

Bertolt Brecht's *Leben des Galilei*: Galileo and the Sea

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Pirandello once wrote that while the truth need not be plausible, fiction does. This assertion appears particularly appropriate in terms of Bertolt Brecht's *Leben des Galilei*, for like other historical dramas Brecht's play imposes a kind of cohesion on the conflicts of history in order to create a plausibility that will connect with the intended audience. It does so, as Eric Bentley and many others have suggested, by addressing science and ethics in terms that cannot fail to remind a 20th-century audience of its own situation after the development of the atomic bomb (Bentley 7). Thus, the new rules of chess are invoked as a symbol of new scientific freedom in a way that the historical Galileo would likely not have been able to articulate. And thus, even more significantly, Brecht's *Galileo* compares playing the new chess to sea travel:

Wie könnt ihr noch immer das alte Schach spielen? Eng, Eng. Jetzt spielt man doch so, dass die größeren Figuren über alle Felder gehen. Der Turm so—er zeigt es—und der Läufer so—und die Dame so und so. Da hat man Raum und kann Pläne machen[...]

Man muss mit der Zeit gehen, meine Herren.
Nicht an den Küsten lang, einmal muss man aus-
fahren (Brecht 65).

Throughout the play the sea is constantly invoked, becoming a powerfully ambiguous metaphor and therefore admirably reflecting the specifically 20th-century ethical issues of the play. While Galileo sees his work as a kind of crusade, the Inquisitor sees it as a horribly seductive danger to Church and State: both present their cases in terms of the sea. At least four aspects of sea travel are invoked: (1) voyages of discovery; (2) impact on societal practices; (3) constant imbalance; and (4) exposure to danger. Thus the various instantiations of the metaphor form an interpretive matrix that forcefully highlights the highly ambiguous ethical implications of both reactionary repression and progressive scientific investigation.

Voyages of Discovery

In the opening lines of the play, Galileo introduces to the audience and to his pupil the radicality of his scientific approach. Galileo observes that for centuries the earth was believed to be stationary and then states: “Aber jetzt fahren wir heraus, Andrea, in grosser Fahrt” (8). That *Fahrt* is a journey by sea, for as he situates himself and his science in terms of a new attitude sweeping across Europe, he makes the claim that it all began with ships of discovery: “Ich denke gerne, dass es mit den Schiffen anfang” (9). He explains

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unserm alten Kontinent ist ein Gerücht entstanden: es gibt neue Kontinente. Und seit unsere Schiffe zu ihnen fahren, spricht es sich auf den lachenden Kontinenten herum: das große gefürchtete Meer ist ein kleines Wasser. Und es ist eine große Lust aufgekommen, die Ursachen aller Dinge zu erforschen: warum der Stein fällt, den man loslässt, and wie er steigt, wenn man ihn hochwirft. (9)

The ships of discovery symbolize for Brecht's Galileo the first manifestations of the new scientific attitude. Rather than reading the ancient books to explain the world they live in, scientists begin to use human reason and observation, imitating the first sailors that dared to push the limits of the ancient maps and discover new worlds. They all say, with Galileo: "[J]a, das steht in den Büchern, aber lasst uns jetzt selbst sehn" (9). The first hint that the ancients are not infallible, Galileo suggests, came through geography: they had not known about the Americas.

But the discovery of the Americas came many years after the first tentative ventures into the unknown sea: Columbus built on the work of many earlier discoverers. In a very real sense, the conceptual difficulty that Columbus overcame to discover America was merely a footnote to the difficulties involved in the first Portuguese attempts to sail south of the Bojador, the westernmost point of the African continent and the edge of all the ancient maps. Though Galileo claims that Columbus' ships *plötzlich* broke from the authority of ancient knowledge, it was not so; in a similar vein, Brecht's Galileo claims untruthfully that he is the first to develop the telescope.

Passing the Bojador was no easy task, and many ship captains turned back, though the difficulty was never treacherous water but fear of what might be beyond the end of the known world (Russell, 11). Only when the old spell of the Bojador was broken was the stage set for Columbus and the ships that “verliessen [...] die Küsten und liefen aus über alle Meere.”

