

Cristina Olivotto, Antonella Testa *

Galileo at the cinema

(1) Introduction

Since the birth of the cinema Galileo Galilei's character has been interesting directors and authors, in several countries worldwide. Nevertheless the film list devoted to the great scientist is not so relevant, especially comparing it with the ones devoted to others important scientists, like Marie Curie and Louis Pasteur.

Among the several (see the film list at 1.5), three films has been analysed in this paper: *Galileo Galilei* (by L. Maggi (1909)), *Galileo* (by L. Cavani (1968)) and *Galileo* (by J. Losey (1975)). The work aims at pointing out which are the most interesting elements of the scientist's biography for the film authors; to identify the role, if any, of the scientific and historical advisors; to understand the relevance and the influence, if any, of the contemporary and past historiography on the making of the film.

(2) The synopses

Galileo Galilei (1909, 223 m, i.e. about 9 min, b/w, silent)

Director: Luigi Maggi *Author:* Arrigo Frusta *Photography:* Giovanni Vitrotti *Cast:* Lydia De Roberti, Mirra Principi *Production:* S.A. Ambrosio (Italy)

The short film is composed by 8 scenes, which depict a character of Galileo taking a few real elements of his biography and several fictional. The film opens with the scientist working in his room but soon turns its attention to the rivalry with a servant, who will play a major role in his condemnation inflicted by the Church. Indeed, after a failed attempt to seduce Galileo's daughter, the servant steals some of his scientific papers and uses them as a proof to denounce the scientist to the Inquisition. The papers confiscated, Galileo and his daughter are placed under arrest: he is condemned by a rigid court; she is obliged to take her vow.

Galileo (1968, 110 min)

Director: Liliana Cavani *Authors:* Liliana Cavani, Fabrizio Onofri, Tullio Pinelli *Photography:* Alfio Contini *Cast:* Cyril Cusack, Gheorgi Kaloiancev, Giulio Brogi *Production:* Fenice Cinematografica SPA (Venice), Rizzoli Film SPA (Rome), Kinozenter (Sofia), Boyana Film (Italy–Bulgary)

The film shows Galileo's biography from 1592 — when he gets the chair in mathematics at the Padua University — to 1633, the abjuration year. The main topics of the film are: the birth of the telescope, the relationship between Galileo and Giordano Bruno, the trial. The character of Galileo depicted by Cavani, is on the upgrade up to 1611 when he discusses with the Vatican astronomers and gets the hearing from Pope Paul V, thanks to Cardinal Barberini. But Galileo gets soon into trouble with the Catholic Church, because of his belief in the Copernican system. The scientist goes on with his ideas until, threatened with torture, is forced to the abjuration in 1633, episode that closes the film.

Galileo (1974, 143 min)

Director: Joseph Losey *Authors:* Barbara Bray, Bertolt Brecht, Joseph Losey *Photography:* Michael Reed *Cast:* Topol, Tom Conti, Michael Gough *Production:* Ely A. Landau Film (Great Britain)

Thirty years after his Bertolt Brecht's *Life of Galileo* performance (1947) Joseph Losey succeeds to realize the cinema version of the drama.

The film starts in the years of the telescope making and the first observations of the sky (1609) and ends with Galileo's death, in 1642; it pays special attention to the troubles occurred with the

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Inquisition and especially from the first warning in 1615 to the abjuration in 1633. The other characters complete the set around the main one: the Cardinal Barberini, Pope Urban VIII, Bellarmino, his daughter Virginia and faithful disciples. All the sets of the film recall a theatrical-style, as well as the direction and the technical features.

(3) Context, advisors and science: the making of three different characters of Galileo

The films were conceived and realized in quite different contexts, especially the oldest in comparison with the others. The Maggi's Galileo was produced shortly after the formal birth of the cinema (1895), when the cinema genres were just starting to take shape. At that time, the Italian cinema was undergoing through a lively period; the historical genre was growing in terms of number of films and value, because it could celebrate the Italian *grandeur*, rediscovering the glory and the feats of the past. Galileo — among others — is one of the greatest protagonists of the Italian past, the founder of modern science, namely an exemplary character to support the nationalist ideology.

