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The Artistic Contribution of Electrographic Practices to the Archaeology of Electronic Art

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Abstract

Nowadays, it is almost a fact that electronic art and, therefore, media art was not born without inheritance. This research presents a return to the past through media archaeology as a methodological approach in order to study the role of artistic electrographic practices of (re)production, transmission and printing out of images as underground movements.

Our research assesses artistic practices such as Copy Art or Fax Art. The study analyses their historical development as essential part of (historical) media art. By suggesting a new analytical perspective, we aim at discussing and understanding phenomena, art paradigms or art forms that became visible in the analog and digital materiality of the photocopy and fax artworks.

For this purpose, the research is based on the original artistic documentary and bibliographic materials, as well as artistic collections held by the International Museum of Electrography (MIDE) in Cuenca (Spain) since its opening in 1990.

Keywords

Media Art Histories, Media Archaeology, Electrographic art, Copy Art, Xerography

Introduction

The 1960s is a unique period, not only in its political, social or economic significance, but as the decade when Media Art emerged. It was the year 1968 when social protests began to spread out at US universities' campuses through youth and feminist movements with liberating, anti-consumerist and independent ideas and demands. Those same movements spread throughout Europe and ended in the May 1968 events in France, among universities' students and staff, and the general population.

In that period and in that historical context, two automatic technologies of the image reached the market: the Personal Computer and Portapack video camera. In light of the 1960s countercultural movements, a group of pioneering and experimental artists began to investigate in a technology they found mostly by chance, as "found media" (McCray 1979:6), usually in universities, offices or copy shops. This technology was the photocopy machine, which became widespread with the commercial purpose of making copies in a more agile, fast, cheap and instantaneous way with the Xerox 914 model in 1959. This technology involved a genuine revolution at the artistic level, especially because of its instantaneous nature and multiplicity, both in functional process and in the materialization of the artworks (Fig. 1).

In the United States, pioneering artist Sonia Landy Sheridan got involved in the creation of posters for the democratic convention together with her students and discovered the photocopy machine as the perfect tool for the creation and distribution of this type of works as well as a creative tool. But she was not the only artist who found in the photocopy machine the potential to be an artistic medium,

> [...] In the early sixties, artists began to work with copy machines, whether located in offices or installed in public places. For these artists, copiers were truly 'found media', personal discoveries uncovered in setting not previously recognized as associated with art-making activities. (Shanken 2009: 206)

N'ima Leveton, an engraver from San Francisco, produced her first series of prints on a coin machine she found in a neighbourhood supermarket. In 1964, Barbara Smith rented a Xerox 914 photocopy machine that was installed in her dining room; it was usual for her family to eat while she was working with the machine. Artist Esta Nesbitt discovered the photo-

Figure 1. Lieve Prins creating one of her artworks with a model on the Canon Color NP photocopy machine. ©Artist´s personal collection, Amsterdam.

Figure 2. Jürgen O. Olbrich simulating the handkerchief registration process with the photocopy machine and surrounded by part of his works. ©Artist´s personal collection, Kassel.

copier at the Parsons School of Design, where she was a member of the faculty and, later, she continued the work within the machines at the company Xerox in Manhattan, organizing her schedule in relation to the sales demonstrations that the company made. In the Seventies, German artist Jürgen O. Olbrich discovered this machine in the office where he worked and made his first records of the used handkerchiefs that he kept in his pocket (Fig. 2). Similarly, Klaus Urbons and Amal Abdenour discovered the photocopier at their workplace, where they began to use it covertly. These are some examples among many others.