The sea journey, thus, represents for Galileo a voyage into the Unknown, to tame it and make it known. To sail means to discover, to leave behind the past and embark on the adventure of personal learning and experiencing. He pleads with his Florentine colleagues to open their eyes and look through the telescope

Sehr ähnlich unsern Seeleuten, die vor hundert Jahren unsere Küsten verließen, ohne zu wissen, was für andere Küsten sie erreichen würden, wenn überhaupt welche. Es scheint, dass man heute, um die hohe Neugierde zu finden, die den wahren Ruhm des alten Griechenland ausmachte, sich in die Schiffswerften begeben muss (50).

In doing so, the adventurer trusts his own observation and reason more than the authority of the ancients, for he discovers that the ancients “hatte[n] kein Fernrohr!” (48). Galileo constantly asserts his belief in human reason, a belief which in his own actions is played out not only in terms of his philosophical attitude toward knowledge but his practical attempts to improve his own economic and physical condition. His philosophical position thus, contains practical and ethical implications.

Sea and Society

These implications first emerge in Galileo's false claim that he has, after seventeen years of persistent struggle, invented the telescope. In private he admits, "[i]ch habe es [nur] verbessert" (25), but when addressing the Venetian authorities he refers to no previous inventor. Nevertheless, Galileo does admit at several points throughout the play that much of his work builds on that of earlier figures such as Bruno, Copernicus, and (unnamed) Flemish inventors. Galileo clearly feels a sense of community and continuity with other scientists and inventors, much like the close relationship of the sea discoverers in which each successive captain utilizes and extends the maps drawn out by his predecessor. This sense of continuity makes it clear that Galileo, in his public claim regarding the telescope, is playing a game with the Venetian dignitaries, a game that satisfies political and social needs of those in political power as well as his own desire for more money.

The "game" occurs as Galileo sells to his profit-driven society the practical applications of his research, which appear to him to be useless scraps. He flatly declares that those practical results are unimportant to him: "Ich habe ein Buch geschrieben über die Mechanik des Universums, das ist alles. Was daraus gemacht oder nicht gemacht wird, geht mich nichts an" (101). The true scientist, he declares, is not concerned with the practical use to which his knowledge may be put. He is, to all appearances, entirely sincere; his marketing the telescope (including the claim to have invented it) was merely a game to satisfy the authorities' profit-motivated needs and his own pocketbook.

But the impact of the new science on society is very

real, and it is described again and again in terms of the sea. The Venetian authorities see in his telescope an instrument of war and espionage, allowing them to observe enemy ships while still far off at sea and to determine strategy based on that early information (24). Galileo's astronomical discoveries are used to create better starmaps for sea navigation, saving a great deal of money and time (30). War and sea trade were both extremely prominent characteristics of the Italian states at the time; Galileo is represented here as having a significant practical effect on the whole fabric of society, in addition to whatever (abstract) philosophical effect he may have.

When the Pope and the Inquisitor General discuss Galileo's case, his effect on sea trade figures prominently; the Inquisitor concedes:

Die oberitalienischen Seestädte fordern immer dringender für ihre Schiffe die Sternkarten des Herrn Galilei. Man wird ihnen nachgeben müssen, es sind materielle Interessen. (107)

The impact of the progressive new science on society is couched in terms of changes in societal practices and a resulting improvement in the quality of life. To this point, Galileo's game of allowing his discoveries to be applied to *materielle Interessen* appears ethically sound.

However, the game becomes the villain in the final scenes of the play, as Galileo decries what he feels to be his capitulation, making his lofty philosophy subservient to material concerns:

Andrea: laut: Die Wissenschaft kennt nur ein Gebot: den wissenschaftlichen Beitrag.

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Galileo: Und den habe ich geliefert. Willkommen in der Gosse, Bruder in der Wissenschaft und Vetter im Verrat! Isst du Fisch? Ich habe Fisch. Was stinkt, ist nicht mein Fisch, sondern ich. Ich verkaufe aus, du bist ein Käufer. (124)

He sold out, he claims, when he recanted. In doing so, Galileo betrayed not only the cause of the new science but his own previous sacrifices for it, such as braving the Plague and waiting ten years before renewing his work. Nevertheless, his recanting is not far removed from his claim to have invented the telescope: the motivation in both cases appears to have been the desire to satisfy the “needs” of those in power and make his own life more comfortable. Now, however, he recognizes the fatal consequences of that kind of approach, for he has sold out and is left with nothing but an empty and a veiled sarcasm, which is once again expressed in terms of the sea:

Galileo: Ja. Dikiert: ...stimme ich überein mit der haltung Kardinal Spolettis gegenüber den aufrührerischen Seilern, nämlich, dass es besser ist, an sie Suppen zu verteilen im Namen der christlichen Nächstenliebe, als ihnen mehr für ihre Schiffs- und Glockenseile zu zahlen. Sintermalen es weiser erscheint, an Stelle ihrer Habgier ihren Glauben zu stärken. Der Apostel Paulus sagt: Wohltätigkeit versaget niemals.—Wie ist das?

