

THE ABC OF GALILEO GALILEI. THE DEPICTION OF THE SCIENTIST IN ITALIAN BIOPICS OF THE 20TH CENTURY

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Sunto

Il primo scienziato a fare la sua comparsa sul grande schermo fu Galileo Galilei. Già nel 1909 fu il protagonista di un cortometraggio muto di una tra le più importanti case di produzione cinematografica italiane, la Società Anonima Ambrosio di Torino. Da allora e per tutto il Novecento, Galilei è stato rappresentato in numerosi film e adattamenti, soprattutto in Italia. Attraverso l'analisi dei film biografici italiani su Galilei, l'articolo mostra la particolare immagine dello scienziato che emerge da ciascun biopic, evidenziando il contesto politico nel quale sono stati realizzati e i messaggi che intendevano trasmettere. Si individuano, così, tre elementi ricorrenti nella trasposizione di Galilei sullo schermo, indicati con A, B e C. Ciascun elemento si riferisce a una particolare dimensione del contesto nel quale lo scienziato ha vissuto e operato: il contesto politico (A = Abiura), il contesto filosofico (B = Giordano Bruno) e quello scientifico (C = Cannocchiale).

Inoltre, il presente lavoro esamina i progetti cinematografici sulla vita dello scienziato concepiti ma mai realizzati, dei quali restano tracce negli archivi, e mette in luce le ragioni per le quali i film biografici dedicati alla controversa figura di Galilei siano stati commissionati e censurati.

Parole chiave: Galileo Galilei; biopic scientifico; immaginario scientifico

Abstract

The first scientist to make his appearance on the screen was Galileo Galilei. Already in 1909, he was portrayed in a silent short film of an important Italian film studio. Since then and for the whole 20th century, Galilei has been represented in numerous films and adaptations, especially in Italy. Through the analysis of Italian biopics about Galilei, this paper shows the specific images of the scientist that emerge from each film, pointing out the different messages

they were intended to convey and the political context in which they were made. This analysis identifies three recurring elements in Galilei's depictions on the screen. Each one refers to a particular dimension of the context in which the scientist lived and worked: the political context, the philosophical context and the scientific context. Moreover, the present paper also examines the planned film projects that are no longer carried out, whose traces remain in the archives, and sheds interesting light on the reasons why the films about the thorny figure of Galilei have been commissioned or censored.

Keywords: Galileo Galilei; scientific biopic; scientific imaginary

*No longer obey the Gospel
No longer obey those who govern
but learn the ABC of Galileo
who taught the humble servant
to be his own master for one day!*
[Strehler, 1962-63]

As Paolo Scandaletti wrote in 1989, Galileo Galilei's story has always been more adapted than narrated [Scandaletti, 1989, Preface]. In the course of time there have been «many Galilei» [Rossi, 1999, p. 133] depending on beliefs and interests of authors and historians that considered him as a hero of free thought, a rebel, a layman, an anticlerical or a fervent Catholic. Thus, the scientist's numerous representations have depicted Galilei as a contemporary man and have contributed to perpetuate his myth. «The world has turned its lenses on Galileo and his science» [Perkowitz, 2011, p. 86]: the figure of Galilei is widespread in cultural production and in collective imagination, also because of his massive presence in theatre, cinema, television, comics and advertising. For obvious reasons, this is especially true for Italian cultural production, where Galilei has been portrayed as a national hero in several cinema and television biopics. Throughout the 20th century, historical films contributed to the process of building and strengthening national identity, bringing to the screen famous figures from the past, which embodied the values of the Italian community [Tagliani, 2019, p. 80]. The biographical film emerged within the tradition of historical films and has been a constant genre of Italian film production, to varying degrees, up to the present day [Canova, 2020, p. 4]. Thus, since the early 20th century several biopics have adapted Galilei's story for Italian screen, although each film has shown a different portrait of the scientist.

This paper aims to analyse the depiction of Galileo Galilei that emerges from Italian biopics and to identify the recurring items in the scientist's

representation. Referring to a famous verse by Giorgio Strehler's script *Life of Galileo* by Bertolt Brecht, the title of this article sums up the three most frequent elements used to present Galilei on the screen, which are indicated by letters A, B and C.

A as Abjuration

*“Before the Sun burned my eyes
I was forced to yield and say
that I did not see what I saw”*
[Levi, 1984].