But the film does not exhibit the „clear historical facts”: it is on the contrary centred on one of the several „novelistic versions” of the scientist biography showing only some scientific legendary episodes like the observation of the censer oscillation in the Pisa cathedral. The set is enriched with scientific instruments that reveal a lack of veracity: the telescope, in fact, seems to be dated as a surely after Galileo's one.

The Cavani's Galileo is definitely an accurate biographical film, and educationally effective. It was produced during the golden age of the Italian cinema and television film industry and was also censored by the national television of the time. As she was used to, Cavani was supported by the historical consultancy of Boris Ulianich, a historian (expert on Paolo Sarpi and working both at Bologna and Naples universities) but the main aim of the film was not to do just a faithful scientific biography. Cavani — involved in the contemporary debate on the relationship between the Church and Science from a Catholic point of view — was interested in Galileo as a major example of non-violent „new character” in conflict with the established authority. Even if it was acclaimed from the reviewers — also from a scientific point of view, apart from minor faults — it presents the „man Galileo” more than the „scientist Galileo”.

The analysis of the Losey's Galileo is strictly connected to the Brechtian theatrical text. The problems linked to the nuclear fission impressed Brecht and the first version of the drama was drawn up after discussions with Niels Bohr, in Denmark in 1938–39, on the basis of 1654 *Racconto storico* by Vincenzo Viviani. Then it was revised in 1945–46⁷ under the influence of the war events and the atomic bombs. Eventually, under the shadow of the H-bomb, a third edition came in 1955 — with minor modification —, which gave rise to the Losey's film. Galileo represents for the author the first scientist who introduced a break between science and society; he's a scientist who — even if depicted with a lot of careful historical and also scientific elements — represents also all scientists who do not care about the consequences of their scientific activity.

(4) Which historiography? Conclusions

Which historiography gave rise, if any, to those three characters? Duhem, Koiré, Drake, Feyerabend, or any other? The answer is not easy but it seems quite clear that no one of the main Galileo's characters of the past and contemporary historiography influenced the authors to agree their models.

If Maggi's Galileo has no evidence at all of any influence, some of the peculiar elements of the Cavani's and especially of the Losey's one can be probably found in Kuhn (1962) (a „scientific opportunist”); moreover, those characters show similarity with the depiction given by the Hungarian intellectual Arthur Koestler's in his *The Sleepwalkers* (1959), centred on a lack of social responsibility.

We can however conclude that, to build their leading role, the authors drew more on popular legendary knowledge (Maggi), on popular monographs of the scientist (Cavani, Losey) and on the context and under their aims and thoughts than from historiography.

More, our analysis suggests to search also for other sources of inspiration from other fields (philosophy of science, sociology, ...) in order to fully understand the genesis of the three films here analysed.

(5) Film list and bibliography

Film list

- Galileo Galilei* by Luigi Maggi, 1909, Italy, 11 min
Galileo by Theo Frenkel, 1911, Great Britain, 17 min.
Leben des Galilei by Egon Monk, 1962, Germany, 150 min., for television
Lamp at midnight by George Schaefer, 1966, USA, 76 min., for television
Galileo by Liliana Cavani, 1968, Italy, 110 min.
Galileo by Joseph Losey, 1974, Great Britain, 143 min.
Galileo by Raul Araiza, 1974, Mexico, 30 min.
Galilei by Otto Adam, 1977, Hungary, for television
Galilei by Mihail Badica, 1984, Denmark
Eppur si muove... by Ivo Barnabò Micheli, 1989, Italy/Germany, for television
Galileo by James Joseph, 1994, India, 92 min.
Galileo: on the shoulders of giants by David Devine, 1980, Canada, for television.

