

*Notes on individual scenes*

## I

*The Scholar, a Human Being*

The first thing L. did when he set to work was to rid the figure of Galileo of the pallid, spiritual, stargazing aura of the text books. Above all, the scholar must be made into a man. The very term 'scholar' [Gelehrter] sounds somewhat ridiculous when used by simple people; there is an implication of having been prepared and fitted, of something passive. In Bavaria people used to speak of the Nuremberg Funnel by which simpletons were more or less forcibly fed undue quantities of knowledge, a kind of enema for the brain. When someone had 'crammed himself with learning', that too was considered unnatural. The educated—again one of those hopelessly passive words—talked of the revenge of the 'uneducated', of their innate hatred for the mind; and it is true that their contempt was often mixed with hatred; in villages and working-class districts, the mind was considered something alien, even hostile. The same contempt, however, could also be found among the 'better classes'. A scholar was an impotent, bloodless, quaint figure, conceited and barely fit to live. He was an easy prey for romantic treatment. L.'s Galileo never strayed far from the engineer at the great arsenal in Venice. His eyes were there to see with, not to flash, his hands to work with, not to gesticulate. Everything worth seeing or feeling L. derived from Galileo's profession, his pursuit of physics and his teaching, the teaching, that is, of something very concrete with its concomitant real difficulties. And he portrayed the external side not just for the sake of the inner man—that is to say, research and everything connected with it, not just for the sake of the resulting psychological reactions—these reactions, rather, were never separated from the everyday business and conflicts, they never became 'universally human', even though they never lost their universal appeal. In the case of the Richard III of Shakespeare's theatre, the spectator can easily change himself along with the actor, since the king's politics and warfare play only a very vague role; there is hardly more of it than a dreaming man would understand. But with Galileo it is a continual handicap to the spectator that he knows much less about science than does Galileo. It is a piquant fact that in representing the history of Galileo, both playwright and actor had to undo the notion which Galileo's betrayal had helped to create, the notion that schoolteachers

and scientists are by nature absent-minded, hybrid, castrated. (Only in our own day when, in the shape of ruling-class hirelings remote from the people, they delivered the latest product of Galileo's laws of motion, did popular contempt change to fear.) As for Galileo himself, for many centuries, all over Europe, the people honoured him for his belief in a popularly based science by refusing to believe in his recantation.

### *Subdivisions and Line*

We divided the first scene into several parts:

We had the advantage that the beginning of the story was also a beginning for Galileo, that is, his encounter with the telescope, and since the significance of this encounter is hidden from him for the time being, our solution was to derive the joy of beginning from the early morning: having him wash with cold water—L., with bare torso, lifted a copper pitcher with a quick sweeping motion to let the jet of water fall into the basin—find his open books on the high desk, have his first sip of milk, and give his first lesson, as it happens, to a young boy. As the scene unfolds, Galileo keeps coming back to his reading at the high desk, annoyed at being interrupted by the returning student with his shallow preference for new-fangled inventions such as this spyglass, and by the procurator of the university who denies him a grant; finally reaching the last obstacle that keeps him from his work, the testing of the lenses which, however, would not have been possible without the two prior interruptions, and makes an entirely new field of work accessible.

### *Interest in Interest and Thinking as Expression of Physical Contentment*

Two elements in the action with the child may be mentioned:

Washing himself in the background, Galileo observes the boy's interest in the astrolabe as little Andrea circles around the strange instrument. L. emphasised what was novel in G. at that time by letting him look at the world around him as if he were a stranger and as if it needed explanation. His chuckling observation made fossils out of the monks at the Collegium Romanum. In that scene he also showed amusement at their primitive method of proof.

Some people objected to L.'s delivering his speech about the new astronomy in the first scene with a bare torso, claiming that it would

confuse the audience if it were to hear such intellectual utterances from a half-naked man. But it was just this mixture of the physical and the intellectual that attracted L. 'Galileo's physical contentment' at having his back rubbed by the boy is transformed into intellectual production. Again, in the ninth scene, L. brought out the fact that Galileo recovers his taste for wine on hearing of the reactionary pope's expected demise. His sensual walking, the play of his hands in his pockets while he is planning new researches, came close to being offensive. Whenever Galileo is creative, L. displayed a mixture of aggressiveness and defenceless softness and vulnerability.

