



Pittronica Towards an Archaeology of the Electronic Image on Italian Television

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Abstract. In retrospect, the ways and times that have characterized the transition from analog to digital television should now be reviewed in the light of the fundamental steps that the progress of computer technology had during the '80s of the twentieth century. If it is clear that since the first television broadcasts, “traditional” visual arts have given a strong contribution to the aesthetics and contents of Italian television, there are not many studies that have investigated the function, operated by TV, of bringing out the role that information technologies have had in the construction of a new visual imaginary. Therefore, the article proposes first reflections about events, transmissions, personalities and technologies that are at the origin of the computer divulgation in Italy mediated by television. Among the proposed case studies, some significant incursions into television programming by personalities already known for having investigated experimental forms of hybridization between TV, art and computers will be analyzed, as well as programs, also on the radio, that have seen the electronic/digital language interact with the television one.

Keywords: TV show · electronic image · digital archaeology · technological visuals · Italian television · paintbox

1 Introduction

Pittronica is the title of a television program that Massimo Mida and Sandro di Paola created for the RAI's Center for Research and Experimental Programs in Turin.

It aired in prime time in February 1985 on RAI3. The intent was to show the combinatory graphic capabilities of a graphic workstation assembled by the Technical Laboratory of RAI, equipped with an input tablet and an electronic pen capable of tracing colored graphic elements on the screen.

The experiment was not particularly successful because the two artists called to test the workstation, the sculptor Emilio Greco and the painter Bruno Caruso, did not fully grasp its potential, reducing it to an instrument capable of faithfully replicating their authorial trait, emphasizing only some procedural peculiarities. In fact, the transmission, focusing on the artistic career of the two, ended up trivializing the use of the computer (Fig. 1). In retrospect, the ways and times that have characterized the transition from analog to digital television should therefore be reviewed in the light of the fundamental

steps that the progress of computer technology had during the '80s of the twentieth century.

If information technology already promised the revolution of every operational custom, the complete digital transition of traditional media would have involved a long and troubled process of settling the entire television sector of electronics on new technological standards. While it is clear that since the first television broadcasts, the “traditional” visual arts have made a strong contribution to the aesthetics and content of Italian television and they are at the origin of a “technological visuality” [1], there are not many studies that have investigated the function, operated by TV, of bringing out the role that computer technologies have had in the construction of a new visual imaginary. The article is therefore proposed as a first reflection on the events, transmissions, television personalities and technologies that are at the origin of the dissemination of computer science on Italian TV. Among the proposed case studies, we will analyze some significant incursions into the television programming of personalities already known for having investigated experimental forms of hybridization between TV, art and computers, as well as programs and shows, also on the radio, that have seen electronic/digital language interacting with the television one.