In every representation of Galilei's life, it is unavoidable to refer to the abjuration: on June 22nd, 1633 Galileo Galilei delivered his recantation of the Copernican thesis before the Tribunal of the Holy Office in the Dominican convent of Santa Maria Sopra Minerva in Rome. It is just sketched in Galilei's biography written by Vincenzo Viviani [Viviani, 1966], in a last attempt to remove the trauma of abjuration from public imagination. During the 19th century the theme of the trial gained attention due to various representations of the condemnation in Galilean iconography [Lewis, 2007; Tognoni, 2010].

Thus, ethical, civil and didactic contents were projected on the scene of abjuration, on one side to exemplify Galileo's intellectual and spiritual supremacy, an emblematic champion also of civic virtue, on the other side to convey anticlerical feelings and ideologies of the Risorgimento [Tognoni, 2010, p. 62].

So, even in the film adaptations of Galilei's life made since the early years of 20th century, the sequence of the abjuration before the cardinals of Inquisition cannot be missed. Indeed, the whole film story often revolves around the condemnation of the scientist.

Such is the case of *Galileo Galilei* (1909) directed by Luigi Maggi, in which the scientist made his first appearance on the screen. The film was sold abroad as *Galileo, Inventor of the Pendulum*, though the title was misleading [Perkovitz, 2022, p. 120]: Galileo merely observed that the period of a pendulum is independent of its amplitude if the amplitude is not too large.

Galileo Galilei (1909) was made in 1909 on the third centenary of Galilei's astronomical discoveries with the telescope. Only four years before, on the 35th anniversary of the Breach of Porta Pia and the annexation of Rome to

the Kingdom of Italy, a crowd of spectators attended the public projection of *La presa di Roma* (i.e. *The capture of Rome*) (1905), the first fiction film of Italian cinematographic production. As Brunetta noted, the movie that marked the birth of the national cinema industry had already the features which characterized Italian film production in later years: a historical, lay - when not markedly anticlerical - and ritualistic film [Brunetta, 2008, p. 197].

Restored in 1997 by the Museo Nazionale del Cinema of Turin and Cineteca del Friuli of Gemona, the film was produced by one of the most notable film production companies on the national scene at the time, the *Società Anonima Ambrosio* of Turin [Gianetto, 2000]. *Galileo Galilei* is a 223 meters long (about 10 minutes) silent film and it is divided into eight scenes, each of which is introduced by a caption. Rather than Galilei's life, the main focus of the story is his condemnation by the Church [Merzagora, 2006, p. 176], which depends on the disagreements with a scribe. In fact, while the scientist is studying the motion of the Earth, the scribe attempts to seduce Galilei's daughter. Rejected, the servant denounces his master to the Holy Office¹. Galilei's house is searched, his writings are taken away, his daughter is arrested and then shut up in a nunnery. The cardinals of the Inquisition find Galilei's writings contrary to the dictates of religion: they order them to be burned and force the scientist to repudiate his theories.

As it can be easily deduced, the historical reconstruction of Galilei's story was misrepresented in favour of a more mythicized approach, which combined anecdotes that had entered the common imagination about the scientist and real events [Testa, Olivotto, 2010, p. 496]: the representation of science and the scientist did not respond to the historical reality, nor to the desire to communicate scientific contents, nor it was meant to shake the existing stereotypes about the figure of Galilei, which, on the contrary, were reiterated. However, it's worth noting the continuous presence of the crucifix and the initials S.U. (i.e. 'Sant'Uffizio', Holy Office), worn by the Congregation's members, exhibited on the stand of the cardinals of Inquisition. The constant reference to the power of the Church served to portray the prelates as enemies in a far from

¹ Although the presence of the servant who denounces Galilei to the court of the Inquisition is only a plot device useful to the storyline, in 1992 - ironically - Franciscan scholar Father Antonino Poppi published some important documents he had discovered in the State Archives of Venice: thus, it was known that the first complaint against the scientist was filed on April 21, 1604 by a certain Silvestro Pagnoni. Pagnoni had been at the service of Galilei as a scribe for almost two years and accused him of professing astrology and living "hereticalmente". The authors of *Ambrosio* could not have been aware of the accusation, yet, in making the film about Galilei's life, the complaint of the servant did not stray far from reality. See Bucciantini [2009, p. 675-676].

veiled way [Alovisio, Carluccio, 2014, p. 146], which was a characterization present in Italian cinema since its first film [Brunetta, 2008, p. 197].

