Design workshop:
The case of creating a stencil mural

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Abstract

Street art, as a global art movement, affects the daily lives of people in towns and cities of our world. Taking that into consideration, this paper reports on the concept of creating a stencil workshop with the goal of painting a stencil - mural (large scale artwork on a vertical surface). This co-design workshop includes some type of Maker technology approached through experiential learning and educational methodologies similar to those used in Design courses, as the ones taught at the Department of Product and Systems Design Engineering of the University of the Aegean. The multidimensional character of street artists is presented in this paper's introduction and their role as creators is examined under the light of design. The techniques and methods they use can be analyzed as design processes, one of which is the creation of stencils. Specific reference is made to the history of this artistic medium, alongside other ways of transferring a draft from paper or the screen on to the wall. The stencil-mural workshop took place in the city of Hermoupolis, Syros, Greece and was attended by 24 participants, young design students from different semesters, who worked individually or in groups for three days. The final artwork and the individual steps of its production are presented, and the paper concludes with all the results and insights provided by the study of the process and the feedback received from the workshop participants.

Keywords: Stencil, Mural, Workshop, Design, Street Art

1. Introduction: Street artist as designer

In search of the etymological framework referring to Public Art, Urban Art, Street Art and Graffiti, there are many different correlations, relationships, overlapping concepts, sections, subsections, terminology, meanings and symbolisms. Efforts to examine this phenomenon by separating and categorizing its concepts is a process in the making by circles of scholars worldwide. In this paper, street art is viewed under the prism of design, following the systematic approach of the doctoral research conducted at the department of Product and Systems Design and Engineering of the Aegean University, which is associated with the triplet Design - Street Art - Creation.

In the writings of Hilde Hein, the term public art is described as a design and implementation process that involves a series of complex and high level negotiations for reaching agreement between all stakeholders, who may have conflicting interests (Hein, 1996). The author clarifies the

time and space in which this process is performed and the meaning that it carries, but, most importantly, public art is called a "design process". This is an effective demarcation for defining public art and street art, that can be broken down into an innovative and dynamic range of design methods and techniques for projects, media and manifestations.

The multitude of different techniques and approaches for creating street artworks and the continuous emergence of new artists are both factors that do not leave much room for a thorough and timely documentation. Having a long past and great complexity, elements under the term street art include "spray-painted stencils, large scale murals, paper paste-ups, ephemeral sculptures - only at the turn of the twentieth century the term emerged as a global category, eventually producing its own system of legible forms, leading practitioners, galleries, publications and events" (INOPINATUM, MacDowall, 2013:125). As shown, the flow of

data on street art is constantly changing: mostly expanded on a global base of information, main representative of which is the Internet.

However, being a type of art which is usually under no rules, what remains timeless is the free spirit and the ideals it represents. The works of street art and graffiti convey many different messages and can be performed with a number of different techniques. These techniques vary depending on the tools (spray, brushes, stencils, markers, trowels, compressors, etc.), the "artistic way", which is a combination of tools and techniques to achieve the purpose (painting, drawing, sculpture, collage, knitting, etc.) and, finally, the surfaces of urban space or objects in which the artistic expression takes effect (walls, pavement, columns, windows, cars, etc.).

Street art, besides spray, indelible pens and markers that are normally used by graffiti artists, allows artists to deal and work with whatever means best serve their artistic style. That is a reason why many artists, in their routine, take advantage of a vast repertoire of mixed techniques with one or more forms of different media [Hughes, 2009]. Some of the techniques that are now associated with street art, such as posters and stencil creation, have been used for various purposes prior to their adoption by artists. Most of these techniques were exploited by graffiti artists to be more productive, or because they better help them to manage the quality of their work, but also because it contributes to their faster creation (Bofkin, 2014:24).

As in other fields of art, but also in graffiti and street art, it is common for the people involved during, before or after the process of production, to shift between roles of artist, designer or user. The role of the craftsperson could also be added, as, according to Phillips and Pilz, "when street art is practiced media-driven is more craftwork than art. The focus is on manual skills, procedures, and media usages." (INOPINATUM, Phillips, Pilz, 2013:125). Often unconsciously and sometimes knowingly, street artists adopt elements that facilitate the flow of their work, which derive from other cognitive environments, such as those of design or technology.

