

Re-enactment as method:

An action research project on art and design

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Abstract

In the 1960s, a group of artists called Gruppo T, by combining design, arts and technology and through the production of interactive environment and kinetic artifacts, pioneered a history of arts alternative to the one based on traditional craftsmanship: they turned the audience into active users and developed the principles of a multiplied art, made for everybody. Aim of the paper is to describe the methodology of the application of practices related to open design, the development of open source software and hardware, and the use of open licenses as means to investigate the connections between the principles introduced by Gruppo T and contemporary practices in art and design based on the use of new technologies. The results highlight a novel approach to design and art history investigation, based on the combination of hands-on activities, participatory practices, and the concept of re-enactment as method.

Keywords

Programmed art, Gruppo T, open source technologies, fablab, interaction design

Introduction and context

Arte Programmata or Programmed Art is the name given to the body of works produced by a group of Italian artists active between the late 1950s and 1960s. The term was coined by Bruno Munari and Umberto Eco in December 1961 for the Almanacco Letterario Bompiani (Almanacco Letterario Bompiani 1962), and subsequently used in the exhibition held at the Olivetti showroom in Milan, in 1962, which showcased works by Bruno Munari, Enzo Mari, and the artists of Gruppo T (Giovanni Anceschi, Davide Boriani, Gianni Colombo, Gabriele Devecchi and Grazia Varisco) and Gruppo N (Munari 1962). The artists produced objects by applying processes similar to those of technological and design research, namely by creating prototypes which were then reproduced as series of ever-changing artifacts. The idea that works of art could be completed with the action or interaction of the viewer emerged in the early 1960s, thanks to the experimental work carried out by these artists, who pioneered the use of technology and an algorithmic approach in art. The pieces produced by Gruppo T are representative of what is known as Programmed Art, which subsequently paved the way for the development of interactive art. Space-time, transformation, variation, and participation: these are the keywords of Gruppo T.

It was the beginning of the 1960s, yet their art was already interactive and immersive. Nevertheless at that time their artworks were difficult to read, understand, and accept. The interactive artworks by Gruppo T involved the body of users: the public was no longer passive. The user was given a free rein to play with the artwork, and became a co-author. The user was programmatically put at the center of the work. If Futurism put the audience at the center of the artwork, Gruppo T transformed the audience together with the artwork.

Interaction was one of the key concepts that Gruppo T used to disrupt the art world. Reproducibility was another concept they used to reach this goal: Giovanni Anceschi asked Gianni Colombo to exchange his artwork $0 \leftrightarrow 220 \ volt$, and got as a reply: "Do it yourself!". This answer suggests the concept that Gruppo T's works could be re-made starting from the new industrial materials and technologies which seemed cartoonish for their initial clumsiness and fragility.

The third element of Gruppo T's artistic production was the application of methods similar to the ones of design research: the group worked on series of artworks that explore specific effects and aesthetics by generating ever-changing images. They developed a kinetic multiplied art that was close to the manufacturing of

industrial design pieces: a multiple edition of 99 numbered pieces plus 9 artist's proofs was developed from the Miriorama objects that were featured in the exhibition *Miriorama 8* at the Galleria Danese in Milan in 1960 and reproduced in collaboration with artists, heirs, and archives of the members of Gruppo T in the re-edition project of Officina Alessi in 2010 (Alessi 2010).

The 2010 re-edition highlighted a continuation of something that had started fifty years before, and had faced difficulties in its reception: the artists of Gruppo T envisioned the art of the future as reproducible, interactive, distributed, and multiplied.

Interaction, reproducibility, and multiplication were the key points that led a group of researchers and artists to start an action research based on the idea of re-programming, not just re-making, with the purpose of studying the art by Gruppo T. We chose to investigate the spirit of Gruppo T on one hand by betraying the uniqueness and originality of the artworks, and on the other by answering new questions concerning the conservation of artworks that cannot be simply contemplated, but call for the active participation of the audience.

Re-enactment through design and making

In the field of ethnomethodology, the researcher as a competent participant in fieldwork tries to understand the social order by studying it and by reproducing its activities until one is fully competent at it (Goffman 1989). In the words of Erving Goffman, the fieldworker has to acquire the rhythms and personal aesthetics of the people or practices being studied: hence our attempt at action research tends to transform the participants into the "phenomenon" itself, to understand it from the inside.

In the case of Kinetic and Programmed Art, carrying out research means reconstructing, namely understanding what works are made of and how they are made, the materials used, and the algorithms deployed to incorporate an element of chance into the program.

