is to decode and or/recode the institutional

conventions so as to expose their hidden operations to reveal the ways in which institutions mold art's meaning to modulate its cultural and economic value; to undercut the fallacy of art's and its institutions' autonomy by making apparent their relationship to the broader socioeconomic and political processes of the day'.

 The aforementioned in (Figure 04) gives a good example that significantly demonstrates the above-mentioned elements.

Confirming that mural should be integrated with its architectural settings it is important to explore the notion of modern, post-modern and other architectural styles in order to find out what kind of visual and conceptual potentials these styles embrace and how these potentials would consequently affect the production of site-specific murals for this particular architectural styles.

Architecture of the New Age

It is important to highlight some specific issues in contemporary architecture which would directly or indirectly enhance and affect the quality of contemporary murals. These issues include the significant potential that contemporary architecture embraces in terms of the materials used, the deconstructive nature of new spaces and new approaches that apply modern architectural theories (Figure 4&5).

As a definition 'contemporary architecture' is a term that refers to the architecture being made at the present time. The time span includes the last few decades, from the 1980s to the present. Modern Architecture or Modernism was a product of the mid-20th century.

Fig.05 Frank Gehry , March 2004. The Ray and Maria Stata Center. Massachusetts Institute of Technology, USA
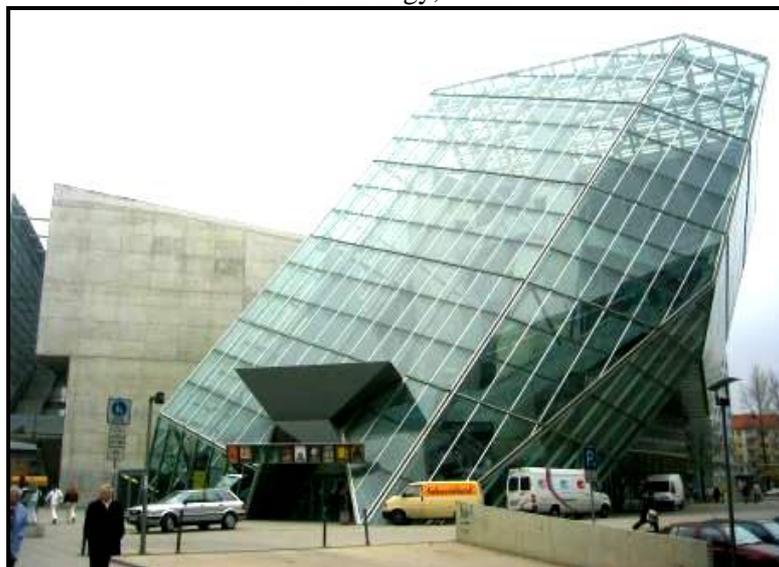

Fig.06 Coop Himmelblau, 1998. Ufa Cinema Centre, Dresden, Germany

In their book "The 20th Century Architecture" (Peel and others 1989) claimed that:

'The term Post-Modernism was coined in the 1970s, possibly first by the architectural critic Charles Jencks in his 1977 book The Language of Post-Modernism as a 'Populist-Pluralist art of immediate communicability"

Contemporary architecture has a number of changes concerning some of its infra structural elements, particularly the walls; for example, most contemporary public buildings (commercial, social or educational buildings) are generally built out of a steel structure, and therefore walls are not functioning as structural elements anymore. Consequently, most of these walls could be described as temporary walls made of plaster, wooden boards or panels and even glass sheets. They may be changed or reconstructed at any time in accordance with the functional requirements of the space; hence, extending or enlarging an existing space or even dividing a large space into small areas is easier than ever.

(Fiebusch 1947) argued that as the walls are no longer the carriers of the building but only a clothing skin giving seclusion and protection, they can be treated with greater freedom, pushed backward and forwards as required by the purpose of the building, open or closed, made opaque or transparent. A result of this flexibility is that the outer and inner spaces are no longer strictly separated. Fiebusch continued: 'In fact the whole building has become a homogenous arrangement in space'.

This significant change is one of the most important features in the structure of contemporary architecture which would inevitably impact on the way murals are thought of in relation to the space, their longevity and their function within contemporary buildings. However my main focus is on how these changes may affect the design process of murals and would also raise the notion of 'Temporary Murals'. This notion would strongly affect not only the design process but also the materials and the techniques used in the production of innovative murals.