Indeed, the decision to make a movie about Galilei's life did not only respond to the need to commemorate an anniversary linked to the scientist's life and work, but it was also a part of the policy of 'nation-building' initiated with the Unification of Italy [Coen, 2009], which intended to provide a 'historia laica' [Ciliberto, 2011, p. 369] (i.e. secular history) in open contrast with the Church, through the historical reconstruction of the cinema. This history was based on the 'martyrs' and 'heroes' who had fought for the birth of modern civilization and the New Italy. Therefore, from the first scenes of the film, Galilei is portrayed as an elderly academic, a sage reflecting and guarding his intellectual freedom, a hero of free thought against the tyranny of the Vatican [Ciliberto, 2011, p. 369].

During the fascist period, the figure of Galilei was a highlight of the collection of 'great Italians' that the regime showed off to point out the links between fascist culture and the nation's past. Galileo Galilei fell into the category of men of genius that Italy had given to the whole world and who contributed to 'demonstrate' the primacy of Italian civilization [Baioni, 2021, p. 414]. Moreover, 1942, in the middle of World War II, was the third centenary of Galilei's death, that occurred in Arcetri, on January 8th, 1642. Leonardo Algardi, the secretary of the EIAR Radio News, a journalist and radio critic, used the anniversary to write the script of a movie about Galilei's life, that he deposited in the archives of the SIAE (Italian Society of Authors and Publishers) in December 1941. The Archive of the Museo del Cinema of Turin keeps a file containing two «Sequences of elements to make a fictionalized biographical movie about Galileo Galilei in the 300th anniversary of his death (1642-1942)»², one of which – probably the first draft – bears the autograph title *Eppur si muove...!* (i.e. And yet it moves!). Along the lines of Viviani's biography, Algardi's screenplay retraced the stages of Galilei's life, from his medical studies at the University of Pisa to his imprisonment in Arcetri, interweaving them with his scientific discoveries, family events, the publication of his works, the conflicts with his detractors, especially the clergy or religious members. Even in this case, a pivotal role in the structure of the work was played by the scene of abjuration, described in detail, denoting Algardi's expertise in historical research. In recounting Galilei's life and work, Algardi used a vocabulary related to the semantic sphere of war: the scientist has to

² Turin, AMNC, Leonardo Algardi, *Pro-memoria per l'ecc. Marinetti*, Rome, 30 December 1941/XX, in *Galileo Galilei*, File Leonardo Algardi (LEAL0168).

counter «his enemies», to defend himself against the «envies and enmities» caused by his discoveries, the opponents «arm themselves» with arguments against him, Galilei abandons «the safe haven» of Padua and goes to Rome «to try to defend himself by forestalling the intrigues of the enemies», where he «successfully rejects the false accusations made by his numerous opponents»³. In the words of the screenplay, the political climate in which it was written echoes: the entry into the war by the USSR, Japan and the USA gave the conflict a global dimension and irreversible features of the ideological clash by that time. It is also noteworthy that, compared to an early version of the script, the copy deposited at the Storage of Plots and Scripts dwells in more detail on the disputes between Galilei and the members of the clergy, such as the one with the Dominican Niccolò Lorini concerning the incompatibility of Copernican theory and the Bible, or the dispute with the Jesuit Orazio Grassi which would lead to the writing of *The Assayer*.

Once he submitted the script, Algardi asked the Ministry of Popular Culture to recognize the priority of his initiative and to include his movie in the program of events celebrating the third centenary of Galilei's death planned by the Executive Committee for the national honours to Galileo. However, he reserved the right to announce the name of the film production company that would make the movie in a later moment. In 1941, Algardi himself was the director of the *Superba Film*, a Genoese film company founded in 1935, but he stated he was in negotiations with several production companies interested in the script. In fact, it had to be a movie of huge proportions: Algardi's press release, which he wrote for radio and cinema news, reported that the movie about Galilei's life had to be made with «the stateliness of means due to a production of this kind»⁴. Therefore, considerable fundings were needed. However, no movie was ever made from Algardi's script. In his memoirs, preserved in the Archives of Fondazione Diaristica Nazionale in Pieve Santo Stefano, there is no reference to the project of a movie on Galileo Galilei. Algardi merely wrote that the period of activity of *Superba Film* represented an immature experience, bound to come to a quick end, since he was too young and inexperienced, not engaged in developing a production and a business plan [Algardi, 1998, p. 77]. Numerous hypotheses can be formulated about the failure of the film project: Algardi's lack of experience; the absence of

³ Turin, AMNC, Leonardo Algardi, *Sequenziari di elementi per la realizzazione di un film biografico-romanzato su Galileo Galilei nel 300° annuale della di lui morte (1642-1942)*, in *Galileo Galilei*, File Leonardo Algardi (LEAL0168).

