

## Science and Religion in Bertolt Brecht's *Life of Galileo*

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### ABSTRACT

'Truth is the child of time, not of authority'.

- *Life of Galileo*, Bertolt Brecht

Galileo is not remembered as a physicist alone; in mankind's history, he stands for the struggle against centres of power and for the freedom of inquiry. Brecht is a playwright well-known for his work in epic theatre, where the purpose of a play is not the imitation of reality but to present ideas. This paper studies how in *Life of Galileo* Brecht depicts the conflict between a new age about to dawn and an older way of life. Galileo embodies the spirit of the new age of science while the scientific community of his time and the Roman Catholic Church represent the earlier period. The question is one of authority and power; the established centres refuse to accept a novel way of thought, which they find threatening. Truth is often sidelined in such power struggles. New Historicism and Michel Foucault's concepts of power, freedom, government and episteme are employed to analyse the narrative of the play. Those in power have control over interpretation. Galileo states that the natural world is interpreted by men of science in attempts to understand it; similarly, the word of God – the Bible — is also interpreted by theologians. No interpretation can be final as time reveals new truths and facts. What is necessary is an open mind to accept new facts and world views, both in religion as well as in science. Brecht envisages a new paradigm in scientific ethics. The scientist, those in power and the theologian have to accept the responsibility of their actions.

**KEYWORDS:** Science, Religion, Interpretation, Power, episteme, Responsibility, Bible

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Bertolt Brecht, the German Marxist playwright, is a renowned name in the field of modern theatre. The influence of Marxian ideas is often seen in his plays and his concepts of epic theatre and alienation-revolutionised stagecraft. Some of his well-known works are *Life of Galileo*, *Mother Courage and Her Children*, *The Threepenny Opera* and *The Good Person of Szechwan* among others. In epic theatre, the purpose of a play is not the imitation of reality but to present ideas. The audience are invited to make judgments on the society the play represents. Characters do not mimic 'real' people, but represent opposing sides of the argument. Brecht used this technique often to propagate his ideas on society and political situations. In *Life of Galileo*, Brecht conveys the Marxian ideal of working for the common good.

*Life of Galileo* dramatises the controversy and conflict in Galileo's support and provides proof for Copernicus' heliocentric theory. In the field of science, Galileo's major contribution was the freeing of science from the earlier Aristotelian method of formal logic and metaphysical dispute. He is also remembered for the invention of telescope, his contribution to astronomy, and study of falling bodies. Eric Bentley, in his 'Introduction' to the play, says that Brecht's Galileo is not necessarily historically accurate. Much that is historically known about Galileo has not been utilised by Brecht. Bentley says in his 'Introduction': 'Sometimes a sudden eruption of the past into the present will call the dramatist's attention to the new relevance of some old event' (Bentley pp. 14). Citing the case of Bernard Shaw's play, he

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continues: 'Like *Saint Joan* and all other good history plays, *Galileo* is about the playwright's own time' (pp. 14).

Interestingly, the political and ideological questions in the play can also be seen in the fact that there are two versions of the play, one written in 1938 and the second in 1947. The first version, written in the context of the rise of Fascism, depicts Galileo as triumphant despite his condemnation by the Inquisition. The situation of Germany during Brecht's time is reflected in the play when Galileo warns Andrea to hide the truth under his coat when he travels through Germany. The scientist who discovers the truth is above the suppressors of freedom, the dominant powers. The second version, written after the bombing of Hiroshima, looks at the question of responsibility. In this version, Galileo recants at the sight of torture instruments and in the end is a defeated figure, abandoned by his disciples. Here, Brecht's Marxian ideals are seen in the theme of working for the greater good of humanity. The scientist has not only the responsibility of discovering the truth, but also the duty to see to it that this truth does not fall into the wrong hands. In *Writing the Truth: Five Difficulties*, Brecht speaks of the necessity of courage to discover and protect truth. He says that truth is often suppressed and speaks in the context of his contemporary world, where one civilised nation after other is falling into barbarism and war (Bertolt and Bentley, 1966; pp. 139-140). Those in control can suppress the truth and keep the seekers of truth oppressed in the processes of dissemination of power.