This study argues, thereby that if murals, in their traditional definition are permanent art forms, new/contemporary architecture theories would suggest that new conceptual approaches for mural painting, as site-specific works, are to be considered as a non-permanent or a temporary art works. This notion of temporary mural would subsequently add more insights for new and innovative approaches to be applied in contemporary murals that would cope with those architectural styles.

Mural Techniques between Conventionality and Modernity

The most common techniques used in murals through the history of art were frescos (particularly for indoor murals) and mosaic and base-relief for both indoor and outdoor murals. We still use these techniques until now in contemporary murals; however, the fresco technique had been replaced by the use of emulsions and acrylic colors due to their significant potentials that challenged the traditional technique of fresco in giving a similar quality with easier procedures that saves more time in the execution of a mural.

Figure 07 (Group of Unknown artist), 2008, Astro Boy train ticket mural, Shinjuku Takashimaya Department Store, Mural installation in Tokyo Metro, Japan

Figure 08 Akmal Abdelarhaman, 2008 "Knowledge" a mural installation at the LRC, University of Bedfordshire University, UK

Other techniques had been evolved through the 20th century such as the use of assembled materials in what so called installation technique. Figures (07 and 08) demonstrate the idea of using the installation technique in contemporary murals. Figure 07 represents a mural installed at a subway station in Japan and it was made using the underground tickets. Figure 08 represents a mural made by the author at the Learning Resource Center at the University of Bedfordshire, UK, where the artist used different materials like mosaic, gold leafs, printed wallpaper, metal pipes, wooden panels and acrylic colors. All these materials were assembled to perform this visual impact that integrated the mural to its architectural context.

With notions such modernity, Post-modernity, Deconstructive and all other terminologies that took place in the early 20th century in the realm of architecture, the need to develop innovative techniques in the production of murals seemed to be crucial.

This paper aims to investigate and develop a number of new techniques that would strongly generate innovative approaches to be used in the production of contemporary site-specific murals. The following pages will discuss these techniques in further details. But before doing that, it is very important to explore the significant potentials in modern technology.

The Significant Potentials in Modern Technology

There is no doubt that new media technologies have provided a great deal of technological as well as visual potential that many contemporary artists have employed in their works, especially those artists who have an IT background in parallel with their artistic background. Pascal Dombis is one such contemporary artist who has a computer since background, which enabled him to produce 'Hyper-Structures' so as to advance a complex pictorial space. (Popper2007) described the approach Dombis uses in developing his hyper-structures saying:

'Using the computer's calculating power, Dombis can generate structures made up of tens of thousands to several million single elements, which would be impractical to be generated by hand'.

The images shown in (Figure 09&10) represent part of a series of video installation art work Dombis produced in 2004 called "Stong_Geminga", and it is based on the idea of opening and closing geometric space. On his web site, (Dombis 2008) explains that the increased numbers of curves at different scales generate shapes that can be geometrically simple like rectangles or squares. Integrated into architectural space, they work as virtual doors or windows. Then, by making the growth process more and more random, these simple forms close and develop into out-of-control networks of arabesques.

The question to be raised here is: what will be the result of using Dombis" hyper-structure technology in combination with the site-specificity principals this study has identified? The suggested answer will be a remarkable mural style that would integrate with a number of contemporary architectural styles. Bearing in mind that the

execution of this kind of art form is not a problematic issue in terms of the advanced technology developed in the last few decades.

Addressing the potential of these new art approaches in developing and producing new kinds of contemporary murals, has evolved as one of the main concerns of this study. This identification is necessary having raised questions about certain types of contemporary and post-modern architecture and what type of murals would cope with these architectural styles.