Another element that refers to the multidimensional nature of the street artist is mentioned by Sarah Thénot, in her thesis

(entitled UNFRAMED - A system of connections between artists and people through mural arts in a Colombian city). The relationship between the artist, work and the end user has changed. For example, the artist, at first, had direct contact with the customer, but then several intermediaries began to appear, who facilitated the flow of information, the purchase and leasing of art projects and, also, demand / supply issues, such as galleries, dealers, museums, curators, and auctions. The role of the artist changes from "decorator" to a protagonist of society's everyday life as a builder of expression and a visionary. The parenthood and uniqueness of his/her art projects, render the creation "alive", both in terms of emotional and economical value, often making it a luxury item and an investment which few can access (Thénot, 2011:81).

Of course, there also is and will continue to exist the need for an open and free expression on the street, since "Street art is gaining popularity and is becoming a stand-alone focus for many students, artists and galleries, as well as advertisers and youth-based marketing. Although there is no study dedicated to this genre, it may be a matter of time before critics and scholars begin looking at the potential of this rapidly growing phenomenon" (Deitch, J., Gastman, R., Rose, A., 2011:14). Indeed, street art has already been embraced by several research communities and will continue to expand on this course.

Undoubtedly, as advocated by Stephen Wilson, there is another side, where the artists themselves can contribute to many aspects of scientific research, putting on the table new topics for discussion, planning "unorthodox" approaches and discovering methods to visualize their findings. Artists may help researchers explore, or even understand unknown dimensions and cognitive frameworks and can establish channels of communication with the audience outside of the scientific community (Wilson, 2010: 16). The view of Christopher Frayilng, in his paper Research in Art and Design, which studies research as a driving force in art and design is also very interesting. The artist, by definition, is someone who works through an expressive idiom, rather than a cognitive, and masterly work for him/her is the result of personal evolution: it is more like autobiography rather than understanding the reality that surrounds him. The researcher - scientist is characterized by strict organization and the habit of raising speculations and hypotheses which

she tries to prove or disprove according to a set of formal and systematic procedures (Frayling, 1993).

It is vital that Graffiti and Street Art "should be embracing municipalities' support to focus on projects that intervene in aggressive urban infrastructures or resume the spontaneous and ephemeral character of Street Art that are in fact, its nuclear strength" (INOPINATUM, Simões, 2013:125). In this direction, private and public bodies should invest in educational norms and expand the channels of communication between artists and other stakeholders, so that both can indulge and reap the benefits of street art's multidimensional reality.

Methods for reproducing art on the wall - Stencils

The study of the techniques and methods that were used in the past, the ones that are being used now and those that will continue to be discovered by street and graffiti artists is a very interesting one. Especially if the search on their roots gets deeper, it is observed that they are often based on the use of known traditional techniques, separate or mixed, or even their blending with other brand new, emerging methods.

In most cases, if it is not about an improvised, unscheduled expression. What precedes the creation of a certain art or other similar type of project is the creation of the draft. The draft is the main guide and the first step to a "safer" approach, especially if the final artwork is going to be a large-scale mural. There are several ways to transfer a draft or an outline from the paper or the monitor on to the wall, and the use of some of the major traditional ways, include:

Grid - The use of grid is an inexpensive, traditional low-tech method for reproducing or upscaling an image from one medium to another. It can be quite a lengthy process, depending on how large and detailed the final project will be. For this method, all that is needed is a ruler, a small-sized copy of the reference picture and a pencil to design the grid lines on the desired surface.

Transfer paper - This technique is used very often, especially by beginners wishing to transfer their projects on to large-scale surfaces. It relies on the use of transfer paper, a paper surface coated with a powder-like kind of material, which is mounted onto another surface when pressure is applied. The transfer paper is a medium that has high precision, but cannot easily be used on uneven surfaces.

Pounce Pattern - A traditional method of transferring drafts from papers onto other surfaces is this ancient technique. Pouncing refers to the use of graphite or coal which with consecutive blows is gently transported through small holes of a paper forming a pattern or a border, to another surface. The holes are made with the help of special tools, such as an awl. A great advantage of this method is that the perforated paper can be reused many times and the transfer of the pattern is very fast.

Video Projectors - A projector is a handy tool for both beginner and master artists. Painters working on photorealistic projects often use projectors to magnify and transfer the image from a small picture onto a large canvas. Moreover, the use of projectors for transferring projects on a large scale, also shows how the development of technology provides a solution to basic issues of art and creativity.