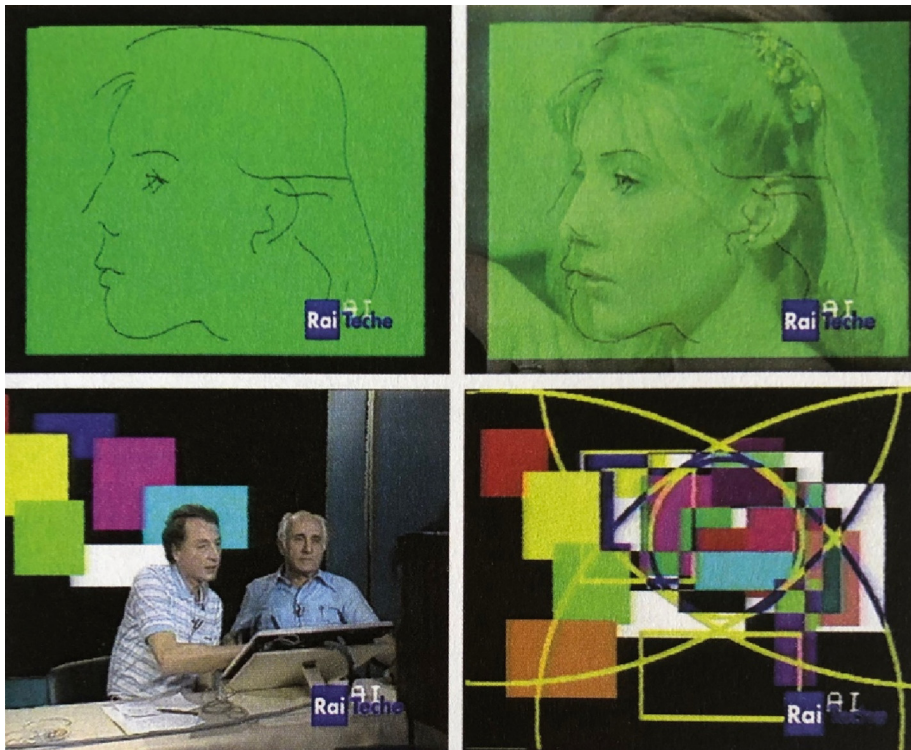


Fig. 1. Frames from the television program Pittronica (1985)

2 Personal Computer and Television

On December 26, 1982, the Computer was named “Machine of the Year” by Time magazine. The “machine of the year” (as the same magazine defines it) is unique in the history of the weekly magazine. The choice of Time derives from the great success that in that period had the PC, becoming an object within the reach of many.

The early '80s represented an epoch-making moment for the sector. Companies such as Microsoft, Apple or IBM were founded in that period, gaining a competitive advantage that other companies in the industry never had before. Even though the Personal Computer had just been introduced, that is a home computer now available to most of the population, it was considered as a typewriter capable of speeding up and replicating some procedures indefinitely. Time magazine decided to dedicate the cover to it because it identified in this tool the medium that would accompany humanity in the future. The model on the cover was the one that was representative for the time: the IBM 5150. A computer capable of selling more than 200000 units in the first twelve months after its launch in September 1981 and that led the competition to conform to the standard, creating IBM-compatible personal computers.

In the same period, at least two technological innovations will profoundly modify television broadcasting in Italy and in the world. On the one hand, the introduction of color transmissions and on the other hand, the simultaneous development of electronic instruments, the progenitors of today's graphic workstations, opened the way to the possibilities of the so-called *videography* [2]. Among the hardware tools that will mark an entire decade we must certainly remember the Paintbox. Launched on the market in 1981, the Quantel Paintbox was a graphic workstation dedicated to the composition of videos and images for television broadcasting. Since the first use, the Paintbox changed forever the production of TV graphics, characterizing with its effects all the TV and video production of the '80s and '90s, especially with regard to the editing of music videos and TV opening titles, introducing, through dedicated hardware, a series of effects and digital filters capable of manipulating both two-dimensional and pseudo-three-dimensional.

Since the origins of Italian public television, opening titles have represented, a field of interesting experimentation on the moving image and a peculiar ground of confrontation between graphic design and technological medium [1], there have been rare occasions in which entire series of television broadcasts have been dedicated to the promotion of an electronic visual culture, capable of announcing the amazing possibilities disclosed by computer tools applied to television graphics.

In the context of Italian TV in the '80s, television programs conceived and transmitted with the intent, among others, to popularize the use of technologies and computer science, we remember, in addition to the already mentioned *Pittronica* (1985); *Radiotext* (1984), *Bit, storie di computer* (1984); *Chip* (1984); *Non necessariamente* (1986); *Immagina* (1987). These programs shared the ambition, albeit in different ways, to inform the television audience of the computational and graphical potential of personal computers.