### *Rotation of the Earth and Rotation of the Brain*

L. arranges the little demonstration of the earth's rotation to be quick and offhand, leaving his high desk where he has begun to read and returning to it. He avoids anything emphatic, seems to pay no attention to the child's intellectual capacity, and at the end leaves him sitting there alone with his thoughts.

This casual manner, in keeping with his limited time, simultaneously admits the boy to the community of scholars. Thus L. demonstrated how for Galileo learning and teaching are one and the same—which makes his subsequent betrayal all the more horrible.

### *Balanced Acting*

During this demonstration of the earth's rotation Galileo is surprised by Andrea's mother. Questioned about the nonsensical notions he is teaching the child he answers: 'Apparently we are on the threshold of a new era, Mrs. Sarti.' The way in which L. caressingly emptied his glass of milk while he said it was enchanting.

### *Response to a Good Answer*

A small detail: the housekeeper has gone to let the new student in. Galileo feels constrained to make a confession to Andrea. His science is in no very good state, its most important concerns must be concealed from the authorities, and for the moment they are only hypotheses. 'I want to become an astronomer,' Andrea says quickly. At this answer Galileo looks at him with an almost tender smile. Usually actors do not rehearse such details separately, or often, enough to render them quickly in the performance.

## [Dismissal of Andrea]

The dismissal of Andrea during the conversation with Ludovico is a piece of stage business for which time must be allowed. Galileo now drinks his milk as if it were the only pleasure to be had, and one which will not last very long. He is fully aware of Andrea's presence. Ill-humouredly he sends him away. One of those unavoidable everyday compromises!

*Galileo Underestimates the New Invention*

Ludovico Marsili describes a new spyglass which he has seen in Holland and cannot understand. Galileo asks for detailed information and makes a sketch which solves the problem. He holds the cardboard with the sketch without showing it to his pupil, who expected to have a look. (L. insisted that the actor playing Ludovico should expect this.) The sketch itself he drew casually, just to solve a problem that offered some relief from the conversation. Then, his way of asking the housekeeper to send Andrea for lenses and borrowing a scudo from the entering procurator—all that had an automatic and routine quality. The whole incident seemed only to demonstrate that Galileo too was capable of ploughing water.

*A New Commodity*

The birth of the telescope as a commodity took a long time to emerge clearly in the rehearsals. We found out why: L. had reacted too quickly and arrogantly to the university's refusal of a grant. All was well as soon as he accepted the blow in hurt silence and then went on, almost sadly, to speak like a poor man. As a natural result, Galileo's 'Mr. Priuli, I may have something for you,' came out in a way to make Galileo's dismissal of the new spyglass as 'bosh' perfectly clear.

## [Interruption of Work]

When Andrea returns with the lenses he finds Galileo deep in his work. (L. has shown, during a by no means brief interval, how the scholar handles his books.) He has already forgotten the lenses, he lets the boy wait, then proceeds, almost guiltily because he has no desire to take up the lucrative bosh, to arrange the two lenses on a piece of cardboard. Finally he takes the 'thing' away, not without a little demonstration of his showmanship.

The senators surround and congratulate Galileo and draw him to the rear, but the tiny exchange with Ludovico Marsili, with its imputation of plagiarism, must as it were still hover in the air; for when the half-curtain closes behind them [Ludovico and Virginia] and in front of Galileo and the others, they continue and conclude the conversation while exiting along the footlights. And Ludovico's cynical remark, 'I am beginning to understand science,' serves as a springboard for the ensuing third scene—that of the great discoveries.

## 3

## [Confidence in Objective Judgment]

Galileo lets his friend Sagredo look through the telescope at the moon and Jupiter. L. sat down, his back to the instrument, relaxed, as though his work was done and he only wanted his friend to pass impartial judgment on what he saw, and that this was all he needed to do since his friend was now seeing for himself. By this means he established that the new possibilities of observation must bring all controversy about the Copernican system to an end.

This attitude explains at the very beginning of the scene the boldness of his application for the lucrative position at the court of Florence.

*The Historical Moment*

L. conducted the exchange with his friend at the telescope without any emphasis. The more casually he acted, the more clearly one could sense the historic night; the more soberly he spoke, the more solemn the moment appeared.