Although digital technologies were established in the 1980s, these analogue and electronic tools answered to new creative needs which reflected some of the changes that were taking place in economic, social and political fields and predicted many of Media Art's features. These three technologies and their artistic practices have been described as "underground experimental avant-gardes" or "alternatives" (Alcalá 2015: s/n), specifying their extremely experimental character and developed in parallel to the general art movements of the time. Moreover, in 1981, French artist Christian Rigal considered these three technologies, along with the Polaroid, as guilty of the great change in the artistic creation (Rigal 1981) and this idea was also defended by Frank Popper and Marie-Odile Briot at the large *Electra. L'électricité et l'électronique dans l'art au XXe siècle* exhibition in 1983. Two years after the publication by Rigal and also in France, this officially manifested the significance of these three technologies in the field of art and new technologies since the exhibition was divided into three central areas: electrography, computer and video.
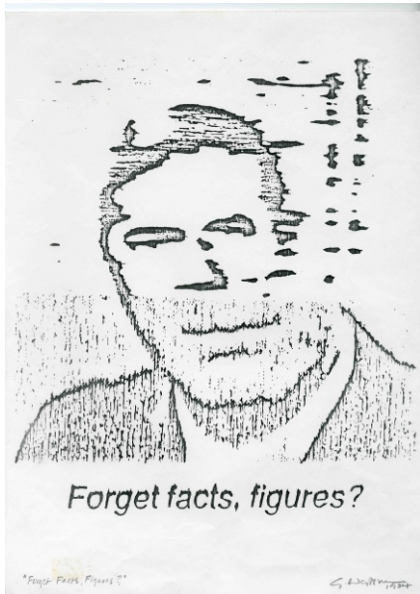
Figure 3. G. Weissmann, *Forget facts, figures?, 1984*, monochromatic xerography, 42 x 29,5 cm. ©MIDE Collection

Of these experimental techniques, especially those practices relating to the computer and the photocopy machine have been kept in different places, establishing their own spaces for exhibitions, workshops and even archives or collections. Following the words of Professor Kate Eichhorn,

> Although most researchers have spent a substantial amount of time using and fixing copy machines at some point in their career, few have considered the machine´s epistemological, aesthetic, political, and social impacts in their research. (2016: 8)

In the case of the photocopy machine as an originally electric and later digital technology, it had a number of technical and functional features as well as restrictions that made it unique for creative use by becoming its graphic language. But one of its significant art historical contributions, which at the same time made theorists not consider it as Historical Media Art, was the establishment of new parameters in art-making through a material production which would become the conceptual, aesthetic and discursive foundations of contemporary art.

When the photocopy machine made art

Historically, it was the US-American inventor Chester Floyd Carlson who patented the electrophotographic reproduction process after making his

Figure 4. MIDE team is assembling a photocopy machine's Interface Processor Unit. ©MIDE documentary archive

first electrographic copy in Astoria on 22 October 1938. That copy consisted of a text written with graphite pencil in which the date and place of the event was indicated: "10.-22.-38 Astoria." The result of his process was denominated Xerography, that is to say "dry writing", because it used dry electrostatic for copying documents. The first electrographic machine came on the market in 1950, but its process was manual until the Xerox 14 appeared in 1959.

As a technology linked to the market, it was marketed as a Xerox company product and distributed worldwide, where it came to be used artistically. The first artists who adopted this technology were mainly North Americans, who started a trend to create with this machine that led artists to explore all its possibilities. Since then, this technology was used by many artistic avant-gardes movements, such as Mail Art, Pop Art or Conceptual Art.

The machine became a "centre" which gathered many artists using it to go beyond the use of a simple artistic technique and turning it into an artistic movement. Known as *Copy Art*, it possessed a recognizable style with graphic characteristics influenced by the diverse countries where it was developed; and evolving with the progress of the technology itself.

Copy Art is a term that produces distortion in its artistic practices and a representation of a time period when artists, obsessed with highlighting the pioneering use of technology, decided to define their art by its new tool in order to emphasize that technological quality. The same happened with Polaroid (*Polaroid Art*), video (*Video Art*), or computer (*Computer Art*), as quoted by the Italian theorist Domenico Quaranta alluding to a commentary by the writer and curator Francesco Bonami, which summarizes the problem this way:

Figure 5. Marik Boudreau, *Untitled*, 1984, Monochromatic xerography, 33 x 20 cm. ©MIDE Collection

> [...] those who talk about computer art haven't a clue what they're talking about, and confuse the medium with the content, the idea, the result, mistaking the tool for the work of art. Art is not like Formula One, where the car counts more than the driver. (Quaranta 2013: 31-34)

Beginning in the 1960s, this fruitful artistic production lasted for more than 30 years and was extended through different geographic areas with the idea of exchange. All of these artistic-technical works established creative parameters that due to the mediality imposed by all electrographic production connect with the general parameters of contemporary Media Art: the relevance of the artistic process itself; the interest in the error which is directed to the current digital culture of Glitch Art, and its search as a form of originality; or the artist closer to a researcher who collaborates with scientists and technicians. In addition, the procedural interface appeared, which in the case of the photocopier is the glass where the light sweep took place in order to trap the objects and translate them into machine language. In this way, creative development ceases to be an undeniable path towards a final object, passing from the traditional "image-object" to the "image-process."