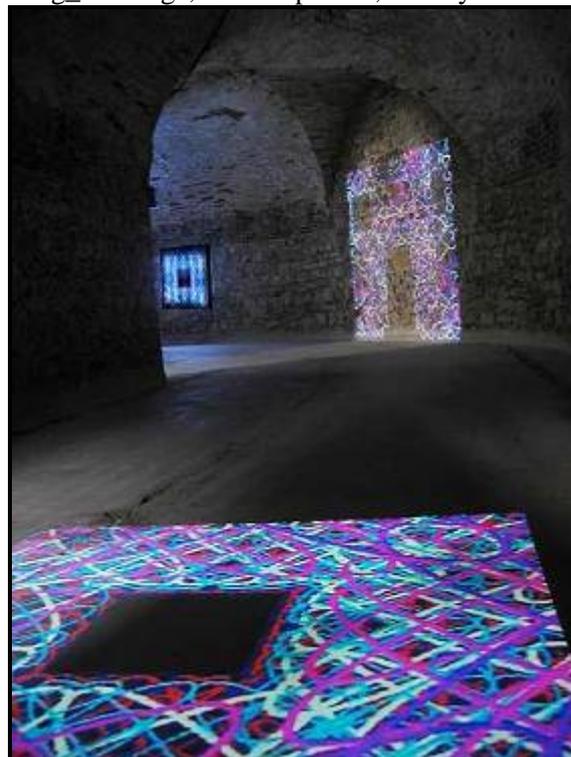Figure 09 Pascal Dombis, Stong_Geminga, Fort Napoléon, La Seyne-sur-Mer Video installation 2004

Figure 10 Pascal Dombis, Stong_Geminga / Thura_Stong, Fort Napoléon, La Seyne-sur-Mer 3 minutes Video installation, 2004 (opposite angle)

Implementations of Modern Technology in Contemporary Murals

This paper raised new issues concerning the development of contemporary murals, the classification of murals as site-specific art and the notion of temporary murals. New questions had been raised and new insights had to be addressed, for example, what kind of murals should be produced to fit one of the most significant contemporary architectural styles (Deconstructive

Architecture), especially those buildings that are built of steel structure and glass? The appropriate answer for this question may be found in the recent art forms such as technological art, digital art, video art projection installation, laser art, which have been fast growing as a result of scientific and technical inventions (Figure 11 & 12).

Addressing the potential of these new art approaches in developing and producing new techniques of contemporary murals, has evolved as one of the main concerns of this study.

The following examples demonstrate a number of significant techniques used in producing innovative contemporary murals. These techniques have new potentials and insights that might generate convincing answers for the questions raised in this paper concerning the site- specificity and the notion of temporary murals for the architecture of the new age.

1- Projection art by Ian de Gruchy

Figs 13 represents one of the Australian artist Ian de Gruchy works . There is no doubt that the visual impact of this work is spectacular, and applying this technique on an architectural façade might classify the work as a digital mural. However, with a closer look at de Grouchy's work, the site-specificity of each project in its current state is not obvious. The specific architectural features of this facade (windows, doors, architectural style, etc) were not fully taken into account in the digital design made specifically for them. This means that one of the main aspects that distinguishes murals as site-specific work (according to this study) is missing and if the same projection were displayed on another façade, the visual effect might be the same.

However, it is not possible to ignore the significant technique de Gruchy used in producing this remarkable work, and from a professional point of view with some slight changes in the pictorial composition of these projected designs to fulfill the site-specific aspect of the façade,   I would strongly agree to classify this work as spectacular mural of the new age.

It is also important to highlight how the artist himself thinks about his work, (Ian 2012)says:

"By integrating research, technology and production and combining the best of analogue technologies (photography, projectors) with the power of digital technologies (imaging, keystone correction, slide production) it is possible to produce complex engaging works with projection"

The criteria established in this paper for contemporary murals would strongly agree with the above-mentioned statement by de Gruchy. This significant technique has the advantage of performing and generating new insights in the realm of murals and would encourage contemporary muralists to develop innovative murals that would challenge the architecture of the new age.
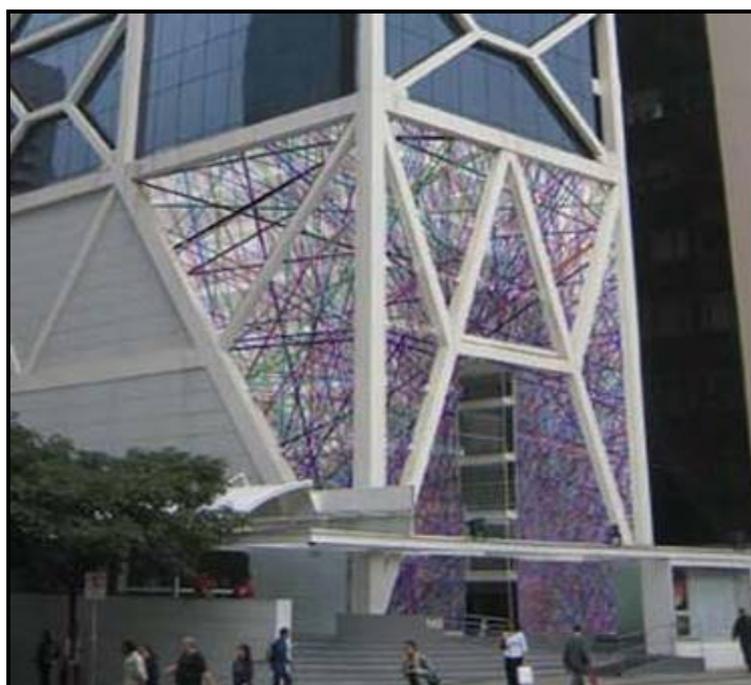