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- (1968): “Galileo” *Bianco e nero* 1968, 29 (9/10) , p. 84-85
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- Brunetta, Gian Piero (2003): *Guida alla storia del cinema italiano* (Torino: Einaudi, 2003).
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- Lizzani, Carlo (1979): *Il cinema italiano 1895-1979* (Roma: Editori Riuniti, 1979).
- Marrone, Gaetana (2003): *Lo sguardo e il labirinto* (Marsilio, 2003).
- Palmer, James (1993): *The films of Joseph Losey* (Cambridge, 1993).
- Porro, Maurizio (1978): *Joseph Losey* (Moizzi, 1978).
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For further details on the subject see the poster attached below.

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INTRODUCTION

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THE SYNOPSIS

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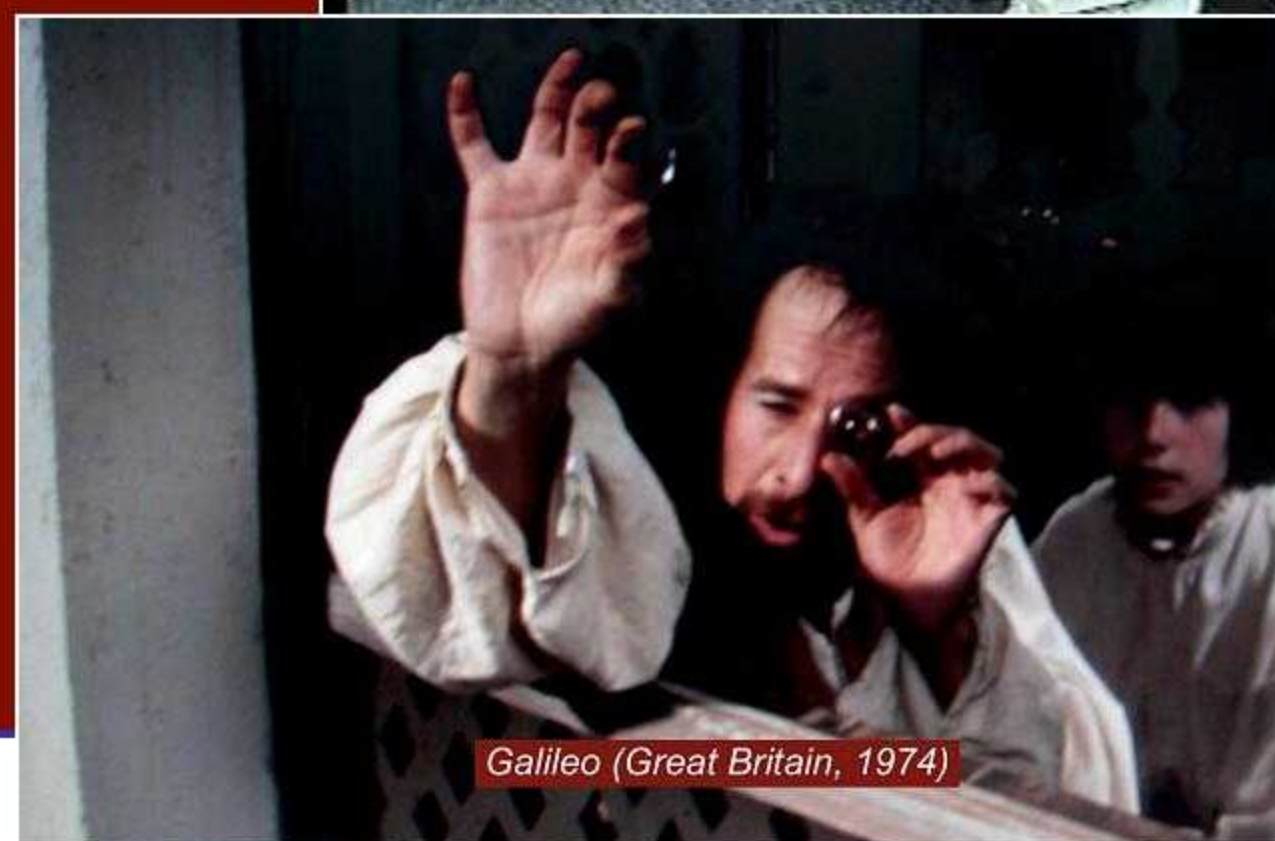
