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Society in colour: Italian television and the switch to colour

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While Italy was proudly celebrating the advent of its own television system on 3 January 1954 and the first official broadcasts were starting to go out, at around the same time, the United States saw the arrival of colour television. Indeed, in December 1953, the Federal Communications Commission (FCC) approved the standard for colour television set out by the National Television System Committee (the same one that established the 525 line standard in 1941). The NTSC colour television standard was chosen for its versatility over other similar experiments, including its CBS rival, since its broadcasts were perfectly compatible with the black-and-white receivers which were widespread at the time. While Italy stood out for black and white, in mid-January 1954, colour television was authorised to operate commercially in the United States, and the analogue colour standard made its entrance on screen. It was then quick to be adopted in Canada, South Korea, Japan and many other countries, and would remain in place up until the arrival of the ATSC Digital system in 2009. Italy, however, officially seemed to have to wait until 1977.

1. POLITICS AND THE COLOUR EXPERIENCE ITALY

In 1965, a RAI studio in Rome was set up with three Colour Television RCA TK40 cameras and a colour TK40 telecine [1-2]. This was the start of the first *“technical broadcasting tests”*, while elsewhere in Europe, Britain, France and Germany – albeit with an eight-year delay compared to the United States – introduced colour television broadcasting in 1967. In Italy, however, the process came to an abrupt halt, and only seemed to fully open up again on 1 February 1977 with the official launch of colour broadcasting. The study of colour television, which is entirely overlooked in Italy, is often merely limited to accounts of the (political) causes of this delay, which fail to deal with its full complexity. In Italy, this

“continuous succession and interweaving of speeding up and slowing down, of cutting-edge experiments and prolonged periods stagnation”

is not uncommon and, according to Peppino Ortoleva, appears somewhat to be a peculiarity of Italian history of telecommunications. Indeed,

at the very time when television may have seemed to be behind, in 1970, Italy held the record – together with Germany – for the first direct distance dialing [3]. The switch to colour television in Italy conceals something more complex, which cannot be put down merely to technological developments. It is a complex story which is very much still to be written, the main aspects of which will be outlined below.

Often the delay in Italy is associated with the battle over the standards running through the world history of colour. It began in the United States, where the choice of system, despite becoming the matrix for its successors, was by no means a painless process. Yet, the contest was especially fierce in Europe, where there was clash between two systems, PAL (Phase Alternation Line) and SECAM (Séquentiel Couleur à Mémoire), between two powers (Germany and France), between two political and expansionist concepts, and indeed between two opposing worldviews [4]. Nonetheless, the impression in Italy was that the late arrival of colour was only the result of uncertainty over the standard. Accordingly, the final move to opt for PAL, approved by the Ministry on 5 April 1975, did not create any particular controversy or backlash in newspapers, where the news was reported in a cut and dry way. This is despite the fact – which has never been properly brought to light – that this decision not only threw out the French standard, but the entire Italian ISA system (Suppression Alternation Identification) patented in 1972 by the Turin-based company Indesit.

Indeed, what had been occurring in Italy took the form of a confusing but lively political debate, more than an economic-industrial matter. Any attempt to untangle it is extremely difficult, as it often used as an opportunity to renew (and decide how to renew) the expiring television monopoly, a battle more of principle than substance, more of ideals than politics or economics. The picture is as hazy as the approach and stance adopted by the television phenomenon itself, between *“empty and inane anti-capitalist leftism”* and *“over-indulgence in crass consumerism”*, as stated in 1977 by Ugo La Malfa, one the fiercest opponents of colour [5]. What is remarkable when reviewing the newspapers’ coverage of colour is the disconnect between the theoretical discussion on television and the path it has taken. In 1972, in the wake of the widespread Eurovision colour broadcasts on other foreign channels, RAI decided, on an experimental basis, to broadcast the Munich Olympics in colour, alternating – somewhat paradoxically – the SECAM and

PAL standards. As soon as news was given of this initiative by the Italian Government in early August, all newspapers – including those which were left-wing and traditionally almost indifferent to what they considered to be a mere and useless appliance – devoted a great deal of space to the story and to the debate around colour television. The minute-by-minute report of the ups and downs in the political reception of this decision by the Ministry of Posts and Telecommunications follows a script that would be repeated for five years. “Waste”, “unnecessary expense” and “distortion” in the face of Italy’s crisis and real needs, were the most frequently used arguments, together with – something that was perhaps the most accurate premonition given what would take place at the end of the decade – an attempt to make people fear colour television as a “dangerous tonic”, a glare and mirage of an economic miracle that was now impossible [6]. More than the boycott of vehicle manufacturers, or than the Italian Communist Party’s invectives against the persistent misinformation of television now in colour, what emerges from the news reports of the time is the depiction of an Italian society where colour was already a reality for much of the country:

“consumers in the north [...] already have colour TV sets: those in the Lombardy and Piedmont area are served by Swiss TV from Lugano, those around Liguria and Tuscany receive French TV programmes [Telemontecarlo], and those in Adriatic areas capture Yugoslav broadcasts [Tele Koper]” [7].