*An Embarrassment*

When the procurator of the university comes in to complain about the fraud of the telescope, L.'s Galileo shows noticeable embarrassment by studiously looking through the telescope, obviously less to observe the sky than to avoid looking the procurator in the eye. Shamelessly he exploits the 'higher' function of the instrument which the Venetians have found not to be very profitable.

It is true that he also shows his behind to the angry man who has trusted him. But, far from trying to put him off with the discoveries of 'pure' science, he at once offers him another profitable item, the astronomical clock for ships. When the procurator has left, he sits glumly before the telescope, scratching his neck and telling Sagredo about his

physical and intellectual needs which must be satisfied in one way or another. Science is a milch cow for all to milk, he himself of course included. While at this point in time Galileo's attitude is still helpful to science, later on, in his fight with Rome, it is going to push science to the brink of the abyss, in other words, deliver it into the hands of the rulers.

### *The Wish Is Father to the Thought*

Looking up from their calculations of the movements of Jupiter's moons, Sagredo voices his concern for the man about to publish a discovery so embarrassing to the church. Galileo mentions the seductive power of evidence. He fishes a pebble from his pocket and lets it fall from palm to palm, following gravity: 'Sooner or later everybody must succumb to it' [the evidence]. As he argued along these lines, L. never forgot for a moment to do it in such a way that the audience would remember it later when he announced his decision to hand over his dangerous discoveries to the Catholic court of Florence.

### *[Rejection of Virginia]*

L.'s Galileo used the little scene with his daughter Virginia to indicate how far he might be blamed for Virginia's subsequent behaviour as a spy for the Inquisition. He does not take her interest in the telescope seriously and sends her off to matins. L. scrutinised his daughter after her question, 'May I look through it?' before replying, 'What for? It's not a toy.'

### *The Fun in Contradictions*

Saying, 'I am going to Florence,' Galileo carefully signs his letter of application. In this hasty capitalization of his discoveries as well as in his discourse on the seductive power of evidence and the representative value of great discoveries, L. left the spectator completely at liberty to study, criticise, admire Galileo's contradictory personality.

4

### *The Acting of Anger*

Vis-à-vis the court scholars who refuse to look through the telescope because to do so would either confirm Aristotle's doctrine or show up

Galileo as a swindler, what L. acted was not so much anger as the attempt to dominate anger.

### *Servility*

After Galileo, erupting at last, has threatened to take his new science to the dockyards, he sees the court depart abruptly. Deeply alarmed and disturbed, he follows the departing prince in cringing servility, stumbling, all dignity gone. In such a case an actor's greatness can be seen in the degree to which he can make the character's behaviour incomprehensible or at least objectionable.

4 and 6\*

### *The Fight and the Particular Manner of Fighting*

L. insisted that throughout the two following scenes, 4 and 6, the sketch of Jupiter's moons from Galileo's original report should remain projected on the backdrop screen. It was a reminder of the fight. To show one of its aspects, the heel-cooling for the sake of truth, L., at the end of scene 4, when the chamberlain stays behind after the hasty departure of the court to inform him of the appeal to Rome, let himself be driven out of the space that stood for his house and stood in front of the half-curtain. He stood there between scenes 4 and 6 and again between scenes 6 and 7, waiting, and occasionally verifying that the pebble from his pocket continued to fall from one raised hand to the other stretched out below.

6

### *[Observation of the Clergy]*

Galileo is not entirely devoid of appreciation when he observes the jeering monks at the Collegium Romanum—after all, by pretending to stand on a rolling globe they are trying to *prove* the absurdity of his propositions. The very old cardinal fills him with pity.

After the astronomer Clavius has confirmed Galileo's findings, Galileo shows his pebble to the hostile cardinal who retreats in dismay; L. did this by no means triumphantly, rather as if he wanted to offer his adversary a last chance to convince himself.

\*Scene 5 was not played in this production.

← plague scene cut

*Fame*

Invited to the masked ball of Cardinals Bellarmin and Barberini Galileo lingers for a moment in the anteroom, alone with the clerical secretaries who later turn out to be secret agents. He has been greeted on his arrival by distinguished masked guests with great respect: obviously he stands in high favour. From the halls a boys' choir is heard, and Galileo listens to one of these melancholic stanzas which are sung amid the joy of life. L. needed no more than this brief listening and the word 'Rome!' to express the pride of the conqueror who has the capital of the world at his feet.