This paper studies how in *Life of Galileo* Brecht depicts the conflict between a new age about to dawn and an older way of life. Galileo embodies the spirit of the new age of science while the scientific community of his time and the Roman Catholic Church represent the earlier period. The question is one of authority and power; the established centres refuse to accept a novel way of thought, which they find threatening. Truth is often sidelined in such power struggles. New Historicism and Michel Foucault's concepts of power, freedom, government and episteme are employed to analyse the narrative of the play.

New Historicism is a school of literary theory that explores the mechanisms of repression and subjugation. New Historicists focus on those at the top of the social hierarchy and are concerned with power and culture. In the case of Brecht's *Life of Galileo*, at the top stands the Roman Catholic Church, an institution of religion, struggling to find foothold in a changing world. Historiography of Galileo's time shows that post the Renaissance period, innovations in science were a challenge to the established teachings of the Church. One such discovery was Copernicus' heliocentric model supported later on by Galileo. The church and the scientific community of Galileo's time privileged Aristotle's model in which the other planets and the sun circled the earth. Galileo, through his telescope, found proof for Copernicus' heliocentric model where all the planets including the earth revolved around the sun, disproving the accepted earth-centred model. The scientific community was reluctant to accept the new model and the church found the heliocentric model a threat to its stability.

In this historiography, one can employ Foucault's concept of power and control to analyse the play. Foucault, discussing the creation of modern disciplines, states that principles of order and control disindividualise power, making it seem as if power inheres within an institution like the government or the church. Bureaucrats or officials within these institutions tend to promote facelessness, a form of disindividualisation. Similarly, while Galileo celebrates the coronation of a mathematician as the Pope, the structure of power requires that Pope Urban become a symbol beyond the individual. He is the symbol of the institution of the Roman Catholic Church and is at once empowered and weakened by this. Galileo keeps silent after his first encounter with the Inquisition in 1616, but 8 years later, the enthronement of a mathematician pope, Pope Urban VIII, encourages him to pursue the heliocentric theory again. However, the Pope himself is caught in the structures of power; the pressure on the Pope is depicted by Brecht in Act 10, where the Inquisitor tells the Pope:

“...Your Holiness's love of art (...) is created to abusive remarks daubed on the walls of Roman houses... Your Holiness's Spanish policy is not understood by men who... regret our rupture with the Emperor... war and the Reformation have reduced Christianity to a few small outposts, the rumour is spreading through Europe that you have made a secret alliance with the Lutheran Swedes in order to weaken the Catholic Emperor...”

Similarly, in the play, Ludovico speaks of the seat of power and says about the Pope: ‘... however great his love for science, (he) will also have to pay due regard to the extent of the love which the foremost families in the land feel towards him’ (Act 8).

Similarly, in the scientific community, the Curator of the University of Padua is disindividualised. He is a mere representative of the power of the scientific community. He has to ensure monetary gains for the Republic of Venice through science and in exchange freedom is provided. The University controls Galileo by guaranteeing him freedom to research and publish whatever he wants, a freedom not available in Rome or Florence, which are under the control of the Inquisition. Galileo tells the Curator ‘Your protection of freedom of thought is quite a profitable business, eh? By pointing out that elsewhere the Inquisition rules and burns, you get good teachers cheap’ (Act 1). To the university, knowledge is a commodity. Galileo is a teacher of mathematics, a subject ‘...not as necessary as philosophy, nor as useful as theology...’ (Act 1), according to the Curator. Galileo pokes fun at the Curator and his role and the University's materialistic approach saying: ‘Free trade, free, research. Free trading in research, eh?’ (Act 1).