Direct drawing - Many street and graffiti artists consider these aforementioned techniques invalid or "fraudulent" because the work is not direct and spontaneous, and each of them contains many technological aids. In direct drawing, artists simply stick the paper with the draft up on the wall with tape and begin to slightly sketch the basic outlines. Throughout the process they are taking steps back to see the project from a distance and at the same time adjust and improve the necessary areas until the artwork is completed. Of course, this process requires much more skill and thinking to run, while it is also very concerning that the artwork should always be viewed from afar so that the artist is sure that everything is going right. Drawing on a large scale is demanding and much time can be spent erasing and redesigning parts of the project. Although, among the advantages is the entertainment provided by this creative process, but also the possible "pleasant accidents" that may eventually enhance the project.

Another reproducing method is the stencil, which is very close to the pounce pattern, only the painting tool used is spray paint. Stencils can be used either as drafts or as integrated tools and their extensive use in street art applications, has led to the emergence of a distinctive artistic style derived solely from them. Images made from stencils range from simple hearts or circles to complex scenes of cities or realistic portraits. The applications are endless, from creating decorative designs for use at home to street artworks or even

to stencils for construction use. Stencils have a long history. Hand outlines in many prehistoric rock paintings in caves can be characterized as the first stencils. They were also utilized as a tool for coloring fabrics for centuries, especially in Japan. In the mid-fifteenth century, they were used for coloring black and white prints from wood engravings. The illustrations on playing cards or books in mass production, for example, were made in this way. Today, their use is often found in street art projects.

The stencil is one of the simplest and most accessible means of artistic intervention in the streets. Since the 1960s it became applicable in Europe and the United States, and very popular from the work of Ernest Pignon-Ernest in France, Hugo Kaagman in Holland and Chaz Bojorquez on the West Coast of America. The stencil can be made easily at home. Many artists make complex stencils in their workplace, and they later create their designs on the street much faster (Catz, 2013: 52). One of the most famous street artists nowadays, using stencils to create most of his artworks is Banksy.

2. Related work: Street art and co-creation

There are numerous examples of collaborative art projects and experiments that have been performed in the past or running at the moment. This type of research is carried out either by universities, institutions, schools, separate departments, by organized groups or even individuals. The creation of a mural or a stencil may be a personal matter, but it can employ a number of people of different professional and artistic disciplines. In street art and graffiti festivals, artists are invited to work individually or together to create artworks on large prefabricated surfaces, walls, or buildings.

A well-known collaborative project is the Favela Painting project, which is about the creation of enormous murals painted on the walls of favela housing and was developed by two designers, Jeroen Koolhaas and Dre Urhahn or Haas & Hahn. The Dutch duo, through an online funding platform, managed to get together, on several occasions in the years 2009, 2010 and 2013, a large group of builders and painters, children and adults, with a common goal of completing an artistic project in two favelas of Rio de Janeiro. The result not only helped in the beautification of the favela, but also in the regeneration of the surrounding area, where the previously unfinished homes were completed, achieving double

benefit, because better living conditions were offered for the residents (Rahman, 2014).

The redevelopment of the city of Tirana in Albania (Abazi, 2014) and the giant murals of Philadelphia (Golden et al., 2002) both show that the impact of street art in social, touristic, economic and communication issues are particularly advantageous. Especially when such actions are launched by experienced professionals in the field of architecture, design and other similar disciplines, then the result can contribute to the improvement and the fulfilment of predefined needs and desires or to address specific problems.

Like any other art form, in street art, individual styles and techniques can be the core of instructive material, which, depending on the degree of expertise and requirements, can be used at different educational tiers as a separate formed course or as "condensed" knowledge that will be presented in workshops, art studios or laboratories.

3. Design workshops and fabrication labs

The different approaches to learning procedures and teaching methods are many, as well as many are the references in the literature, with a starting point on the works of Dewey, Kolb, and Schön. Moreover, textbooks rich in information and examples on the collaborative artistic creation and construction are, Connected! LiveArt by Waag Society and FAB by Neil Gershenfeld.

Creating (Making) is currently applied in different places, permanently established as Makerspaces and FabLabs or temporary, such as Hackathons. An important aspect of the Maker movement is the need to integrate the ideas and culture of educational contexts or learning activities, associated with the idea of "learning through making or constructing" which is rooted in constructivism, considering that learning can occur more effectively when people act while making tangible objects in the real world (Anderson: 2012).