⁴ Turin, AMNC, *Ricevuta della Società Italiana Pubblicità Radiofonica Anonima (SIPRA)*, Rome, 9 January 1942, in *Galileo Galilei*, File Leonardo Algardi (LEAL0168).

producers willing to fund the project; the revocation of the authorization by the General Management of Cinematography; the anticlerical connotation of the screenplay; Algardi's political orientation – in fact, even if he joined the Fascist Party to work for E.I.A.R., he always professed to be 'non-Fascist' [Algardi, 1998, p. 18]; or even the appearance of a competitor film producer wanting to take advantage of the occasion of the Galilean celebrations. In 1942, indeed, the National Institute LUCE made a scientific-educational film entitled *Galileo Galilei* (1942) on behalf of the Cineteca Scolastica. It was a documentary directed by Giovanni Paolucci with the scientific advice of Sebastiano Timpanaro, future director of Domus Galilaeana, in which a voice-over recounted the salient events of Galilei's life. In this film made by the official organ of the regime, the disagreement between Galilei and the Church was no longer presented in terms of conflict and hostility, but in conciliatory terms. The relations between the State and the Church had changed with the signing of the Lateran Pacts: the Vatican and the regime had an interest in putting Galilei's conflicts with the Church aside and in supporting the integration between science and faith [Baioni, 2021, p. 416]. Despite Timpanaro's advice, the spoken parts of the documentary were almost entirely censored without his knowledge and they were replaced with a more rhetorical and magniloquent script [Levi, 1998]. With regards to the observations with the telescope, the voice-over quoted a letter from Galilei to Belisario Vinta, the secretary of the Grand Duke, in which the scientist wrote: «I give thanks to the Lord who was pleased to make me alone the first observer of such an admirable thing, kept hidden from all the centuries» [Galilei, 1610]. And with regards to the abjuration:

A sentence in which it was said that Urban VIII's theologians had solemnly proclaimed that the Earth does not move was deleted and the following sentence appeared: 'Galileo, old and embittered, is forced to a formal abjuration', which he pronounces 'with a sincere heart and an unfeigned faith in Santa Maria Sopra Minerva'. As you can see, this is a composite sentence because at the same time it is stated that Galileo was forced to abjure and that he abjured seriously. Maybe the person who wrote the sentence did not fully understand the value [Levi, 1998].

What emerged from the film was the image of Galilei as believer and a scientist. Not coincidentally, right after Galilei's date of birth (February 15th, 1564), the date of his Baptism was mentioned (February 19th, 1564). Therefore, the abjuration was deliberately shown with ambiguous terms.

B as Bruno

“Galilei: - *If Rome let me become famous, it's because I kept quiet.*
 Federzoni: - *But now, you can no longer keep quiet!*
 Galilei: - *I can avoid being roasted over the fire like a ham!*”
 [Brecht, 1963]

In the numerous adaptations of Galilei's life for the screen, a second element can be detected in a more veiled or explicit way: the controversial presence of Giordano Bruno. It is emblematic that already in 1908, when the *Società Anonima Ambrosio* made the first film on the life of Galileo Galilei, another film production company, *Itala Film*, made a film about Giordano Bruno, which has unfortunately been lost. Thus, Bruno and Galilei were the first scientists to be represented on the silver screen in Italy – although the term ‘scientist’ may seem inaccurate referring to Giordano Bruno. As already pointed out, the choice of the protagonists of the two short films did not only depend on the film producers' desire to educate the spectators and to recall their meagre historical knowledge, but it depended also on the aforementioned nationalistic and anticlerical policy.

In 1962, when prior restraint was abolished, Bertolt Brecht's *Life of Galileo* arrived in Italy. The next year the play was performed at the Piccolo Teatro of Milan under the direction of Giorgio Strehler, stirring up heated controversy. As Massimo Bucciantini pointed out, when *Life of Galileo* was read in Italy, the topic of the responsibility of the scientist – the central point in Brecht – definitely faded into the background beside the interpretative stereotype of «the offense against religion, the little respect for the pope and the cardinals, the sacrilegious way to mock the members of the clergy in the carnival scene» [Bucciantini, 2017, p. 78].