*The Duel of Quotations*

In the brief duel of Bible quotations with Cardinal Barberini, L.'s Galileo shows, beside the fun he has with such intellectual sport, that the possibility of an unfavourable outcome to his affairs is dawning on him. For the rest, the effectiveness of the scene depends on the elegance of its performance; L. made full use of his heavy body.

*Two Things at Once*

The brief argument about the capacity of the human brain (which the playwright was delighted to have heard formulated by Albert Einstein) furnished L. the opportunity to show two traits: 1) a certain arrogance of the professional when his field is invaded by laymen, and 2) an awareness of the difficulty of such a problem.

*[Disarmed by Lack of Logic]*

When the decree is read out forbidding the guest to teach a theory acknowledged to have been proven, L.'s Galileo reacts by twice turning abruptly from the reading secretaries to the liberal Barberini. Thunderstruck, he lets the two cardinals drag him to the ball as if he were a steer stunned by the axe. L. was able, in a manner the playwright cannot describe, to give the impression that what mainly disarmed Galileo was the lack of logic.

*[Indomitable Urge to Research]*

If in the seventh scene Galileo experiences the *No of the church*, in the eighth he is confronted with the *No of the people*. It comes from the lips of the little monk, himself a physicist. Galileo is disturbed, then recognises the situation: in the fight against science it is not the church that defends the peasant, but the peasant who defends the church. It was L.'s theatrical conception to let Galileo be so profoundly upset that he delivers his counter-arguments in a spirit of defence, even of angry self-defence, and makes the throwing down of the manuscript into a gesture of helplessness. He blamed his indomitable urge to research like a sex offender blaming his glands.

*Laughton Does Not Forget to Tell the Story*

In the eighth scene one of Galileo's lines contains a sentence which continues the story: 'Should I condone this decree . . .' L. distilled this small but important detail with great care.

*[The Impatience of Galileo the Scientist]*

Whereas L. insisted he must be allowed to give Galileo's character a markedly criminal evolution after the recantation in scene 13, he did not feel a similar need at the beginning of scene 9. Here too, to oblige the church, Galileo has for many years abstained from publicising his discoveries, but this cannot be considered a betrayal like the later one. At this point the people know very little about the new science, the cause of the new astronomy has not yet been taken up by the North Italian bourgeoisie, the battle fronts are not yet political. There may not be an open declaration on his part, but there is no recantation either. In this scene therefore it is still the scientist's personal impatience and dissatisfaction which must be portrayed.

*When Does Galileo Become Antisocial?*

The issue in Galileo's case is not that a man must stand up for his opinion as long as he holds it to be true; that would entitle him to be called a 'character'. The man who started it all, Copernicus, did not stand up

for his opinion; it would be truer to say that he lay down for it inasmuch as he had it published only after his death; and yet, quite rightly, no one has ever reproached him for this. Something had been laid down to be picked up by anybody.

The man who had laid it down had gone, out of range of blame or thanks. Here was a scientific achievement which allowed simpler, shorter and more elegant calculations of celestial motions; so let humanity make use of it. Galileo's life's work is on the whole of the same order, and humanity used it. But unlike Copernicus who had avoided a battle, Galileo fought it and betrayed it. If Giordano Bruno, of Nola, who did not avoid the battle and had been burned twenty years earlier, had recanted, no great harm might have come of it; it could even be argued that his martyrdom deterred scientists more than it aroused them. In Bruno's time the battle was still a feeble one. But time did not stand still: a new class, the bourgeoisie with its new industries, had assertively entered the scene; no longer was it only scientific achievements that were at stake, but battles for their large-scale general exploitation. This exploitation had many aspects because the new class, in order to pursue its interests, had to come to power and smash the prevailing ideology that obstructed it. The church, which defended the privileges of princes and landowners as God-given and therefore natural, did not rule by means of astronomy, but it ruled within astronomy, as in everything else. And in no field could it allow its rule to be smashed. The new class, clearly, could exploit a victory in any field including that of astronomy. But once it had singled out a particular field and concentrated the battle in it, the new class became broadly vulnerable there. The maxim, 'A chain is as strong as its weakest link,' applies to chains that bind (such as the ideology of the church) as well as to transmission chains (such as the new class's new ideas about property, law, science, etc.). Galileo became antisocial when he led his science into this battle and then abandoned the fight.