The Department of Product and Systems Design and Engineering has repeatedly offered its infrastructure and equipment to support the hosting and running of several different workshops over the past years. Indicatively, one of them is the recent Open Design & Fab Workshops: The

Case of Making Use of 3D Printing Technology in Scenarios of Recycling Plastic. This workshop worked by training participants through the making process, which followed a certain constructivist approach, such as active learning, experiential learning, reflective practice and problem-based learning. These approaches can be applied to any learning context ranging from academic to vocational training.

The Stencil Mural Workshop that is presented in this paper was based both on the philosophy of active and experiential learning and on the methodology adopted in the Design Studio (Studio 7c) course of the D.P.S.D.E. [Bofylatos et al.: 2016]. In this way, students who have already attended the Service Design Studio class, can work under certain conditions which are familiar to them, addressing the process of making a stencil and creating a large collaborative artistic work, as a process for designing any other product or system that will later be used for a particular service or for a predetermined purpose. Additionally, they can work in groups, as they are accustomed to during the execution and delivery of projects in specific courses of the department.

4. Stencil mural workshop

The main subject of the Stencil Mural Workshop was the learning of a basic method for designing and creating a stencil, individually or collaboratively, in order to use it to create a mural composed of stencils. The workshop had a total duration of 24 hours and was divided into three different classes of 8 hours per day. One of the main goals was that the participants could work in groups or individually, after having received all the necessary information for each step in the manufacturing process and use of the stencil.

The workshop took place under a class project for the Design Studio 7c, of the Department of Product and Systems Design and Engineering of the University of the Aegean, and
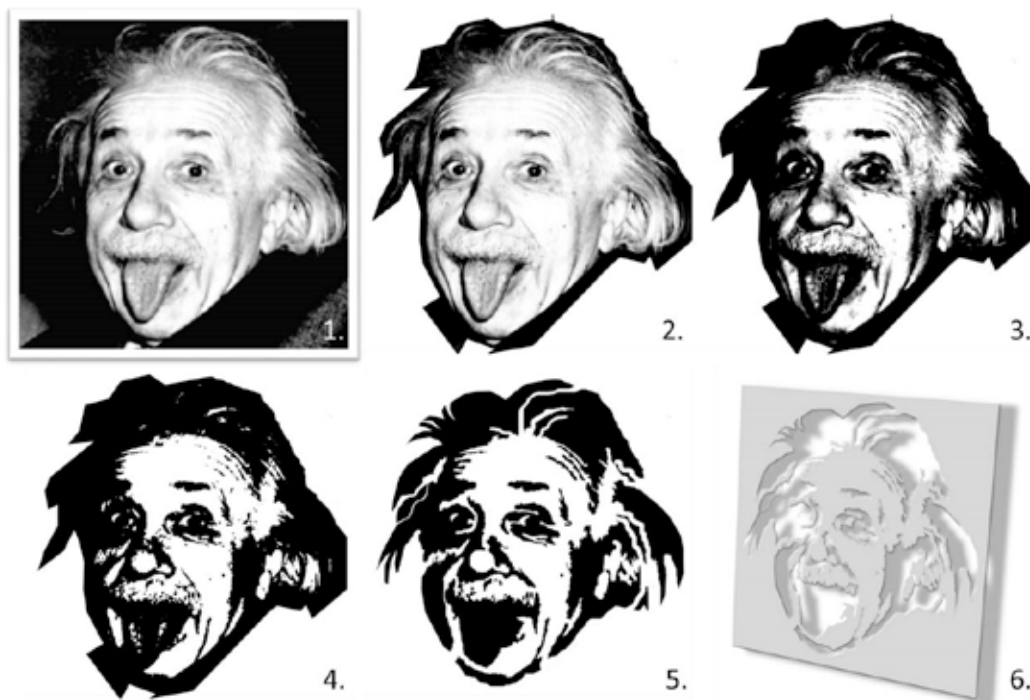

Fig. 1. Using a photo to create a stencil. Step 1. Image selection, Step 2. Background deletion, Step 3. Brightness/contrast adjustment, Step 4. Saturation adjustment, Step 5. Technical details adjustment, Step 6. Printing, pasting on the desired surface and cutting. Steps No. 4, 5 and 6 when using a drawing and steps 5 and 6 when using a photograph are those that require the most attention and are the most time consuming. The better completion of these steps would guide the ultimate success in the making of the stencil and for this reason the participants were instructed to deal with them diligently to avoid the possibility of errors, which would create problems later. Many of those who attended the workshop initially had difficulty understanding the usefulness of islets, bridges and the margin (Fig. 2) but in the end, when they put their stencils on the wall, they realized their importance in the construction.

was originally proposed by a six-member group of students as part of their work for the semester. The central axis around which the teams' work revolved was the design of a service, and, more specifically, the analysis of the ways of tool-sharing, in order to bring together designers with artisans or craftspeople so as to exchange knowledge and experiences. For this purpose, this workshop was created and organized considering that the participants are students who are invited to create a project using tools and methods that are known to urban artists.