Within a year, the actual framework becomes clearer: the extraordinary measures put in place on 22 November 1973 to address the oil crisis directly associated television with the politics of austerity, and the “dangerous tonic” was defeated, putting an end to Italy’s experiments in colour. Policy imposed black and white (as well as a compulsory silence as the small screen was required to be turned off early); darkness fell upon Italian cities, where shop windows and signs were turned off and public lighting was halved.

There was already, however, a growing relationship between colour and the viewer. Indeed, whether directly or indirectly, colour made a significant contribution to stabilising the television picture in Italy. How the television picture was experienced by viewers in its first twenty years is extremely interesting. At least in Italy, the economic expenditure of mobile external units set up for live broadcasting and the poor performance of radio links used to transmit the signal to the production centre, meant that, from the outset, television filming was carried out with film stock and Arriflex cameras, which were much more manageable than the bulky “backpacks” for the magnetic recorder of portable cameras, and were often preferred by operators with a background in

film. Therefore, the base photographic image, albeit converted electronically, remained for a long time – at least until the mass spread of U-Matic technology introduced by Sony in 1971 but becoming massively widespread in RAI in the second half of the 1970s. This technology became the workhorse of the first private networks – the standard for filming not only documentaries and news reports, but services including the much-loved sports coverage, starting, for example, with the football match summary. Moreover, when TV serials opened up to the outdoors (being initially made entirely live in the studio using small models and effects), they opted for the more flexible film cameras, mixing cinema film and other entirely electronic footage with telecine. It is not easy to establish, in this era of craftsmanship, whether what was in play was a consolidated practice or a particular aesthetic choice of the producers and directors. For instance, already in *L’isola del tesoro* (1959), Anton Giulio Majano uses film to show, in just a few minutes, a pirate falling from a brig (entirely rebuilt in studio) in the real waters of Lake Fogliano. Conversely, in *Il mulino del Po* (1963), Sandro Bolchi shoots in film the famous film credits superimposed over the flowing river, while to achieve the famous flood, she chooses to flood studio 3 in Milan. What is certain, however, is that the eye of the viewer perceives, with some degree of clarity, the difference in texture between the two images, which opposes the above-mentioned scenes, as well as the medium close-ups of newscasts with recorded services and an entirely different lighting distance [8].

Colour increases this ontological genetic instability of the television picture, which the general “overflow”, so to speak, is not fully able to conceal; in actual fact, it is fuelled by the external environment. First, the viewer’s experience starts to bring about an interaction between the black-and-white television pictures and their colour print counterparts. The advent of television runs parallel to the revival of the rotogravure, characterised by photojournalism and colour pages, such as in *Epoca*; in magazines with a greater focus on the television world, colour still seemed to interact directly, supplementing or perhaps attempting to overtake the small screen. For instance, in 1962, “*Bolero Film*” accompanies a service on *Canzonissima* with an array of colour shots, half a page large, on the ballet and costumes worn by Mina in the episode aired that week [9]; at the same time, the weekly publication *Successo*, presented an unusual interview between the famous singer and Luchino Visconti, accompanying the text not only with black-and-white feature of the restaurant encounter between the two, but also with several shots of Mina on the set, as Lina Cavalieri, during the making of a *Carosello* for Industria Italiana della Birra (figures 1-2) [10]. The relationship between the text in black and white and the paratext in colour also relates to cinema, where it was not uncommon for black-

and-white film to clash with the colour of flyers or posters (such as *L'avventura*, Michelangelo Antonioni, 1960, or *Rocco e i suoi fratelli*, Luchino Visconti, 1960). Nevertheless, film paratexts now have a narrative or symbolic relationship with the film subject, representing a form of novelisation. For this very reason, the preferred choice was for illustration, such as in the famous posters of Carlo Campeggi or Angelo Cesselon, and where the film frame is used, the image opts for pseudo-toning change or strong colour backgrounds charged with symbolism. Whereas, in the case of colour television paratexts, the relationship seems to be of a calligraphic and didactic nature with both a "faithful" use of colour and, at the same time, the powerful performance of four-colour coated paper, which becomes an emblem of the post-war "universe of coloured objects" [11]. As such, the colour image seems to be a complementary experience to black-and-white television. The above example of Mina is not accidental: the significance of clothing and fashion, make-up and disguise is an essential part of constructing this character, and the periodical's images not only make the viewer dream of lavish dressing tables, but help to complete the feel of the scene.