In the beginning, however, it was Prof. Antonio Grasselli, professor at the newborn degree course in Computer Science at the University of Pisa, who held the Introductory Course on Data Processing. This was one of the courses of the *telescolastica* born from an agreement between RAI and the Ministry of Education. *Telescolastica* was a sector that included all the School and Educational Broadcasts, transmitted by RAI in the general

schedule of Cultural TV Programs and School Integration (Fig. 2). *Telescolastica* a few years later would formalize into the *Dipartimento Scuola Educazione*, established by Law No. 103 of April 14, 1975, then renamed *Videosapere* (from 1995 to 1997), then *RAI Educational* (from 1997 to 2014), and finally *RAI Cultura*. The *Dipartimento Scuola Educazione*, as well as its successors, was a structure of RAI that dealt with cultural and educational activities, through the realization of cultural and educational programs. An excerpt from RAI's 1971 Board Report it states: "The Convention stipulated between the Ministry of Education and EAI in June laid the basis for a new approach aimed at providing new models of didactic approach, beyond the traditional formula of the lesson and the rigid partitions of the subjects. In the last year, the "Sapere" column, the core of the educational programs for adults, has underlined an orientation aimed at giving each program a precise qualification that reconciles the requirements of cultural divulgation and critical solicitation. The programming has been articulated along three lines: popular topics (to cite a few titles: *L'Informatica* and *Storia del nazionalismo europeo*), centers of cultural interest (*La Bibbia oggi, Il minore e la legge, La società post-industriale*), monographs (dedicated to issues of actual or potential relevance for the public)" [3].



Fig. 2. Frames from the television didactic program *L'Informatica* (1971)

2.1 Radiotext (1984)

As well as the computer courses pioneered on TV by Prof. Grasselli with the precise intent to educate, but without any ambition to intervene directly on the visual imagination

of its audience, *Radiotext* was born with the specific intent to spread, or rather transmit, software via radio throughout the Italian territory. Eight episodes broadcasted between May and June of 1984 on RAI RadioTre.

Radiotext was therefore composed of two parts: a traditional one in which radio speakers commented on the main theme of the episode thanks also to the support of external interviews; and an innovative one, in which impulses were transmitted. These impulses encoded the various programs one after the other, for various types of computers, so that the user could record on audiocassette those of his interest and then load them on the home computer.

The computers to be used were the most popular for the period in Italy: the Sinclair ZX Spectrum, the Olivetti M-10 and the Commodore 64.

It was aimed primarily at students, teachers, professionals, who had the opportunity to have free software dedicated to the creation of databases, the creation of music scores to or the definition of tourist routes.

To be noted the schedule of the second episode, entitled: graphic-computer and bit-comics, in which in addition to interviews with Bob Noorda, Giorgio Soavi and Milton Glazer, were transmitted 10 min of analog signals dedicated to the generation of a database to collect magazines, characters and authors of comics as well as a demo software for drawing with computer [4].

2.2 Chip (1984)

In an attempt to bring the general public to the world of computer science, in 1984, was broadcast an evening news program entitled: *Chip, ovvero quando il piccolo è.. Grande!* A programme structured in two distinct sections. The first was purely informative, consisting of interviews or external services, and the other was more of a playful character organized with a quiz in the studio conducted by two presenters flanked by a robot produced by Androbot Inc. of Nolan Bushnell and called Topo. One of the two presenters, as well as curator of the program together with Giancarlo Monterisi, was Stefano Gentiloni, who said about the program in an interview with Radiocorriere TV: “Our goal is to explain what informatics, telematics and microelectronic technology is; what electronic processors, satellites, optical fibers and data banks are and how they can be used, because this is the emerging world that is changing social and economic relations. Just think of the introduction of intelligent robots in factories or computers in offices” [5].

The conclusion of the broadcast instead explored the potential of computer graphics with a closing title performed by the couple Franco Battiato and Giusto Pio, who performed a song entitled *Automotion*, in a videoclip populated by numerous distortion effects and dominated by the presence of overlays thanks to the use of keying effects (Fig. 3).