The total number of participants was 24 (19 women), from 18-24 years old and all of them were students of different semesters. The six-member organizing team secured the necessary materials and premises essential to the workshop. Specifically, the workshop amenities included razors, pens, papers, rulers, sprays, paperboards and old x-rays films to

create and cut the stencils. The use of recyclable materials, such as x-rays, enhances the sustainable character of the design process. The laboratory and the departments' amphitheater were also used, containing the necessary desks and computers with pen and tablets for those who wanted to work in digital software.

The first part of the presentation on the first day of the workshop concerned the history of graffiti and street art and their different manifestations. The second part focused on the history of the stencil as a tool for the creation and reproduction of images, patterns and other graphics and gave fundamental information on creating and cutting it. There were also presented many works by famous street artists engaged in the practice of the stencil, such as Banksy, C215, Blek le Rat, 3 dot and others. After the presentation, the participants were divided in groups or individually started
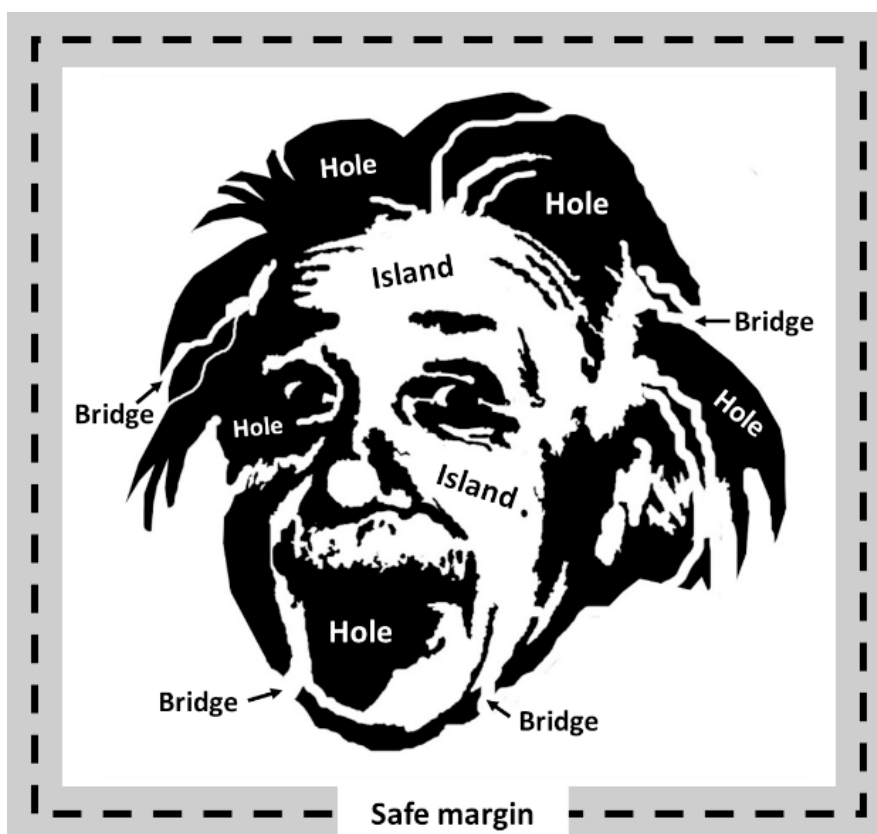

Fig. 2. Bridges and the margin

thinking about what they wanted to create as a stencil. To make and cut the stencil they followed the steps below:

Theme selection. Participants were allowed to either use a ready-made image from the web or to design whatever they wanted.

Creation of a draft. If they had chosen a photo from the web (Fig. 1) instead of this step, the participants were called to edit the photo to make it black and white, and then to adjust the brightness, contrast and threshold levels to obtain the desired result. In a few words, they were taught how to "trace" the image.