Nonetheless, through its relationship with paratexts, colour also shows a television picture which is far removed from that commonly-projected window on the world: a manufactured and unstable image, which at the time in Italy, was incomplete and, therefore, awaiting integration

2. COLOURING REALITY: SPORT AND GAMES SHOWS

In 1978, on the pages of *Corriere della sera*, Luca Goldoni remarked:

"Today, Italy's television unity is a past memory, we have now returned to the Municipalities and Signorias. Every district has its own private antenna; people no longer converse on the train, but rather just brag about who gets the most channels. If two travellers realise that they have both seen the same programme the night before, they embrace one another" [12].

The commercial sale of colour TV sets led to the spread of the remote control, which came included with all of them, and the transition to colour coincided with the widest proliferation of private and commercial broadcasters and with the practice of "zapping" [13]. However, as mentioned above, for some time, viewers did not all have the same perception of the television picture, so much so that, in Italy, it somewhat questioned – or made into a reconstruction – that sense of immediacy and of living nature that would immediately characterise it. The perspective on colour shows a complex and protean television picture, which was far from that mere framework or window onto the

world, that would only be fuelled by the meaning constructed by the live coverage from the late 1970s.

The relationship and interference between the television picture in black and white and paratexts in colour soon came together with an audiovisual text identity, where the colour system varied according to its communication channel. The crisis and need to renew RAI's production, leading to a close dialogue with cinema [14], which once again would be over-simplistic to dismiss as a generic "transition to film". In actual fact, it was a very complex situation both in its causes and its consequences: from the inability to dub with magnetic tape, thereby excluding this option for large international co-productions (*L'Odissea*, Franco Rossi, 1968), through to the choice between 35 mm (*La strategia del ragno*, Bernardo Bertolucci, 1970 or *I clowns*, Federico Fellini, 1970) or "inflated" 16 mm (*L'Orlando furioso*, Luca Ronconi, 1975). The question of colour – whose mere adoption was the result of various and complex causes – has also been addressed with an equally simplistic approach and cannot be reduced to how close the writer was to the world of television. Whilst the choice of black and white in *Francesco d'Assisi* (1967) by Liliana Cavani may be traced back to her previous television reports, this is not the case of Leandro Castellani who, despite also being an exponent of television reporting, is motivated – as he himself acknowledged – by the latest developments of the American Cinéma vérité and its different use of black and white for his *Le cinque giornate di Milano* (1971). At this stage, colour had a fundamental importance which one must begin to reconsider. Firstly, the television picture continued to find its colour elsewhere. Often our memory fails us and we tend to forget that the greatest successes, such as *Le avventure di Pinocchio* by Luigi Comencini (1972), and the most daring experiments, like the aforementioned *Furioso* by Ronconi, were seen at the time in black and white. Yet, we also tend to forget that our colour perception of these works is not so much due to the fact that they

Figure 1 (left) – Photograph of the set of *Carosello* by Industria Italiana della Birra (in *Successo*, March 1962, p. 63).

Figure 2 (right) – Part of the television frame of *Carosello* by Industria Italiana della Birra



were aired in colour in following decade, but because of the concurrent availability of colour in cinema theatres: *La strategia del ragno* was aired on Sunday 25 October 1970 but gained its censorship certificate on 6 October the following year, embarking on an autonomous life of film; at a shorter distance apart, Comencini's *Pinocchio*, aired in April 1972, hit the screens of major cities in August. In this period of revival of television narratives, things become more complicated when widening our scope to the above-mentioned foreign broadcasters in the Italian language. We might narrow it down to one case in point: from the 3 October 1971, the RAI viewer was able to see *UFO* in black and white, a great international success from the British channel ITV, whose episodes were aired in colour in Italian-speaking Switzerland the year before under the title *Minaccia dello spazio*, which could be received in a large part of Italy. That's not all: given its success, the producer of the television series, Kent, made feature films by assembling scenes from "Swiss" TV series in colour, making it finally possible to show everyone in colour the Fuchsia-haired female protagonists or the futuristic base of the SHADO. It was not by chance that the first of these films, *Allarme rosso... attacco alla Terra!* (1973), was touted as "a great colour film that you'll never see on TV".