The scientific community is a part of the structure of the government; its survival depends on providing profit to the government. Galileo is required to make inventions that shall bring them revenue. He invents compasses, water pumps and irrigation plants for the City, and later modifies a spyglass, which he hears of being created in Holland, and makes the telescope. Keeping the University and the Republic satisfied provides him freedom for research and safety from the Inquisition. The concept of

freedom is important to Foucault's understanding of power. ‘Power is exercised only over free subjects, and only insofar as they are free’ (Foucault, *Discipline and Punish*). Galileo is provided freedom but at a cost, power is exercised on him by the University and in turn by the government.

Foucault in *Discipline and Punish* says: ‘Basically power is less a confrontation between two adversaries or the linking of one to the other than a question of government’. Speaking of the wider application of the term in the 16th century, he continues: ‘... ‘government’ did not refer only to political structures or to the management of the states, rather it designated the way in which the conduct of individuals or of groups might be directed; the government of children, of souls, of communities, of families... To govern in this sense is to structure the possible field of action of others’ In *Life of Galileo*, both the Church and the scientific community representing an earlier age, can be in this sense seen as governments. The teachings and methods of Aristotle, formal logic and metaphysical principles were followed by the scientific community. The Church favoured Aristotle's teachings as they supported and could be incorporated into the teachings of the Church. Galileo, the voice of the new age, speaking against Aristotle's theory of an earth-centred universe angered not just the Church, but also the scientific community who refused to accept his proof. Galileo challenges the authority of Aristotle and says: ‘Gentlemen, belief in the authority of Aristotle is one thing; facts, tangible facts, are another’ (Act 4). The arguments of the philosopher and the mathematician who accompany Cosimo, the young Grand Duke of Florence, depict the accepted approaches to science in Galileo's era. Formal logic and disputations in Latin using metaphysical principles are the methods they employ. Their senseless disputations and refusal to observe the proof provided by Galileo through the telescope causes young Andrea to declare ‘They're stupid’ (Act 4). When Galileo moves to Florence from Padua, he has to please those that govern. The patronage of those in power is required. He christens the new satellites of Jupiter he

discovers as 'Medicean Stars' to please the powerful Medicis of Florence.

Galileo's continued study and proof for the heliocentric theory results in a second summons by the Inquisition in 1633. Foucault says: 'At the very heart of the power relationship and constantly provoking it are the recalcitrance of the will and the intransigence of freedom' (Felluga). His persistent challenging of the accepted notions of the centres of power finally result in his being kept under house arrest with constant supervision till his death. This works with Foucault's notion that power always entails a set of actions performed upon another person's actions and reactions.

The concept of power is seen in the episteme of the period as well. According to Foucault, episteme is a historical *a priori* that grounds knowledge and its discourses and thereby represents the condition of their possibility with a particular time period. Several epistemes can coexist, such as that of the Church and the scientific community. The episteme, a statement acceptable within the society under the structures of power, orders the thoughts of those under it without them realising it. There is constant unconscious awareness of power and subjugation. Galileo's friend Sagredo and his maid Signora Sarti embody this. Signora Sarti complains to Galileo about what he teaches her son Andrea in Act 1: 'Are you really teaching him such nonsense? So that he'll chatter about it at school and the reverend gentlemen will come complaining to me because he repeats all this unholy stuff'. In a similar vein, Sagredo displays an awareness of authority and the episteme.

Galileo is excited by what he sees through the telescope, a proof to prove the Copernican model. His friend Sagredo, on the other hand, feels fear, understanding that the discovery is against the teachings of the Church. Galileo is excited to have proof, but Sagredo knows that in the episteme of the Church proof will not have value, it is heresy. In the play, Christopher Clavius, a monk who is the accepted authority on astronomy and a teacher at the Papal College in Rome, confirms Galileo's

observations after he observes through the telescope. However, the Church refuses to accept this.