"Cleaning" the draft. At this stage, the participants had to present an as "clean" as possible draft or photo, without visual noise or unnecessary details, so as to facilitate the process later during the transferring to the cutting surface.

Technical details. After the "cleaning", the participants added in their images, by hand or digitally, the details needed for a stencil to be cut

correctly. These include the "islands", the "bridges" and a safe margin around the stencil.

Transfer to the cutting board. Whether by printing and pasting, or simply by placing their designs with tape, the different themes were transferred on the x-ray film or the paperboard and were ready to be cut.

Cutting the stencil. At this last step, the participants completed their stencil.

Most of the participants chose to create their own themes, with preference to those depicting characters, humans, animals or cartoons. Other topics included decorative designs, objects, abstract designs or a combination thereof. It is noted that three of the participants chose to deal with the making of multi-layered stencils which they managed to successfully carry out on the wall. The main paper sizes used were A4, A3 and A3 multiples. For cutting stencil sizes larger than A3, they used cartons or many x-rays joined together. In the final count the number of all various sized stencils were 38, after some of the workshop members constructed over
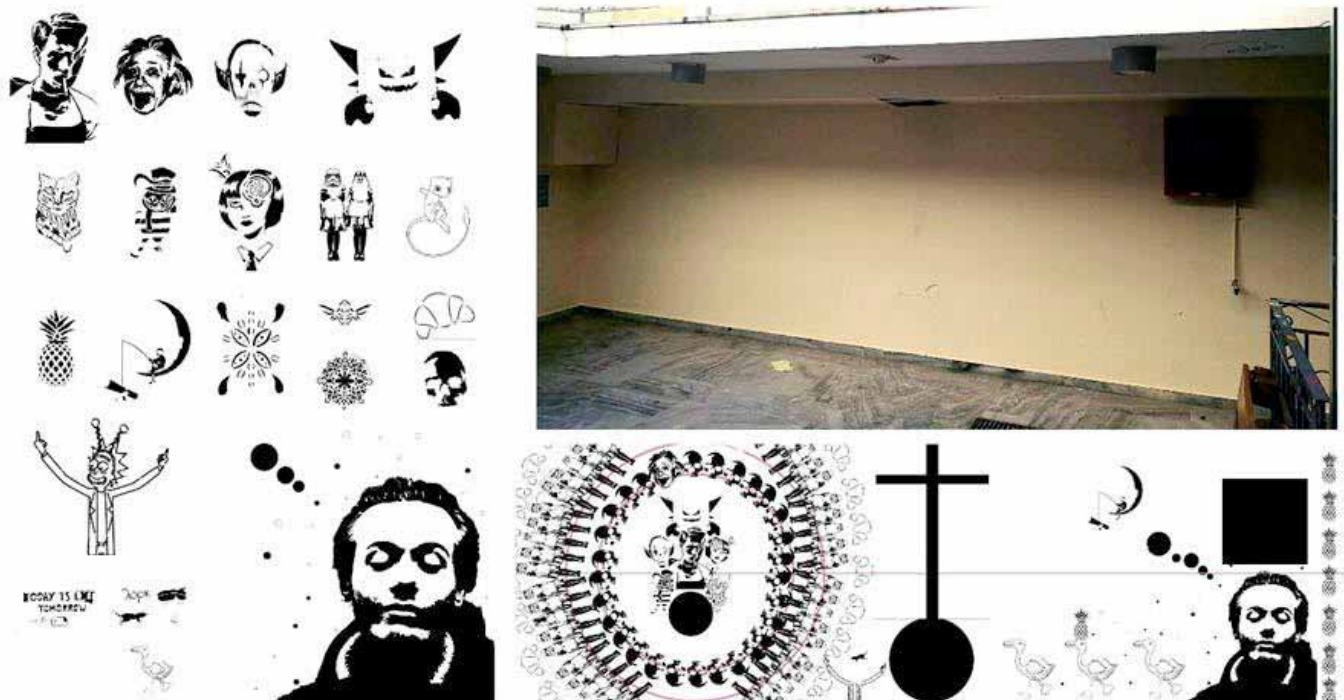

Fig. 3. Stencil workshop elements - Some of the stencils of the workshop (left),
the wall before (top right) and the draft sketch created (bottom right).

2 individual stencils.