One of the most important potentialities and the radical change that Copy Art provoked deals with concepts of the original and the copy, uniqueness and multiplicity. This is where the greatest subversive power

resides, which caused rejection by the market, critics and art historians. Although the photocopier was introduced to the market for copying documents, the artists used it to generate original artworks, where the act of photocopying deformed the academic approach of artistic creation. Many artists were attracted to use the degenerative technique that can be considered as a logic of reproduction which reproduces itself and ends up being a different reproduction. Artists created works with infinite self-generation which represents their own mechanism of reproduction. This can be observed in the artworks by Miguel Egaña, Marik Boudreau or Giorgio Nelva.

It should be clarified that the machine has an attribute as producer of multiples that transgresses the idea of uniqueness. This does not devalue the original, but transforms the market value of a work into a value of exhibition and dissemination. The latter produced a change in the dissemination mode of the electrographic work, since normally it did not —and still does not—occupy the space of a museum that maintains its traditional cult to the original and to the classic parameters of art. For this reason, this art form is located directly in private archives managed by independent collectors or the artists themselves.

Historical milestones in the context of media art

Artists linked to electrography have been relegated outside the general history of contemporary art, even though it spread internationally and the contributions influenced the main artistic contexts of what is considered as historical Media Art (Escribano 2017: 1039). For example, this technology was presented at the *XX. Biennale di Venezia* in 1970 by Italian artist and designer Bruno Munari. The Biennial changed its traditional curatorial strategy and set out to show an experimental approach to art, inviting artists who worked with new materials and technologies. In this Biennial, an Italian pavilion of *Ricerca e Progettazione. Proposte per una Esposizione Sperimental* was established, where a selection was included which showed the first experiments with computers, and which overlapped with the contributions of Bruno Munari. He installed the Rank Xerox in one of the rooms, called *Laboratorio per la Produzione Manuale e Meccanica*, so that the public could experiment with it. During this event, the Italian artist took the opportunity to present his publication *Xerografia. Documentazione sull'uso creativo delle macchine Rank Xer-*

Figure   6. General view of the exhibition *Interconnexions copigraphiques*, with the work *F.I.N.* by Alcalacanales, 1993. ©José R. Alcalá´s personal collection, Valencia

ox, which was a kind of catalogue that worked as a recipe book on the potential applications of this technology.

The same happened at the *Software Information Technology: Its New Meaning for Art* exhibition (1970) curated by Jack Burnham at the Jewish Museum in London which explored the 'epistemological break' through a series of experiments carried out by various research teams and scientists outside the field of art. It was an exhibition where innovative technology was used by focusing on the relationship between people and their electronic and electromechanical surroundings, encouraging the use of electronic means in unconventional ways. Among those participating artists was Sonia Landy Sheridan, one of the pioneers in the use of the photocopier since the photocopier was an electronic domestic medium transgressed for artistic purpose. Sheridan, one of only two female artists invited to participate in such an exhibition, asked a 3M Colour-in-Colour photocopier to be installed and available to the public during the exhibition. Sheridan named the result "Interactive Paper Systems" (AA.VV. 1970: 8) and visitors had the opportunity to interact in different degrees and levels with the various technologies.

Professor Kate Eichhorn stressed that aspect in Sheridan's involvement with the public, saying that the "interactivity of photocopy machines" (Eichhorn 2016: 48) or the potential to engage an active participant in the process was something Sheridan explored as a pedagogical tool in exhibitions and in the Generative Systems Programme at the School of Art Institute in Chicago.

It is important to also highlight the *Ars + Machina I: Infographismes, Photographismes, Reprographismes* exhibition in 1980 and *Electra. L'électricité et l'électronique dans l'Art au XXe siècle* in 1983, both in France and divided into main thematic blocks: computer graphics, video art and artworks made with photocopy machine. The aim of these exhibitions was to make a compilation of the new directions that artists had taken thanks to the use of new technologies.