Last but not least, one can see how colour became a central element through a correct and thorough understanding of these particular hybrids, these products of "cinema-television" where the co-occurrence of film and television material – seen in early TV soaps – becomes an integral part of the text and subject matter and, once again, survives the apparent homogenisation caused by telecine. Indeed, the factors at play are not only the clash between cinema and television with different areas of competence in terms of viewing, or the role of the frame and its relationship between the big and small screen, but also the duality of light and colour between cinema and television. The latter is the result of the particular interplay in television between chrominance and luminance signals (used for the brightness of the image which is, in fact, the black-and-white signal) [15]. This aspect is well-known to the great cinematographers, who often work on these productions, such as Vittorio Storaro, pushing the boundaries of film photography or breaking that of television, devoid of strong tonal contrasts.

Colour television was yet to triumph in the wake of audiovisual narratives and RAI's increasingly sought-after twinning with cinema, which – as caustically observed in 1977 by Lietta Tornabuoni – was turning RAI into "an institute of historical and nostalgic studies", but saw victory with a completely unexpected area of the state monopoly: sports. The regular broadcasts of the Yugoslav network Tele Capodistria in full colour (since 6 May 1971) not only attracted viewers with cartoons or TV series, but also through the European coverage of major sports events. The viewer alternated and soon migrated to watch

the winter Olympic Games in Sapporo (1972) on the Istrian channel, being able to see Gustav Thöni win gold in the giant slalom with his yellow skis as the Italian flag was raised triumphantly for the awards ceremony. The experience would be repeated more often, with the Olympics in Munich, the FIFA World Cup in West Germany (1974), the European Football Championship (1976) and the Olympics in Montreal (1976). Likewise, private broadcasting began in colour (reflected in the broadcaster GBR's yellow, blue and red initials). The Rome-based broadcaster later gained international renown for its footage during the kidnapping of Moro, gaining authorisation to enter stadiums and provide live coverage in colour of those games where state television would only be able to maintain some degree of appeal thanks to the replays with Carlo Sassi in *Domenica sportiva*. Through sport, colour provided "real" coverage, with the emblematic example of the Sanremo festival: in 1973, the final would be televised by Eurovision in colour but could only be captured on foreign television and not by RAI repeaters; the following year a fierce TeleNapoli would offer all three events in colour.

Soon after the entry into force of the official state colour television, the dichotomy of a picture whose artifice became exposed by colour was finally over, and the colour television was proven to be a key element for the success of the television picture as a "window onto the world". Colour became the central feature when constructing the television picture, which finally displays that supposed transparency which will become one of its key elements.

Following the dissatisfaction of its audience (although one might take the foreign example where the second international French Channel ORTF chose the opening of the Winter Olympics from Grenoble on 1 October 1967 to inaugurate their own colour broadcasting), RAI releases the colour broadcasting of the infamous 1972 Summer Olympics in Munich, where the red shirts of the Soviet basketball team overpowering the white jerseys of the US team in the last three seconds of the hotly contested final was even able to stir up excitement among Italian viewers. Yet, television failed on the real "show", as the Fedayeen's attack on the Israeli athletes would be covered minute by minute by radio reporters directly linked from within the Olympic village. Conversely, private televisions now commanded the film phenomenon both through companies set up specifically to distribute films to television (such as the Rusconi Audiovisual system) and through direct agreements with major production houses (as in 1979, Berlusconi with Fide and Titanus). Indeed, RAI was not only battling over film content, but over being able to offer a real and credible vision of reality: in 1977, the Giro d'Italia bicycle race was still broadcast in black and white, owing – they say – to the high costs involved in covering such a large event.