On the second day of the workshop (Figure 4.) the students finished cutting the stencils that had not been completed. Once this happened, all the projects were stored in digital jpeg file format, with 70 dpi resolution, in proportion to their actual dimensions. Thus, all projects could directly be used in the digital draft model of the wall using the appropriate software (Adobe Photoshop), in order to develop the overall draft, which would be the guide for the creation of the final artwork. The overall draft was formed in cooperation with the organizing team and the participants, at the end of the second day by co-decisions and adjustments that took place in real time. The goal was that the groups and each lab member would propose a spot where they would like to draw their stencil, and to finally arrange and place them all together to create the final artwork.

Final corrections to the stencils were made at the start of the third day while the first circular guide lines were sketched on the wall. As co-decided, some stencils on the left part of the wall would be reproduced along these circular lines, creating concentric circles surrounding a subject made of other stencil designs. When all groups and individuals

Fig. 4. Snapshots from the first two days of the workshop - 1. Sketching before cutting, 2.,3., and 4. Participants cutting the stencils, 5. One of the completed stencils, 6. All the stencils together.

Fig. 5. Snapshots of the third day of the workshop -
1. The first circle is completed, 2. and 3. Participants working together for the final creation.

were prepared, the first stencil was created by the author and, subsequently, under his guidance, the participants began to make the rest. The colors used were pre-selected with subjective criteria by the organizing team, which also painted the wall with emulsion paint, before the beginning of the workshop. The wall is 1.90 meters high and 6.20 meters long. The spray paint used was Montana Gold of pink, turquoise, black and white color. There were 6 cans for each color (total 24 cans), but eventually it took about half of each. The remaining colors were stored to be used in the future in a similar activity.

Fig. 6. The final artwork (stencil - mural).

For the creation of the final artwork (Figure 6.) none of the above methods of transferring (section 2 of the paper) was used. Actually, it was not necessary, since the stencils themselves had the needed size and were able to work as individual pieces of the master draft and could also perform simultaneously as guides. The only thing necessary was the creation of the circular lines, that were made using a nail, thread and a pencil. The end of the workshop was marked with the completion of the stencil - mural that was made entirely, from beginning to end, by the workshop participants.

5. Conclusions and future research

Throughout the workshop the participants showed a lot of enthusiasm and interest, especially the younger ones, having received a first impression of how an organized design approach can lead to interesting results, even if it concerns artistic fields, such as stencils and street art. Thirty percent of the students had never made a stencil before, nor had ever attended seminars of such type. For them it was a really special experience, as they mentioned at the end.

Many students were initially worried, because they thought that they would be required to work for the creation of an artistic work, which requires talent and imagination, but after their familiarization with the materials and the clarification of the "tricky" areas of the process, they were very satisfied and confident about the stencil they produced. After the workshop, all participants were asked to answer a questionnaire. The most useful data were plotted in graphics, from which some useful conclusions were derived. The majority dealt with character creation (74%) (Figure 7.), most participants said they acquired a new skill (65%) (Figure 7.), as well as many answers confirming the beneficial and educational function of the different aspects of the workshop (presentation, tutoring, creative approach, and so on).

A participant said, "I realized very quickly the way of making a stencil, although I've never made one before". Another said, "I liked it so much that when I went home I continued to make more stencils". The aspect of co-working received many positive comments, both about the creation of the
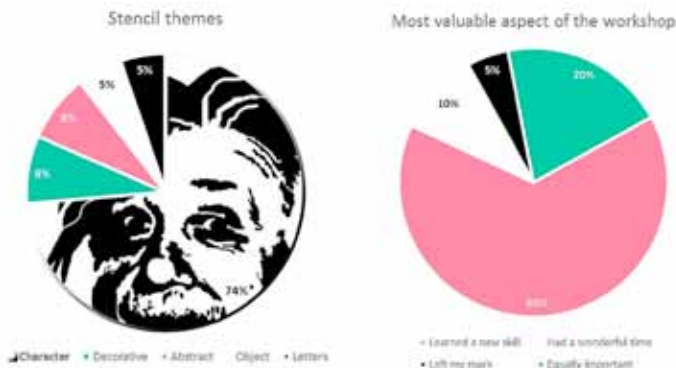

Fig. 7. Pie charts 1 and 2. Different stencil themes (on the left) and most valuable aspect of the workshop (on the right).