In 1989, the Brazilian artist Luiz Guimaraes commissioned a large exhibition dedicated to Copy Art for the XX. Biennial of Sao Paulo, bringing together a wide range of works from some of the most renowned international artists of the time. In 1992, at the prestigious and significant Media Art Festival *Ars Electronica* in Linz, the Austrian artist Peter Huemer organized the exhibition *Copy Bites* in the Galerie MÆRZ. Huemer prepared the exhibition with artists from the 1970s, 1980s and 1990s who used the photocopier as an artistic medium, including works by the German artists Georg Mühleck and Albrecht/d. And one year later, Monique Brunet-Weinmann curated the exhibition *Copigraphic Interconnections* (1993; Fig. 6), within *Montage'93. Festival International d'Image,* which took place in Rochester. Since 1987 this festival tried to take a step forward by becoming an annual event for new media. The exhibition was intended to show the relationships and cultural crosses between artists from different countries whose artistic practices used the photocopy machine for creation. To that end, she invited artists from all around the world. This exhibition, which was specifically focused on artistic creations that used the photocopier, was part of a large festival that contained 16 different exhibitions with such diverse media as photography, video, computer graphics, painting, sculpture and installation.

Two years later, Monique Brunet-Weinmann and Jacques Charbonneau co-curated the exhibition *Photocopy Art—Who were the Pioneers? (Que sont les Pionnières devenues?,* 1995), in the Gallery Motivation V/Centre Copie-Art in Montreal as part of the well-known Media Art symposium ISEA—International Symposium of Electronic Art[1]. The curators wanted this exhibition to show what had happened to the pioneering artists of Copy Art, exhibiting works from their initial period together with other works they were doing in that period. In this way, the photocopy machine and the different artistic creations that were formalized as a result of its artistic use were part of two of the annual events that are considered cardinal in Media Art: Ars Electronica in Linz and ISEA (Interna-

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1   http://www.isea-archives.org/symposia/isea95/.

tional Symposium of Electronic Arts), which every year takes place in a different city. The fact that these artistic practices were part of these two prestigious festivals, placed them within the recognized field of historical Media Art.

Furthermore, these artistic practices have been mentioned in publications which are considered to be milestones in the history of electronic art such as the book *Art of the Electronic Age* (1993) written by Frank Popper, who was a very important figure for the recognition of xerography in France. This French theoretician, who participated as an artist in the exhibition *Copy Art-Electrographie-Electroradiographie-Telecopie* held in Dijon in 1984 considered Copy Art as part of the art of communication. Another landmark publication is *Postmodern Currents. Art and Artists in the Age of Electric Media* (1996) by Margot Lovejoy, who was an artist of the First Generation of Copy Art; or the publication *Sintopía(s). De la relación entre Arte, Ciencia y Tecnología* (2007), in which Spanish artist Marisa González wrote one of the chapters dedicated to Electrography-Copy Art. Also, Edward Shanken quoted in his book *Art and Electronic Media* (2009) the pioneers Bruno Munari and Sonia Sheridan, and the contributions of German Timm Ulrichs.

Sheridan also published her texts and reflections in places within the field of art and new technologies, such as the magazine *Leonardo*, as the article "Generative Systems versus Copy Art: A clarification of terms and ideas"[2] in 1983, which sought to clarify the confusion that was emerging between the terms "Copy Art" and "Generative Systems", since the latter referred to her teaching and research program dedicated to art made with tools that lead the human being to ruptures in art and democratization.

Conclusion

The relevance of this research is to demonstrate that our considerations of these practices in the context of Historical Media Art are not based on evasive connections, but demonstrate how Copy Art and Electrographic Art were an integral part of its history. Artworks were exhibited and discussed in the most relevant places and festivals which are now references of Media Art and its Histories. Our aim is to make art historians, curators, theorists, critics and other experts aware of this fact, especially when

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2   http://arteca.mit.edu/journal/10.1162/leon.1983.16.2.103.

tendencies which relate to the materiality and the new materialism of the digital are on the rise.

It is precisely now important to do media archaeology to give light to the origin and development of our most recent art history. To that end, critical reviews of the unpublished documentary materials, which MIDE and other public and private museums, archives and collections have preserved for years, are needed to safeguard the works created with these new technologies. We produce in-depth analyses to recover all these experimental practices and to reclaim the place that all these processes truly deserve within the well-known official art history.

Finally, thanks to collections such as those owned by MIDE in Cuenca (Spain) or the *Museum für Fotokopie* in Mülheim an der Ruhr (Germany) or to documentation owned by art and research centres such as the Daniel Langlois Foundation in Montreal (Canada), interested researchers will be able to demonstrate the quality and interest that all these forgotten practices have had, allowing the establishment of the theoretical and critical bases that allow to review the history of these artistic practices at the transition from the XX. to the XXI. century, from analogue to digital art.

Acknowledgments

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