Figure 11 Pascal Dombis, Mertz, France 1999, large format digital print for a thirty-meter window in an art school, after being digitally processed by the Computer.

Figure 12 Paul Pfeiffer, 'Dutch interior', 2003. MIT List Visual Arts Centre
Digital Installation

Figure 13 Ian de Gruchy, Maitland Town Hall (Art Projection), April 2005, Australia

2- The Interactive Twitter Mural

Figure 14 represents another type of the new technology impact on contemporary murals. The Canadian tourism industry is trying to attract American tourists to head to Canada for their next vacation by relating to them through social media on the streets. DDB Vancouver put giant, touchable screens (8X10 foot) in New York, LA and Chicago with real time twitter updates that people are posting about their travels through Canada. The author states that

> *"People passing by the mural can interact with the live posts by leaving comments for the travelers and viewing their photos. They can scroll through different posts to read the*

ones they want and they can enlarge the pictures to get a better view".

Although the author classified this piece of work as a mural I would also contest the site-specificity aspect of this mural. As seen in the picture it is very obvious that the main elements used in the design are the common features usually seen in a web page. This seems to be perfect in demonstrating the conceptual aspect this mural was based on; however, the visual implementation of these web elements does not seem to fulfill the site- specificity of this particular wall. The final visual impact may attract passing people as an astonishing extraordinary visual piece of work, but from a professional point of view if the pictorial composition took into account the specific features

of this wall I would suggest that the final visual impact would be more effective and would be more attractive because the whole visual elements would be integrated to each other and to their architectural context.

The idea of the interactive technique however, seems to be innovative and updated at the same time. Thinking about interactivity in producing creative murals generates new challenges to contemporary muralists. It would add a further aspect in mural design to be considered, this is the functionality aspect of the mural, such as the current adv mural.

Figure 14 Canadian Tourism, 2009, Interactive Twitter Mural, New York, Chicago and LA. USA

The author of the current article (Canadian Tourism) says:

"Perhaps an interactive mural will eventually let you virtually play around with a new product, for example an iPad, so that Apple can do research by getting feedback on what to improve and to see what consumers want from the product"

3- "Three Weeks in January" Suzanne Lacy's Digital Mural

Figure 15 represents another innovative technique that has been implemented in one of the recent murals in the USA. The digitally produced mural is printed directly on an aluminum substrate, and was the result of the artist's aesthetic choice based on the metallic architectural elements found in the LAPD headquarters.

This Digital/Mural as described by the (author 2012) is pushing the boundaries of materials traditionally used for outdoor and indoor murals by experimenting with the latest available technologies and digital processes.
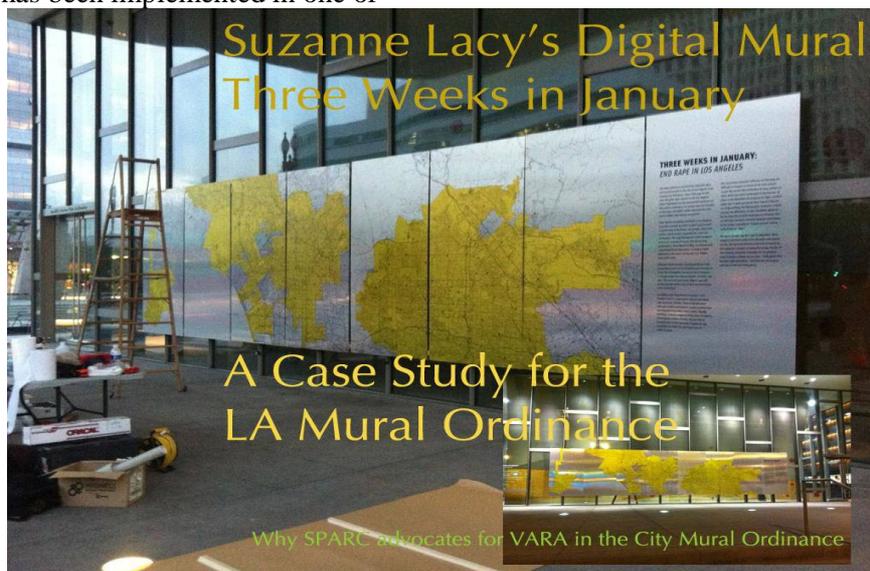