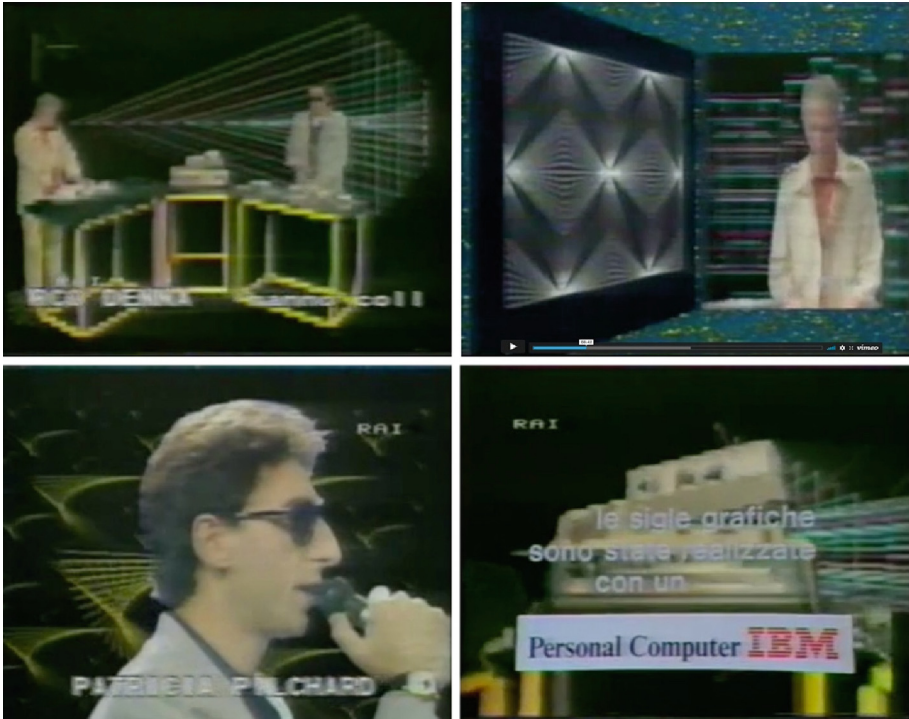


Fig. 3. Frames from the closing title of the television show *Chip* (1984). <https://vimeo.com/206463037> last accessed 6/6/2021

2.3 Bit, Storie di Computer (1984)

Bit, storie di computer was instead the first television program entirely dedicated to the scientific popularization of computer technologies on a private television. Aired in 1984 on Italia 1, it was hosted by writer, director and actor Luciano De Crescenzo.

De Crescenzo, graduated in hydraulic engineer, studied electronics as a self-taught and was hired by IBM where he remained for 18 years before devoting himself to his passion as a popular writer. Precisely because of his double vocation, he conducted this transmission with the aim of teaching pills of computer science and its different uses: from video games to research in archaeology, medicine, sports, music.

The television critic Ugo Buzzolan wrote on the pages of the national newspaper *La Stampa*: "... the episode I saw the day before yesterday, between noon and thirteen, was, in a friendly dimension of almost variety, pleasant and at the same time contained an updated information: the computer used to package cartoons, the missile war [...] maneuvered with computers, and maps drawn with the decisive help of the computer, and the personal computer for the use of the young woman who puts in the telephone addresses of her heart. So, there is this first - and valid, it seems to me - sign of competition from the networks. Others may be added in the near future. RAI keeps Piero Angela close, but at the same time thinks in a concrete way to the development, on the three networks, of a sector like this scientific one that involves us all, directly and daily" [6].

Buzzolan certifies its popular validity and, at the same time, he criticizes the Italian public television, stimulating its intervention in an area that, according to him, is neglected in favor of the story of the past of our civilization.

2.4 Non Necessariamente (1986)

Broadcasted for eleven episodes starting at 10 p.m. on RAI1, the program *Non necessariamente* was defined by the presenter/ideator Carlo Massarini (Massarini was one of the creators of *Mister Fantasy*, a RAI1 TV show dedicated, for the first time in Italy, to video art and music videos) a techno-variety show based mainly on the manipulative possibilities of the electronic image. Manipulative possibilities explored during the program, among others, by the artist collective called *Giovanotti Mondani Meccanici* who, hybridizing analog and digital technologies, reworked live action images using a graphic tablet and graphic manipulation software, to generate *Le Avventure di Marionetti*, or the adventures of a character who, as the pun in the name might suggest (in Italian, puppet is translated as marionette, while Filippo Marinetti was a futurist writer), was poised between comic situations and futuristic environments. Regarding the techniques used, we report here the comment of Antonio Glessi (one of the founders of GMM) to one of his videos posted on his YouTube channel, in response to a user who asked what technique was used: “There is not a clear definition because it has been a unique work of its kind. It was a mix among early digital technologies and basic analog techniques. Call it a digital flip-book of digitized and then digitally retouched black and white pictures.