The work *Scultura da prendere a calci* ("Sculpture to be Kicked at") by Gabriele Devecchi (fig. 1), for example, has a conservation record that under the heading 'condition', merely states 'poor'. This poor condition is a direct result of the artist's intention: the sculpture was designed to be kicked at until unrecognizable, in pieces, annihilated. Using the work, as part of its performance, also leads to its destruction.



Fig. 1: Gabriele Devecchi, *Scultura da prendere a calci* ("Sculpture to be kicked at"), 1959, ph. courtesy of Archivio Giovanni Anceschi.

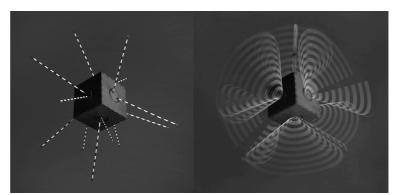


Fig. 2: Esacono by Giovanni Anceschi, Serena Cangiano, Davide Fornari, 2015, ph. courtesy of Sara Daepp/SUPSI.

In order to study Gruppo T's artworks and the key aspects of their artistic investigation (interaction, reproducibility, multiplication) we experimented making- and design-based processes. On September 1-7, 2014, we asked five groups of artists, designers, and researchers, together with two members of Gruppo T to meet at SUPSI fablab in Lugano (Cangiano, Fornari, Seratoni 2015). The goal was to build prototypes of kinetic artifacts that would translate the main principles of Programmed Art into the codes of contemporary culture, following the tenets of peer production, namely open source hardware and software and digital fabrication technologies. The hands-on workshop was the initial activity of an action research aimed at updating Programmed Art by reprogramming the artworks with new tools, using the techniques and processes of interaction design, as well as maker and DIY culture. During the action research, each artist set about translating Gruppo T's artworks into a form that would enable anyone to reproduce, repair or subvert it, in order to elicit reflections on the practices involved in creating visual effects, visualizing physical phenomena and interactions, manipulating mechanisms, and playing with materials and technology.

The results of the research are five artworks whose specifications and source files are released under open and Creative Commons licenses. They are artworks, but also experiential prototypes that allow the public to understand Programmed Art through direct interaction. The prototype Esacono (fig. 2), for example, is a translation of the concept that generated the series Strutturazioni cilindriche virtuali (1963-1966) by Giovanni Anceschi. The concept is described in issue 22 of the magazine il verri, but was never produced due to the limits posed by the technology of the period. It is a cube suspended by one corner which has six motors embedded into each side. The motors drive two rotating rods that draw six truncated cone shapes in space, creating virtual volumes. The speed varies from motor to motor, and as a consequence so does the effect of the six shapes drawn in the air at the sides of the hanging cube. The prototype Magnetic Drawbot stems from the principles of the work by Davide Boriani, who in the series Superfici magnetiche presents machines that perform a single program generating changing and developing images (fig. 3). Magnetic Drawbot is the result of a research project with a playful element: ferrofluid unexpectedly turned out to be an unpredictable sort of ink, which created very distinctive graphic effects when animated and magnetized by hand.



Fig. 3: Magnetic drawbot by Giorgio Olivero, Fabio Franchino (TODO), 2015, ph. courtesy of Sara Daepp/SUPSI.

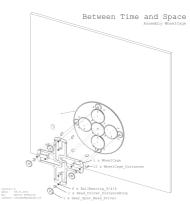


Fig. 4: Blueprint of Between Time and Space by Martin Fröhlich, 2015, image courtesy of the artist.

Open sourcing as preservation strategy

The initial concepts of the action research reside in the key changes within the field of participative creation and development of interactive artworks: open source hardware and software, open design and the use of Creative Commons licenses, all foster collaborative design processes, and the users or co-creators are members of widespread, networked communities which share knowledge in order to complete or expand on the work of artists and designers (Kennedy 2011).

The open source paradigm applied to the realm of physical things implies that the documentation of a design artifact is made public so that anyone can study, modify, distribute, make, prototype, and sell the artifact based on that design (Open Design Definition 2015). Fablabs and the various kinds of distributed infrastructures for DIY and peer-to-peer production enable anyone to benefit from the constructive and creative potential of technology that for a long time was too complex for the layperson. Open sourcing the artistic practices by re-making masters' artworks became in our case the act of re-programming them with open technologies and principles: building upon existing knowledge, releasing a complete documentation, source files and bills of materials, applying an open license such as Creative Commons in order to allow other people to make artifacts without asking permission. In this context we envisaged the possibility to be in tune with the utopia of Gruppo T about a multiplied art made for everybody by using the model of open source development: the parts and the files of the derivative artworks that are built upon Gruppo T's artworks are open source.

The action research project sought to evoke the 'T method' and reframe its pioneering, innovative spirit in the light of the paradigm of peer to peer design and production.