Fig.15 Suzanne Lacy, Three Weeks in January, Digital mural in LA. USA
(Date unknown)

The idea of digital printing on different mediums such as metal, wood and glass would expand the potentials these materials embrace using this digital technology. This notion will result in producing murals that would cope with several modern and post modern architectural styles. The artist of the current mural used digital printing on Aluminum substrate in particular, in order to incorporate the mural with the architectural settings for which this mural was made. This innovative technique strongly supports the idea this study was based on. It was not possible to think out of the box in the production of traditional

mural practice. The newly innovative techniques discussed in this part of the research thereby, would expand the way contemporary muralists and practitioners think of modern contemporary murals.

4- Google Map

The final example this paper presents is an attempt to reflect upon the pre-mentioned techniques. It represents one of my students' virtual designs made for a specific wall at the faculty of Applied Arts in Egypt. The student designed this mural to be painted on the designated wall using acrylic based paints as shown in Figure 16.
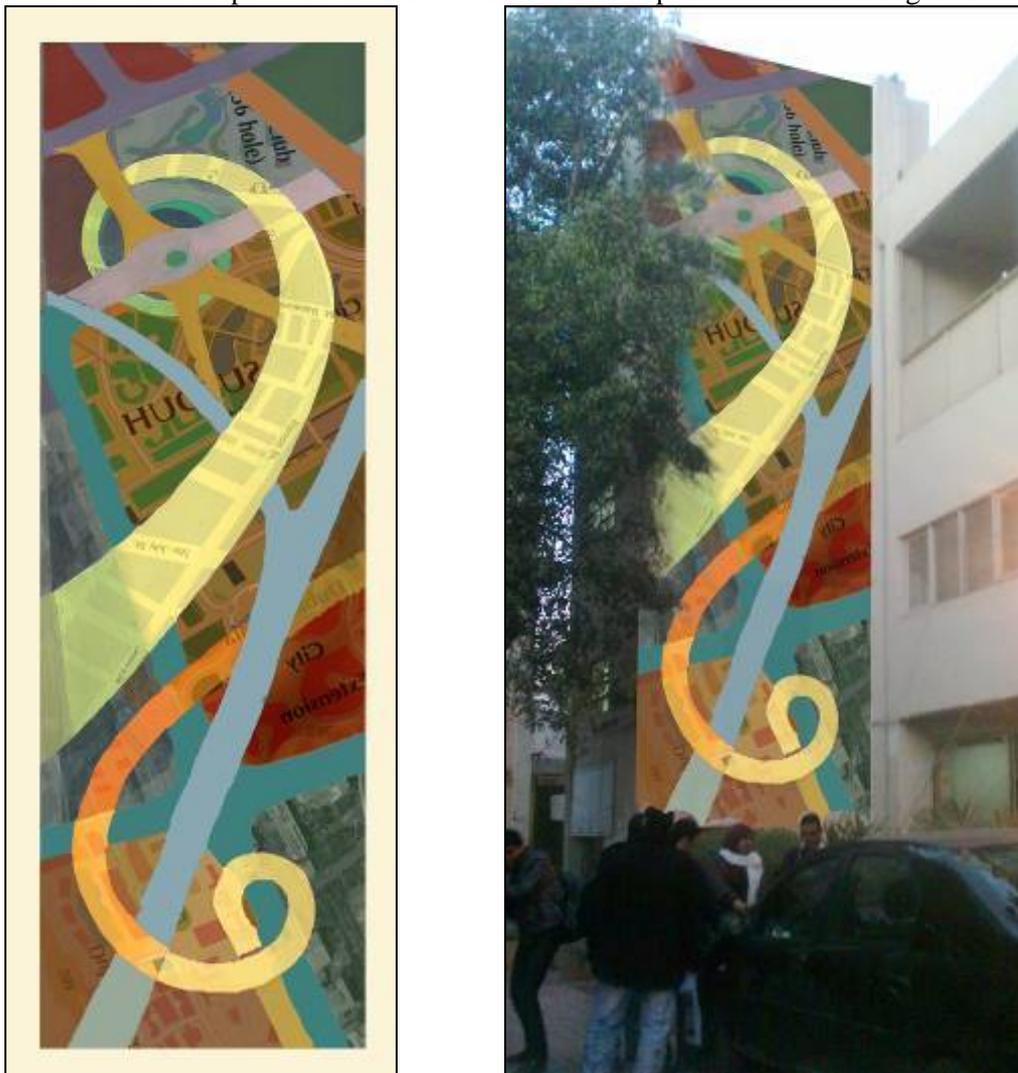