RAI would later be able to address its problems and the crisis of its system, but thanks to colour, the television picture – and with it the same

media identity – would stabilise in a mix of both highly spectacular and everyday events, as a dirty mirror as it was called, which could now fully deploy its effects. The game show is the most mature and conscious platform where, once again, colour plays a central role. The move from Tele Milano to Canale 5, from a small local cable service to the core of the future Berlusconi - owned network was announced in December 1979 on a game show, *I sogni nel cassetto*, which only apparently copied RAI's format – with Mike Bongiorno supported by his most loyal collaborators, such as the notary Ludovico Peregrini or Director Lino Procacci – and a traditional game mechanism focusing on general knowledge questions. However, as commented by Orietta Berti in her theme song *I sogni son desideri*, the prize is making a dream come true (albeit within the “limit” of 20 million lire). No one remembers what the dreams of competitors were, yet there is a clear colour and spatial translation created by the aspirational scenario where nothing is impossible: the TV set builds the communication situation with lights and colours, with a predominance of strong primary colours, and set designs with warm tones as opposed to the icy blue and grey colours of state television in Rischiatutto. The set created by Graziella Evangelista – the unparalleled set designer who would make an unforgettable mark on commercial television, from *Ok, il prezzo è giusto!* to *Il gioco dei nove* and *Drive in* – contained coloured flowers and rainbows, superimposed elements and dazzling psychedelic optical effects. Everything came together to make the game show space closer to the fantastic world of the *Wizard of Oz*, where reality and dreams, window onto the world and entertainment coexisted – a far cry from RAI's inefficient, sterile, dull, grey cabins and theatre boxes [16].

The new decade began for Italian society where this quality of colour television had now become a well-established reality. The first images of the Bologna station bombing were shown by private networks in colour, as were the desperate live images from Vermicino awaiting an impossible happy ending, the equally innovative coverage of Enrico Berlinguer's funeral, the euphoric images of the fall of the Berlin wall, the student who was able to stop the tanks in Tiananmen, and the chilling scenes that crushed teleological ambitions of the Shuttle exploding into a thousand pieces during the festivities in Cape Canaveral. Similarly, in 1980 a television show opens on the glitzy, psychedelic TV set of Tele Milano 58, shining with thousands of colours, where Mike Bongiorno cheerfully strides on stage with his programme *Allegria!*

BIBLIOGRAPHY

[1] RAI Radio Televisione Italiana, *Annuario 1965*, Edizione Radio Italiana, Torino 1965.

[2] A. Lari, *Sistemi di ripresa e registrazione in RAI dal 1950 ad oggi*, Sandit, Albino (BG) 2012.

[3] P. Ortoleva, *Telecomunicazioni: un modello italiano?*, «Memoria e ricerca», n. 5, gennaio-giugno 2000, p. 112.

[4] F. Andreas, “Politique de la grandeur” versus “Made in Germany”: politische Kulturgeschichte der Technik am Beispiel der PAL-SECAM Kontroverse, R. Oldenbourg, München 2007.

[5] A. Ronchey, *Intervista sul non governo*. Ugo La Malfa, Laterza, Roma-Bari 1977.

[6] G. Crapis, *Il frigorifero del cervello: il Pci e la televisione da ‘Lascia o raddoppia?’ alla battaglia contro gli spot*, Editori Riuniti, Roma 2002.

[7] R.R., *Tv a colori per le Olimpiadi*, «Corriere della sera», 2 agosto 1972, p. 7.

[8] M. Mazzanti, *L'illuminazione in televisione: manuale per la progettazione e l'uso tecnico/creativo delle luci nello studio TV*, Quartz color lanaro publishing division, Roma 1979.

[9] Anon., *Mina. 5 dive in una sola*, «Bolero Film», 777, 25 marzo 1962, pp. 30-32.

[10] S. Benelli (a cura di), *Luchino Visconti. Mina. La donna, e altre cose ancora*, «Successo», marzo 1962, pp. 60-65.

[11] F. Pierotti, *La seduzione dello spettro. Storia e cultura del colore nel cinema*, Le Mani, Genova 2012, p. 219.

[12] L. Goldoni, *Il “pirolino” che fa scoprire le mille tv private*, «Corriere della sera», 3 febbraio 1978, p. 14.

[13] P. Ortoleva, *Un ventennio a colori. Televisione privata e società*, Giunti, Firenze 1995.

[14] F. Pinto, G. Barlozzetti, C. Salizzato (a cura di), *La televisione presenta... La produzione cinematografica della Rai 1965-1975*, Marsilio, Venezia 1988.

[15] A. Banfi, *Corso integrale di televisione a colori*, con la collaborazione di A. Nicolich, N. Stucchi, H. Salan, D.S. Fleming, 8 voll., Il rostro, Milano 1966.

[16] P. Valentini, *Televisione e gioco. Quiz e società italiana*, Archetipo/Clueb, Bologna 2013