Re-enacting the transnational collaboration

Gruppo T's origins are rooted in the cultural exchange between Italy and Switzerland. The collaboration was set up between Milan, Bellinzona, and Lugano. Since the end of the 1950s, Davide Boriani, Gianni Colombo, Gabriele Devecchi and Grazia Varisco were all students of Achille Funi at the Accademia di Brera, where they learned fresco technique. Giovanni Anceschi was studying philosophy at Milan's Università Statale, attending Enzo Paci's courses on temporality and relationality, and Husserl's *Cartesian Meditations* in particular; he also attended Cesare Musatti's courses on perceptology and psychoanalysis. He was bent on an artistic career, however, and Funi accepted him in his classroom at Brera.

Since before its official foundation Gruppo T was spontaneously formed in the class of Achille Funi. Together with the realization of the fresco series, they started to experience the idea of method and collective work that would allow them to deal with the theory and realization of the very first kinetic works.

Achille Funi's course at the Accademia di Brera was also attended by Kiki Berta (Bellinzona 1938). Berta invited Boriani to organize a show in Switzerland and Boriani extended the invitation to Colombo and Devecchi, with whom he already worked.

In June 1958 the exhibition was held in the Sala Patriziale in the city hall of Bellinzona, Switzerland. Several months after this episode, Berta, Boriani, Colombo, and Devecchi were invited again for another exhibition, this time at the Lyceum of Southern Switzerland in Lugano, in November 1958.

In his review, the Swiss art historian and critic Gualtiero Schönenberger wrote: "Gianni Colombo, Davide Boriani, Gabriele Devecchi and Kiki Berta from Bellinzona are barely twenty years old. Thus, first of all, their works want to document an orientation of today's youth. Yet the diversity of their characters, often successfully expressed in their paintings, shows that these young people were able to listen to their inner tone: and this is a good omen". Kiki Berta was later replaced by Giovanni Anceschi, who became a founding member of Gruppo T in 1959.

Aware of this episode of Gruppo T's history evoking a Swiss-Italian cultural exchange at the end of the 1950s, we framed the action research in the context of a bi-national cooperation program between Italy and Switzerland promoted by the Swiss Arts Council Pro Helvetia. The aim was twofold: to recreate the experience of such an encounter among young artists and the beginning of a collaborative process that initiated Programmed Art. Secondly, we wanted to reconnect that spirit of collaboration at an international level thanks to online document sharing and the connection among spaces such as fablabs.

The result of re-enacting the encounter stimulated a reinterpretation process of Gruppo T's artworks and, in general, of Programmed Art principles from the point of view of young artists and designers based in different countries. All artists and designers were already sensitive to topics such as algorithmic art, computational design, and open hardware and design. Their perspectives on those topics helped connect the Gruppo T to contemporary practices in design and art mediated by new technologies. Moreover, their view of Programmed art helped show how this kind of art can be investigated through a process of collaborative transnational design.

Collaborative transnational design is also a key aspect proposed by the fablab network that consists in a network of connected libraries sharing common tools and practices for creating physical artifacts. By creating open derivatives of Gruppo T's artworks that can be made with the use of digital fabrication tools available at fablabs, the group of young Swiss and Italian designers and artists involved in the project reenacted the transnational collaboration of the so called New Tendencies that Gruppo T was part of. New Tendencies was a movement that brought together personalities with different backgrounds and drove the whole field of art towards the future, blending technology and perception studies together. New Tendencies produced a new kind of operational figure who innovated the ways in which works showed their aesthetic and perceptual qualities, spread the idea of art for everyone, and foreshadowed new forms of activities connected to research methodology (Anceschi 2014). Art became one of the disciplines whose purpose is to produce knowledge. New Tendencies was a cohesive transnational community open to the future and to a scientific view of the world, showing the connections between art and design that anticipated the creation of a network of spaces such as fablabs.

Conclusion

The approach of historical investigation proposed by the project Re-programmed art highlighted how the method of re-enacting practices rather than the re-making of artworks activates an exchange of knowledge whereas the tangible outcomes of the prototyping activities is merely a manifestation of this exchange. The exchange was an outcome generated through transnational collaboration between artists and designers from Switzerland and Italy that is now entrusted to the community of people active in the fablab network or in the open design and hardware movement.

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Biographical note

Serena Cangiano is researcher at Laboratory of visual culture of SUPSI, University of Applied Sciences and Arts of southern Switzerland. She coordinates the Master of Advanced Studies in Interaction Design. Her research focuses on open design and hardware and their impact on the interaction design education and the technological innovation.

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Azalea Seratoni is an art historian, writer and curator. After completing her studies at Università degli Studi in Milan, with a dissertation in contemporary art history, namely on Bruno Munari's relationship with Japan, her research focuses on the disciplinary field concerning the borderline between art and design.