Fig. 4. Frames taken from an episode of the television program *Non Necessariamente* (1986). <https://www.youtube.com/watch?v=Po4M2WdlGvQ> last accessed 6/6/2021

Everything has been done in 1985 with an Apple 2 and broadcasted in an experimental TV program. Its production was a very low cost one for that time, but too tricky and limited to become a standard. Just two years later the scene of DIY digital cartoons would have been dominated by the incoming Amiga, much more suitable for these kinds of works” [7].

The scenography of the entire program was instead entrusted to the intense use of chroma-key, thanks to which the presenter, between comic performances and trips into the past, went through different eras overlapping with old movies or stock images. Although the common thread was the electronics, *Non Necessariamente* made meet cinema, music, and computer art, staging, through a surreal visual journey, the fragmented fruition resulting from the use of the remote control and typical of the new television [8] (Figs. 4 and 5).



Fig. 5. Frames taken from the TV series: *Marionetti* (1986), performed by *Giovanotti Mondani Meccanici*. <https://www.youtube.com/watch?v=fjXqIUprSZE> last accessed 6/6/2021

2.5 Immagina, Segni e Sogni del Nostro Tempo (1987)

The growth and diversification of experimentation around the electronic image acted as a prelude to what was probably the most ambitious television production among those briefly listed here: *Immagina, segni e sogni del nostro tempo*, which was broadcasted on RAI1 between 1987 and 1988. The scenography was designed by one of the most important video-artists of the period, Fabrizio Plessi, who drew a backdrop that concretized the concept of a “neo-baroque age” [9], as it was defined by one of the authors

of the program, the television critic Omar Calabrese, while in the same years the critic Gillo Dorfles spoke of *neo-baroque taste* in Architecture. In this regard, in 2006 Omar Calabresi said: "...Then, I started from the conviction that the neo-baroque taste derives from the fact that ours is a mass culture and, above all, that this mass culture, because of television, is oriented towards the forms of surprise and originality at all costs that derive from the prevalence all over the world of a culture of spectacle, as opposed to the sector of information or pedagogy that are more traditional strong points of public television" [10]. Plessi's scenography therefore consisted of an installation that replicated the architectural and naturalistic layout of the Trevi Fountain and consisted of a series of mobile elements. These elements were equipped with a cathode ray tube screen on which videos of flowing water or excerpts from the broadcast were shown. Beyond the topics covered, art, architecture, cinema, fashion and advertising, in the video art and computer art works shown, *Immagina* develops a critical discourse on visual communication by playing on a double meaning: images and the imagination that springs from them [2] (Fig. 6).



Fig. 6. Frames from the television program *Immagina. Segni e sogni del nostro tempo*. https://www.youtube.com/watch?v=fFtZjPW6b_Y last accessed 6/6/2021

3 Conclusions

At the end of the '70s, the range of the possibilities for managing images, sounds and films offered a scenario still not very mature, below the expectations that the media had induced in previous years. Television was a medium that had reached full maturity, but the

relationship between television and computer was mostly linked to the possibility, indeed the need, to use the television monitor as a video terminal of an electronic computer. In the early '80s, however, the artistic research related to electronic media, exceeds the canons self-referential and underground that had characterized it until a few years before and it was introduced in the palimpsest and mainstream television. A brief analysis of the television programs conceived with the aim of educating the popular visual imaginary by bringing to the knowledge of the general public some frontier experiments related to the use of hardware dedicated to digital manipulation, allows us to contextualize these programs within a cultural framework capable of bringing out and spreading new electronic/digital visualities.

A path that unravels from the *Telescolastica* of the public television up to arrive, with the last productions of the period, to find a new ground of experimentation between video art and popular television trends.

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