The Church felt threatened by the disrepute the play was casting on its image, *Life of Galileo* was immediately labelled as ‘for mature audiences’, prayer vigils were organized to exorcize the scandal the drama was unleashing. The controversy about the staging of *Life of Galileo* even ended up in the city council of Milan [Bucciantini, 2017, p. 126 ss.].

Moreover, in Brecht-Strehler's drama, the story of Galilei is linked to the story of Giordano Bruno. Galilei seemed to follow in Bruno's footsteps and he risked to face the same fate – that's why Giordano Bruno is more often named «the one burned at the stake». What makes the difference between Galilei and Bruno is the fact that Bruno did not have evidence that Galilei gave, through his observation with the telescope.

A few years after the first show of *Life of Galileo* at the Piccolo Teatro of Milan, Strehler even entertained the idea to make an adaptation of Brecht's drama for the cinema: the film was supposed to mark his cinematographic debut as a director. Here too, the movie never saw the light of day, as the documents preserved in the Archive of the Civic Museum Carl Schmidl of Trieste prove. In May 1969, Strehler wrote to Helen Weigel: «I'm dealing with the making of a film based on *Life of Galileo* with the Paramount, with Rod Steiger» [Strehler, 1969a].

Only a month later, in June 1969, in a letter to the film producer Maurizio Lodifé, he wrote that “the Galileo project vanished” [Strehler, 1969b]. In September 1969, only three months after the letter was written, a new biopic on the life and works of the scientist was presented at the Venice International Film Festival: *Galileo* (1968) by Liliana Cavani.

The movie was commissioned by Angelo Guglielmi, the head of RAI Special Programs, to Liliana Cavani, who had debuted as a television director in 1966 making a biopic about Saint Francis of Assisi. *Galileo* (1968) traced the crucial years of the scientist's life – since 1592, when he became a lecturer in mathematics at the University of Padua, to the abjuration in 1633 – emphasizing the parallelism of Bruno's and Galilei's stories. Although there are no documents attesting that Bruno and Galilei ever met, Cavani imagined a dialogue between the two, who were in Padua in the same months in the fall of 1592 and visited the same families (such as the Venetian Andrea Morosini's house). According to Cavani, «they could not have known each other» [Magrelli, 2022, p. 50], «they may not have met, but they may also have» [Cavani, 1970, p. 189]. Actually, Bruno was under arrest since May, 1592 while Galilei started his lectures at Padua in December, 1592. In any case, this is not the only distortion of the truth in the movie: for the purpose of the narrative, Cavani represented Bruno's condemnation to be burned at the stake simultaneously with Galilei's observation with the telescope. Instead, Bruno died in 1600, while Galilei started to point his telescope towards the sky in 1609.

The structure of the movie consists of two symmetrical parts, the former is about Giordano Bruno, the latter is about Galileo Galilei, along the lines of Giordano Bruno. Both open with the research and the philosophical study and close with a trial: the sentence of Giordano Bruno marks a watershed between the two parts. Not only the two stories are intertwined, but also in the first part of the movie the editing alternates Bruno's storyline and Galilei's storyline in a counterpoint in which the actions of the former affect the actions of the latter [Rossi, 2003, p. 100]. For the purpose of this paper, there are two significant scenes: in the first one Galilei, who has just heard

of Giordano Bruno's denunciation to the Inquisition by Sagredo, decorously wears the academic gown to go to the University, stares at his own reflection in the mirror and complains that he looks like "an idiot" forced "to put on that uncomfortable overcoat" and that he could not think straight⁵. The following scene shows Bruno's interrogation by the cardinals of the Roman Inquisition; then, returning home after a lesson, Galilei unties his ruff collar. This is a metonymy: Galilei's brain cannot think freely because it is gagged by the gown and the collar that the official culture imposes [Rossi, 2003, p. 101]. The presence of Giordano Bruno in the movie permitted the director to not only emphasize the continuity between Bruno and Galilei, but also to mark the distance between them. Cavani herself said that she found Galilei more modern than Bruno, because Bruno was basically a philosopher, who bore his verdict on the basis of unshakable faith in his reason and his intuitions [Brignoli, 2011, p. 116], instead Galilei was a scientist who asserted only what he could prove. When Galilei abjured, he pretended to change his mind, he played a part. And he saved himself.

Galileo is not a hero. He defends his discoveries to the threshold of the martyrdom but, faced with the supreme decision, he hesitates, he trembles, he shrinks. Galileo is not Giordano Bruno, who is present here through a positive stretching of the history, to represent the other side of the debate [Di Giammatteo, 1990, p. 137].