Figure 16 Shereen Khaled, 2012, Google map, virtual design for the Faculty of Applied Arts. Egypt

With a helping hand, Mrs. Khaled developed this design which was inspired by the common features found in Google Maps. She did not think of any digital means to be applied in the execution of this design in spite of the clear instructions given to all students to think about innovative ideas to produce their designs. Throughout the development of this study and after investigating

the pre-mentioned techniques I thought of this particular design to be produced in a different innovative approach. The initial idea was to digitally project this design on the wall using digital installation technique instead of using scaffolds to paint the design on such extremely high wall. This particular idea is now under

processing to perform the first digital mural inside the faculty of applied arts.

Results and Recommendations

In the context of this study I have addressed a concern in problematic contemporary mural practice. Throughout this research, I have found that in the production of contemporary murals, there is often little relationship between the compositional aspects and the architectural physical spaces for which they have been made. This type of relation between murals and their architectural context is what distinguishes murals as site-specific art forms.

 I have also raised the notion of temporary murals that would strongly affect not only the design process of a mural but also the techniques and materials used in the production of contemporary murals.

The newly innovative techniques investigated and discussed in this study would directly or indirectly develop and generate new insights in contemporary mural practice; hence, the result of the points raised in this study could be summarized in the following points:

 1- The identification of murals as site-specific art forms.
 2- Identifying the possibility of murals as non-permanent art forms.
 3- The use of digital technology in the development of contemporary mural practice.

This study would also recommends the following points:

 1- Further practice-led studies in the field should be undertaken in conjunction with digital technologies to extend the exploration of the potential these media have for mural design and production.
 2- There is scope for further research based on cross disciplinary collaboration between artists and architects and/or artists and new media technologists, which could produce substantial new literature in the field and, could subsequently provide a significant contribution to the development of contemporary murals.
 3- Defining murals, as site-specific art forms could extend the scope for a review of the way in which traditional murals have been seen and practiced across art history until the

20th century. This would also extend the research area for practitioners, art historians and theorists

.References

- Cass, C., 1988, *Grand Illusion, Contemporary Interior Murals*, London: Phaidon Press.
- Fiebusch, H., 1947, *Mural Painting*. London: Published by Adam & Charles Black.
- Kaye, N., 2000, *Site-Specific Art: Performance, Place and Documentation*, London and New York: Routledge.
- Kwon, M., 2002, *One Place After Another: Site-Specific Art and Locational Identity*, USA: Massachusetts Institute of Technology,
- Peel. L., Polly, P. & Garrett, A., 1989, *"The 20th Century Architecture"*, London: The Apple Press.
- Popper, F., 2007, *From Technological to Virtual Art*. Massachusetts: Massachusetts Institute of Technology.
- a-n Magazine. The Artist Information Company, ISSN 02613425, June 2008.
- Architectural Review, November 03/ volume ccx1v No. 1281
- Abdelrahman, A. 2009, Compositional Structures in Mural Design, PhD, University of Bedfordshire, UK
- Posey E. J. R., 2000, The Effects of Technology on Place as Viewed from Contemporary Fine Art Practice, PhD, University of Wales Institute, Cardiff.

Web sites

- http://www.sitespecificart.org.uk/1.htm. Accessed: July 2009
- http://www.nytimes.com/2004/28/arts/design/28Blum.html Accessed 2008
- http://www.dombis.com/work/geminga.htm. Accessed 2008
- http://www.artprojection.com.au/html/Idebib.htm , Accessed in July 2012
- http://urgensia.com/2010/08/interactive-twitter-mural/ , Accessed in June 2012
- http://www.sparcmurals.org:16080/sparcone/index.php?option=com_content&task=view&id=553&Itemid=103. Accessed in June 2012