Virginia: Es ist wunderbar, Vater.

Galileo: Du meinst nicht, dass eine Ironie hineingelesen werden könnte?

Virginia: Nein, der Erzbischof wird selig sein. Er ist so praktisch. (117)

The game of trying to satisfy practical concerns while still clinging to his philosophical convictions finally goes against him, and he loses. The practicalities win; his philosophy is now nothing more than impotent irony that goes unrecognized. As a result, the practical effects are held in check by no ideological structure ensuring that they remain beneficial to humanity. Thus, Galileo fears for the future, foreseeing a time when the progress of science may serve the regression of society. In that time every scientist will capitulate just as he has and the lofty philosophy of science will be reduced to nothing more than working for the highest wages. Not only does Galileo foresee that others will follow him in his “game”, he also foresees a time when that game will become essential to the scientific discipline. Progressive science as a discipline will become a form of oppression, requiring its practitioners to sell their knowledge to those who have money and who will use science for the detriment of society.

In Galileo’s personal life, the future gulf between science and humanity is foreshadowed in his rather callous disregard for his daughter’s happiness as he refuses to submit to Ludovico’s threat of calling off the engagement with Virginia if Galileo continues his investigations. This refusal is justifiable perhaps in terms of Galileo’s opposition to traditional (secular) authority, which Ludovico represents, though Galileo appears to have no consideration whatever for his daughter’s feelings. Less justifiable, however, is Galileo’s refusal to introduce his daughter, while still young and interested, to his cause:

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Virginia: Darf ich durchschauen?

Galileo: Warum? Virginia weiß keine Antwort. Es ist kein Spielzeug.

Virginia: Nein, Vater. (36)

It remains an open question whether the telescope is anything more than a Spielzeug for the young Andrea, either, but nevertheless he was accepted as a pupil. The rebuttal of Virginia's interest is made even less justifiable when contrasted with Galileo's desperate attempt to convince his Florentine guests to look through the telescope. Because Galileo kept Virginia out of his world despite her interest, she gradually loses that desire to participate; and there is a rift and an imbalance: Galileo enters into the role of scientific investigator at the same time that he loses the role of a father guiding and instructing his children.

Imbalance at Sea

The imbalance in Galileo's personal life represents yet another manifestation of the sea metaphor that recurs constantly throughout the play. To sail means to have no solid ground under foot, to be forever slightly off-balance. Like the sailor, Galileo's society feels imbalanced when the traditional authorities are questioned. The ballad scene describes the unsettling effects of Galileo's works on the whole philosophical basis for the structure of society and intimates a future of social revolution (94-98).

The old Cardinal, representative of traditional Ptolemaic Catholicism, feels the imbalance in terms of a religious crisis, and responds in terms of a secure ground and a center on which to place his feet and his faith. As

Galileo and various Church dignitaries await the results of Father Clavius' evaluation, the Cardinal decries the threatening new astronomy:

Ich bin nicht irgendein Wesen auf irgendeinem Gestirnen, das für kurze Zeit irgenwo kreist. Ich gehe auf einer festen Erde, in sicherem Schritt, sie ruht, sie ist der Mittelpunkt des Alls, ich bin im Mittelpunkt, and das Auge des Schöpfers ruht auf mir and auf mir allein. (62)

The new ideas, and the energy of his own declamation, overcome the Cardinal, and “[e]r sinkt zusammen.” On the sea, one feels no “feste[n] Erde,” can make no “sichere[n] Schritt.” In Brecht's play the sensations of imbalance, falling, and centerlessness characterize the import (from a traditional viewpoint) of the Galilean findings, and it is precisely these elements of the sea metaphor that give a certain plausibility to the actions taken against Galileo by the Church.