Galileo by Cavani is a deeply Catholic man [Angeli, 2017, p. 2], well-connected to the ecclesiastical environment of those times, within which he cultivates his friendships, shares his studies and demonstrates his faith in God and in science. However, he turns out to be an ingenuous man, who believes he can trust the Pope and his personal friendship, he can dialogue with the power and counterpose experimental truth against the dogmatism of the Church. He is a believer who turns out to be 'a transgressor despite himself' [Gissi, 2014, p. 112] and, in the end, he yields to the power of the Church, not due to his weakness, but due to his coherence. In a film sequence, Galilei says before Inquisitors:

I am ready to confess anything you want, because I am a Christian and I want to remain a Christian... in spite of everything that has been done to me.

⁵ This scene is a clear reference to Galilei's *Against the donning of the gown*, 1589.

The movie was made in 1968, a significant year in Italian history, marked by protests and struggles against institutions and established power. The Second Vatican Council had recently been concluded and one of the issues that had been discussed was the relationship between science and faith. Cavani called herself a ‘Catholic of dissent’ [Angeli, 2017, p. 7] and it is noteworthy that she assigned the role of historical consultant of the movie not to a historian of science, but to a historian of religions, Boris Ulianich [De Ceglia, Lusito, 2021, p. 96–97], who had already collaborated with her in making *Francis of Assisi* (1966). According to the director, *Galileo* (1968) was meant to be «a film-debate» [Ricci, 2016, p. 81.], «the story of a denied dialogue» [Marrone, 2000, p. 55]. It represented a firm indictment of the intransigence and ignorance of the clerical power and a complaint against the authority of the Church – which is depicted through monumental, vertical, marble and pale scenic design. The movie was intended to provoke the audience’s reflection, to open a discussion on those critical issues dominating the Italian public debate at the end of the Sixties.

However, RAI never aired *Galileo* either in 1968 or later. After a private screening of the movie in the presence of some members of the clergy and executives of State television and without the knowledge of the director herself, *Galileo* was sold to the distribution company Cineriz so that it could be shown on the silver screen. The movie was censored, the scene of Giordano Bruno’s punishment was removed and the Catholic Film Centre prohibited it for minors under the age of 14⁶. Many years later, Ettore Bernabei, at the time chief executive officer of RAI, stated that Cavani’s *Galileo* «was more outrageous than Brecht’s» [Bucci, 2005] because of its marked anticlerical connotation. On September 2nd, 1968 *Galileo* was presented at the Venice Film Festival and in February 1969 it was released in cinemas in its short version – that is without the scene of Giordano Bruno burning at the stake. This was not the first time that RAI censored Giordano Bruno’s presence in a movie – and more would follow. Just the year before, on the television broadcasting of *Caravaggio* (1967), a miniseries produced by RAI itself on the life of the painter, the executives made cuts without any warning. The offending scene involved Caravaggio being present in Campo de’ Fiori when Giordano Bruno arrived with a muzzle on his mouth to be burned at the stake [Guglielmi, 2022, p. 138]. Although this was a historical distortion, the episode had been included in the script at the behest of the director Silverio Blasi and

⁶ *Segnalazioni Cinematografiche*, Centro Cattolico Cinematografico, vol. LXIV, July 1968, p. 203.

the actor Gian Maria Volonté, who played Michelangelo Merisi. A few years later, Volonté played the role of Giordano Bruno himself in a movie directed by Giuliano Montaldo. The *Giordano Bruno* (1973) by Montaldo had first to face the difficulty of finding producers willing to finance the movie [Acciambessa, 1973], then it was censored by the Church⁷ and by the Film Review Commission of the Ministry of Tourism and Entertainment, that granted its permission some years later.

Soon after *Galileo* was hastily withdrawn from the cinemas on minister Giulio Andreotti's express request [Palombelli, 2005]. All copies and documents about Cavani's movie owned by RAI were destroyed [Magrelli, 2022, p. 51]. Ironically, *Galileo* continued to circulate thanks to San Paolo Film, a production and distribution film company of San Paolo Publishing Group, which kept a copy of the movie for the distribution in schools and parishes.

C as Contraptions⁸

One of the greatest humourists, without knowing it, was Copernicus, who has demolished not exactly the machine of the Universe, but the proud image we had made of it. [...] The discovery of the telescope was the deathblow for us: a hellish contraption, which can match the one nature has given us. But we have invented this one, not to be outdone. [...] a terrible tool, which has destroyed the earth and the man and all our glories and greatness
[Pirandello, 1908, p. 157].