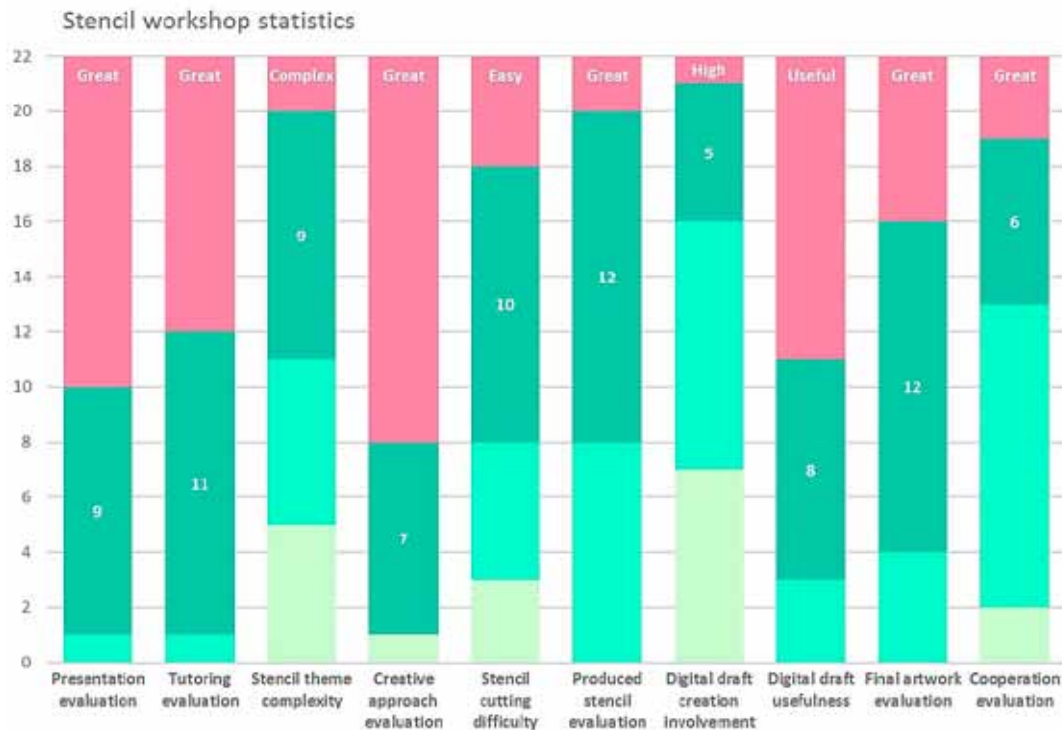Fig. 8. Participant information - Past and future

Fig. 9. Participant trends - Different aspects of the
workshop from low to high regarding different matters.

collective stencils, and also about the creation on the wall. Questions regarding the stencil making and the cooperation between the participants concerned a) the needs of the workshop, b) personal needs, c) neither d) both, the clear majority responded both times the fourth. Also, on the question on which workshop day was the most interesting, the third day prevailed against the first by 2 votes, mostly because the participants enjoyed working together on the final artwork.

A part of the workshop which did not work as dynamically as the rest, was the creation of the digital draft on the second day. Some of the participants were able to express their opinions in the way they wanted, while others had a stronger will. This has led some in the decision not to participate and simply observe the process of creating the final draft. This did not create any particular problem in the smooth implementation of the remaining parts of the workshop, but a little resentment was obvious on the part of some participants. In a future workshop, this would be one of the first pieces that should be studied and designed more thoroughly, as it appeared it was one of the weak points.

Ultimately, the three-day seminar on stencil making to create a co-operative mural, can be called a success according to the participants, the large and loyal attendance and the final result. It was a first experiment, which can work as a base for exploring respective themes in the future. Further projects would be very interesting if the participating audience could come from environments that are not related to design or artistic mindsets and working methods, or even children or elderly people.

Of particular interest would be the study of the results of the implementation of such a laboratory in a public area and the documentation of the public's reaction and the degree of the final project acceptance. In addition, quantitative and qualitative criteria which could be explored is the use of a wider color pallet, the making of larger stencils, the creation of artworks in larger and more areas. Finally, possible future research could focus on the interaction with other academic fields, and the standardization of many individual procedures of the workshop with the aid of other disciplines.

Fig. 1. (Step 1.) Albert Einstein's photo by Artur Sasse (http://www.storypick.com/wpcontent/uploads/2016/01/AE-1.jpg) Fig. 4. (1 to 5) and figure 5. photos by Nefeli Karaslanidou. All other figures and photos created or taken by the author.

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