The Church, in the play, is willing to accept Galileo's charts for the ships, as the mariners demand it and this brings money. However, as the ideas behind the charts are against the accepted teachings of the Church and therefore destabilise it, Galileo is made to recant his statement or suffer torture and be declared a heretic. The Church being in power, Galileo has no choice. The mechanics of power is observed here and how truth is twisted to suit the needs of those in power is observed. Galileo defies the Church and the scientific elite and says: 'Truth is the child of time, not of authority. Our ignorance is infinite, so let us diminish it by a fraction'. Brecht's Galileo here speaks about the scientific community's responsibility to the common man; they have to show him the truth. The responsibility of those in power, science and the scientist are studied here.

Galileo's confirmation of the heliocentric theory threatens the Church's concept of Heaven and thereby threatens it. To the monks and the scientific community, the telescope becomes the 'devil's tube'. However, from the perspective of responsibility and authority, the Church has a duty to the masses. Galileo's theory could cost the common man his faith, a sudden loss of which could cause an existential crisis among the masses, similar to that which occurred in the 20th century after the publication of Darwin's *Origin of Species*. Brecht alludes to this in the play where a monk says: 'But now the earth, too, is a star according to them... We shall yet live to see the day when they will say: there are no longer men and animals, man is an animal, there is nothing but animals!' (Act 4).

The Little Monk who comes to visit Galileo in Act 7 of the play speaks of the conflict that Galileo's discovery could cause for the simple common man and of the duty the Church has to its flock. He says:

"They have been assured that the eye of God rests upon them... that the whole universe has been built up round them in order that they, the actors, can play their greater or lesser parts. What would my peoplesay

if they learned from me that they were really on a little bit of rock that ceaselessly revolves in empty space round another star, one among very many, a comparatively unimportant one? ... I see how they feel cheated and betrayed... There is no meaning in our misery... So do you understand that in that decree of the Holy Congregation I perceive true maternal compassion, great goodness of soul?... The very highest reasons keep us silent — the peace of mind of our unfortunate people”.

The responsibility of the scientist, the discoverer of truth, is also interrogated in the play. Andrea in the last act tries to understand why Galileo recanted and concludes that he did it to escape from the political squabble and to find leisure for research. However, Galileo contradicts him and says that he recanted as he was afraid of physical pain. Andrea, at the end of the play, manages to smuggle Galileo's new work out of the country, though Galileo himself remains a broken figure. In the first version of the play, Galileo himself smuggles the work out of the country emerging victorious. In the current version, Brecht suggests that every action has consequence, whether in the name of science, truth or mere pride. Brecht here speaks of the responsibility of the men of science and the men in power and speaks through Galileo saying:

“I maintain that the only purpose of science is to ease the hardship of human existence. If scientists, intimidated by self-seeking people in power, are content to a mass knowledge for the sake of knowledge, then science can become crippled, and your new machines will represent nothing but new means of oppression... your progress will only be a progression away from mankind.”

He continues echoing the modern tragedy of Hiroshima:

“The gulf between you and them can one day become so great that your cry of jubilation over some new achievement may be answered by a universal cry of horror...if only the natural scientists had been able to evolve something like the Hippocratic oath of the doctors, the vow to devote their knowledge wholly to the benefit of mankind!” (Act 12).

In Galileo's time, the Church had hegemony and this continued for a while. However, from the time of the enlightenment and then on science has had the upper hand, and in Brecht's time, more than ever before the responsibility of the investigator and the discoverer of truth was paramount. The necessity of religion and science going hand in hand to support the masses can be seen in the play. Both are ways to comprehend the world. Those in power have control over interpretation. Galileo states that the natural world is interpreted by men of science in attempts to understand it; similarly, the word of God — the Bible — is also interpreted by theologians. Both sections are only human, mistakes can occur. No interpretation can be final as time reveals new truths and facts. What is necessary is an open mind to accept new facts and world views, both in the field of religion as well as in science. Brecht envisages a new paradigm not just in terms of astronomy, but also in scientific ethics. The scientist, those in power and the theologian have to accept the responsibility of their actions. Truth, scientific truth, should not be let into the hands of those in power to be misused as a mere tool to attain an end.

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