In his representations for the big and small screen, the father of modern science presents those clichés and stereotypes that typically characterize the movies scientists: Galilei is often portrayed niggling on scattered papers, making complicated calculations and, above all, handling odd tools, which he uses for his observations and experiments. The scientific instruments are the third recurring element in Italian biopics on Galilei: complex contraptions of his own invention are shown as mere film props or as tools handled and flaunted by the protagonist. The presence of these devices on the film stage alludes to Galilei's scientific activity. The narration in biopics does not convey

⁷ *Segnalazioni Cinematografiche*, Centro Cattolico Cinematografico, vol. LXXVI, June 1974, p. 138.

⁸ In the Italian version of this paper, which was presented at the Youth Conference of the Italian Society of History of Science on September 8th, 2023 in Naples, the letter 'C' stood for telescope, which is 'cannocchiale' in Italian. The word 'Contraptions' was preferred to maintain the consistency of the article and to refer, at the same time, to other devices built by Galilei, such as the compass and the compound microscope.

contents regarding Galilei's strictly scientific activity and works: one can only intuit the significance of them, if one is already familiar with the figure of the scientist [Merzagora, 2006, p. 176].

Obviously, the telescope cannot miss among the numerous and curious instruments on the scene. Galilei was not the first person to use the telescope: he was the first person to turn it towards the sky. However, he designed his own telescopes, built increasingly larger and more powerful types of them and converted a device for making objects that are faraway look closer into an instrument of scientific research through his ability to reconcile mathematical theory and handcrafted practice. His revolutionary act made Galilei with the telescope in his hands the most widespread and instantly recognisable image of the scientist, whose iconography resorted to the telescope since the 19th century [Tognoni, 2010, p. 61] and it influenced the world of art: painting, music, poetry and theatre [Vannoni, 2023].

A telescope, albeit of modern manufacturing [Merzagora, 2006, p. 648], was already present at a scene in Galilei's first appearance on the silver screen in the short film *Galileo Galilei* (1909). Furthermore, early on in Cavani's first draft of *Galileo* (1968), the movie opened with the scene of the observation of the night sky: Galilei, Mazzoleni and Sagredo first saw the Sun rise on the Moon with the telescope⁹. The scene might seem «an overused figurative commonplace» [Ricci, 2015, p. 87] to the director and she opted to replace it with the brilliant scene of the anatomy lesson inside the Anatomical Theatre of the University of Padua. In another scene, that was cut from the movie, Galilei and Paolo Sarpi went to the workshop of the alchemist Mamugna, where they were trying to turn lead into gold in the presence of scholars and members of the clergy¹⁰. This scene was intended to describe the historical and scientific context of the time, which also included the study and practice of alchemy.

Galilei's contribution to science was a key theme of Strehler's plan to make a film out of Brecht's *Life of Galileo*, too. According to Strehler, in fact, Galilei symbolised the need to know, the need that led him to conquer outer space for the first time¹¹. But Galilei also embodies the issue of the responsibility of scientists, accentuated by Brecht. In his *Notes on B. Brecht's Galileo* preserved in the archive of the Civic Museum of Trieste, Strehler wrote that behind *Life*

⁹ Carpi, ASCC, Liliana Cavani, Script of *Galileo*, *Materiale relativo a "Galileo"*, schedatura D, E, FLC.

¹⁰ *Ibidem*.

¹¹ Trieste, CMT, Giorgio Strehler, Notes on B. Brecht's *Galileo*, 1969-1970, FGS 45.

of *Galileo* there was always «the immense radioactive cloud of Hiroshima»¹², «a terrible shadow»¹³ which constantly appealed to the responsibility of scientists. Therefore, the movie on *Life of Galileo* should have been «not a movie about the past, but a movie about the future»¹⁴, a movie that speaks «to us, directly», that teaches us «to better understand *what* to do»¹⁵.

After the discovery of the nuclear fission, as we have physically crossed those thresholds that Galilei first “had seen”, as we are going to or we have already landed on the Moon, today we are children of this ancient drama. We still hover between our destruction and the conquest of another greater human dimension¹⁶.