The image of the sea as a shaky foundation becomes more explicit in the mockery of the monks as they enact comic scenes to demonstrate the ludicrousness of Galileo's propositions. The stage directions record: “Es bildet sich ein Klumpen von Mönchen, die unter Gelächter tun, als wehrten sie sich, von einem Schiff im Sturm abgeschüttelt zu werden” (59). If Galileo is right, Church and society are on the sea and must reel with every storm without knowing where to find stability, having lost the traditional authorities. When Clavius confirms Galileo's observations, the storm, in a certain sense, arrives, for the new science raises for the Church dignitaries the awful question, expressed by the Inquisitor:

“Sollen wir die menschliche Gesellschaft auf den Zweifel begründen und nicht mehr auf den Glauben?” (105).

Dangerous Waters

The movement of the sea thus becomes a metaphor for the movement of the earth, itself symbolic of the imbalance of a society deprived of its traditional strongholds of authority. The danger of this movement is clearly recognized by Galileo himself. When the little monk approaches Galileo and desires to learn from him, Galileo hands him a few pages and warns him: “Hier stehen die Gründe, warum das Weltmeer sich in Ebbe und Flut bewegt. Aber du sollst es nicht lesen, hörst du? Ach, du liest schon? Du bist also ein Physiker?” (79).

For the play’s Church, and ultimately for the entire society, the greatest danger inherent to the new science is spiritual. In the discussion between the Pope and the Inquisitor, quoted above, the Inquisitor expresses the danger in terms of sea travel: “Seit sie über das Meer fahren—ich habe nichts dagegen—, setzen sie ihr Vertrauen auf eine Messingkugel, die sie den Kompass nennen, nicht mehr auf Gott” (106). Where is God in your universe, asks Sagredo to his friend Galileo, who, like the heretic burned ten years before, can only reply: “In uns oder nirgends!” (33).

Thus Galileo appears to be willing to question the authority of the Church in certain areas in which it has claimed absolute knowledge, at the same time that he still claims to remain a devoted son of the Church. This combination appears to have come easily to him, but the imbalance felt by the other characters, as well as the (unrecognized) imbalance in his own life, mentioned above,

gives ample evidence of the extreme difficulty of maintaining such a combination. The imbalance of the sea, when introduced into the areas of knowledge in which the Church claims sovereignty, becomes labeled as heresy, and is repressed. Galileo clearly sees the repression of the Church as he waits for ten years before renewing the investigations he desires to pursue and is ultimately requested to recant. This repression is fraught with difficulty, because the scientific attitude is responsible for much that the reactionary force desires to retain. The Pope is well aware of this, but the Inquisitor is adamant:

Der Papst: Man kann nicht die Lehre verdammen und die Sternkarten nehmen.

Der Inquisitor: Warum nicht? Man kann nicht anderes.
(107)

Once again, the sea asserts its centrality in the issues at stake. To reject the new science is to throw out the societal improvements it brings, represented here by improved navigation at sea due to the Sternkarten; but to embrace it would be to accept a diminished position of authority and to accept doubt into what once was sure.

Conclusion

In the world of Brecht's *Leben des Galilei* there exist, then, both the oppression and the security of authority. There exist also both the freedom of science and the (latent) oppression of a scientific discipline that must sell itself to the highest bidder. There are, thus, good and bad elements on both sides of the dialectic between reactionary repression and progressive scientific investigation, a dialectic that is powerfully illustrated and enhanced by

the metaphor of sea travel.

To embark on sea travel is to leave the comfortable, the known, and venture into the unknown, but it is also to cut ties with humanity. To sail means to have no solid ground under foot, to be imbalanced, to expose oneself to danger. To sail is to discover and to record so the next voyager can go farther; it is to depend on the community of adventurers. To sail is to realize humanity's infancy and transitoriness in the face of the physical world and the world of knowledge, but also to realize its greatness. There is a rift between the seaman and the rest of humanity, unless the seaman returns to shore. He must return if he is to retain his own humanity: so too, the scientist of the twentieth century.

Brecht's own poem at the beginning of the last scene admonishes us:

Wir, die wissensdurstig sind
Er und ich, wir blieben dahint'.
Hütet ihr der Wissenschaften Licht
Nutzt es und missbraucht es nicht
Dass es nicht, ein Feuerfall
Einst verzehre noch uns all
Ja, uns all. (128)

The thirst for the sea of knowledge—that can never be satiated—may lead to fire if we are not careful. And we in the atomic age, Brecht believes, have not been careful.

Works Cited

Bentley, Eric. Introduction. *Galileo*. New York: Grove Weidenfeld,