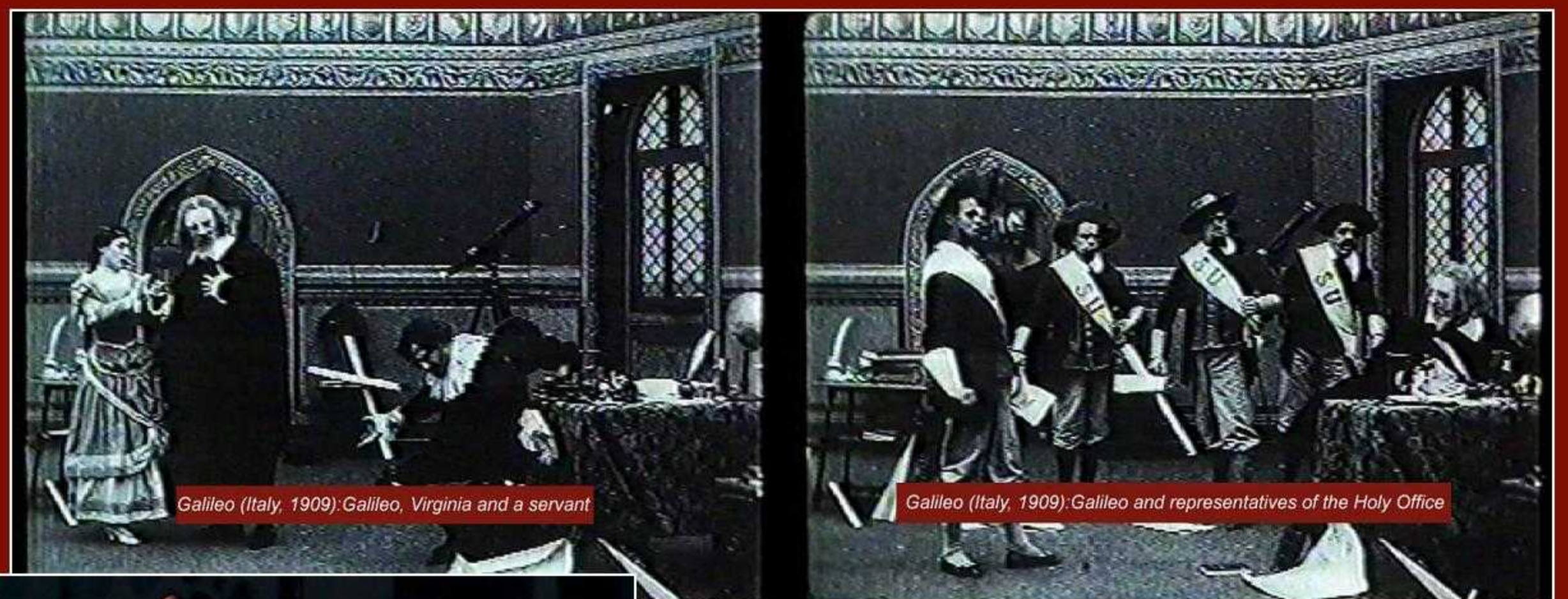
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Some films devoted to Galileo Galilei

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Galileo in a few attributes

- Maggi's Galileo:** old, wise, brave, heroic
- Cavani's Galileo:** a human hero, passionate, tormented
- Losey's Galileo:** clever, trusting in reason, ruddy, arrogant, ingenious

CONTEXT, ADVISORS and SCIENCE: the making of three different characters of GALILEO

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WHICH HISTORIOGRAPHY? CONCLUSIONS

Which **historiography** gave rise, if any, to those three characters? Duhem, Koiré, Drake, Feyerabend, or any other? The answer is not easy but it seems quite clear that **no one** of the main Galileo's characters of the past and contemporary historiography influenced the authors to agree their models.

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