The most accurate representation of Galilei’s scientific works is the one the director Roberto Rossellini inserted in his television series *Man’s Struggle for Survival* (1970–71). In the mid-Sixties he abandoned cinema for television and he carried out an educational project of encyclopaedic ambition in the conviction that «TV, with its exceptional capability of penetration, is the ideal instrument to spread knowledge to masses» [Iaccio, 2006, p. 148].

Part of Rossellini’s historical–educational programs was *Man’s Struggle for Survival*, a television series made between 1967 and 1969 in twelve episodes and aired in two cycles in 1970 (episodes 1–6) and in 1971 (episodes 7–12) respectively on RAI’s First and Second Channel [Michelone, 1996, p. 62]. In the series Rossellini traced the history of mankind since man’s appearance on Earth, in the light of certain themes such as sociality, transcendence, science and technology [Masi, 1987, p. 108]. In the eighth episode, entitled *From the age of magic to the age of science*, Galileo Galilei appeared in his academic gown, summoning scholars, prelates and academics to his workshop. While explaining his discoveries, he let them observe the lunar surface, the immeasurability of the number of the stars, the shape of Venus towards his telescope. Some of them refused to look into the instrument, others observed and shared Galilei’s curiosity and enthusiasm. Rossellini’s Galilei is a smug optimistic intellectual, who illustrated his discoveries and presented his conclusions with pedantic manners and authoritative stance. At the same time, he was a conflict-free Galilei: some of the bystanders dissented from the opinions expressed by Gal-

¹² *Ibidem*.

¹³ *Ibidem*.

¹⁴ *Ibidem*.

¹⁵ *Ibidem*.

¹⁶ *Ibidem* (my translation).

ilei and accused him of blasphemy. Anyway, in the twenty minutes of the episode devoted to Galilei there was no mention of the controversies with the Aristotelians, with the Church, or of the trial and the abjuration. In addition to the telescope, on the scene there were numerous scientific instruments, because of the educational purpose of the series: on the table in Galilei's workshop, there were an armillary sphere, a geometric and military compass, a microscope and, a little further away, an astrolabe and other telescopes.

Conclusions

The analysis conducted hitherto has pointed out that in cinema and television biopics on Galileo Galilei made in Italy during the 20th century three essential elements recur: the abjuration of the Copernican theory, the comparison with Giordano Bruno and the presence of scientific instruments on the scene, particularly the telescope. The first element refers to the conflict between Galilei and the Church, between freedom of thought and dogmatism, knowledge and power. Therefore, the abjuration represents the historical and political context in which Galilei lived and worked. The presence of Giordano Bruno in movies about Galilei's life and the comparison between their thinking refer to the historical and philosophical context. The scientific instruments framed in the background or used by actors or built by Galilei allude to the scientific context of the time. On the screen, the scientific context of Galilei's life is often neglected in favour of the first two contexts. This is the case of the last movie made in Italy on Galilei affair: *Eppur si muove* (i.e. *And yet it moves*) by Ivo Barnabò Micheli. This is a German-Italian coproduction made in 1989 on the occasion of the first publication of the documents concerning the trial of Galilei preserved in the Vatican Secret Archives in 1984 [Pagano, 1984]. *Eppur si muove* (1989) is an inquiry film rather than a biographical film, in which the director imagines that a German screenwriter goes to Rome to carry out a thorough investigation on Galileo's case. In the movie historical reconstructions and interviews with representatives from the religious and scientific world follow one another: the philosopher and mathematician Ludovico Geymonat and then-cardinal Joseph Ratzinger, future Pope Benedict XVI participate in the debate.

The movie directed by Barnabò Micheli has not been followed by any other Italian biopic on Galilei so far, nor has Cavani's *Galileo* (1968) ever been aired on TV. Even in 2009, proclaimed the International Year of Astronomy, to celebrate the fourth centenary of Galilei's astronomical discoveries, Italian cinema and television didn't show their readiness to take such an important

opportunity to make a new biographical movie on Galilei, although Italy was the location of numerous Galilean events and celebrations of international importance, too.

The genre of biography is becoming more and more popular in the audiovisual landscape, gaining increasing critical and public success thanks to its ability to look inside the lives of the characters to recount the wounds and the contradictions of history. The absence of a new biopic on Galileo Galilei's life may signify that Italian cultural industry is not ready to heal that wound which has been bleeding for four centuries.

Abbreviations

AMNC	Archive of Museo del Cinema of Turin
ASCC	Historical Archive of Comune of Carpi
CMT	Civic Museum of Trieste
FGS	File Giorgio Strehler
FLC	File Liliana Cavani

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