### Teaching

Words cannot do justice to the lightness and elegance with which L. conducted the little experiment with the pieces of ice in the copper basin. A fairly long reading from books was followed by the rapid demonstration. Galileo's relationship with his pupils is like a duel in which the fencing master uses all his feints—using them against the pupil to serve the pupil. Catching Andrea out in a hasty conclusion, Galileo crosses out his wrong entry in the record book with the same matter-of-fact patience as he displays in correcting the ice's position in the submersion experiment.

### Silence

With his pupils he uses his tricks mainly to quell their dissatisfaction with him. They are offended by his keeping silent in the European controversy about sunspots, where his views are constantly being solicited as those of the greatest authority in the field. He knows he owes his authority to the church, and hence owes the clamour for his views to his silence. His authority was given him on condition that he should not use it. L. shows how Galileo suffers by the episode of the book on sunspots, which has been brought along and is discussed by his pupils. He pretends complete indifference, but how badly he does it! He is not allowed to leaf through the book, probably full of errors and thus twice as attractive. In little things he supports their revolt, though not himself revolting. When the lens grinder Federzoni angrily drops the scales on the floor because he cannot read Latin, Galileo himself picks them up—casually, like a man who would pick up anything that fell down.

### Resumption of Research—a Sensual Pleasure

L. used the arrival of Ludovico Marsili, Virginia's fiancé, to show his disgust at the routine nature of his work. He organised the reception of his guest in such a way that it interrupted the work and made his pupils shake their heads. On being told that the reactionary pope was on his deathbed Galileo visibly began to enjoy his wine. His bearing changed completely. Sitting at the table, his back to the audience, he experienced a rebirth; he put his hands in his pockets, placed one leg on the bench in a delicious sprawl. Then he rose slowly and walked up and down with his glass of wine. At the same time he let it be seen how his future son-in-law, the landowner and reactionary, displeased him more with every sip. His instructions to the pupils for the new experiment were so many challenges to Ludovico. With all this, L. still took care to make it plain that he was seizing the opportunity for new research not by the forelock, but just by a single little hair.

### The Gest of Work

The speech about the need for caution with which Galileo resumes a scientific activity that defies all caution shows L. in a rare gest of creative, very vulnerable softness.

Even Virginia's fainting spell on finding her fiancé gone barely interests Galileo. As the pupils hover over her, he says painfully: 'I've got to know.' And in saying it he did not seem hard.

## 10

*Political Attitude on Dramatic Grounds*

L. took the greatest interest in the tenth (carnival) scene, where the Italian people are shown relating Galileo's revolutionary doctrine to their own revolutionary demands. He helped sharpen it by suggesting that representatives of the guilds, wearing masks, should toss a rag doll representing a cardinal in the air. It was so important to him to demonstrate that property relationships were being threatened by the doctrine of the earth's rotation that he declined a New York production where this scene was to be omitted.

## 11

*Decomposition*

The eleventh scene is the decomposition scene. L. begins it with the same authoritative attitude as in the ninth scene. He does not permit his increasing blindness to detract one iota from his virility. (Throughout, L. strictly refused to exploit this ailment which Galileo had contracted in the pursuit of his profession, and which of course could easily have won him the sympathy of the audience. L. did not want Galileo's surrender to be ascribable to his age or physical defects. Even in his last scene he was a man who was spiritually, not physically broken.)

The playwright would sooner have Galileo's recantation in this scene, rather than let it take place before the Inquisition. Galileo executes it when he rejects the offer of the progressive bourgeoisie, in the person of the iron founder Vanni, to support him in his fight against the church, and insists that what he has written is an unpolitical scientific work. L. acted this rejection with the utmost abruptness and strength.

*Two Versions*

In the New York production L. changed his gest for the meeting with the cardinal inquisitor as he emerges from the inner chambers. In the California production he remained seated, not recognising the cardinal, while his daughter bowed. This created the impression of something ominous passing through, unrecognisable but bowing. In New York L. rose and himself acknowledged the cardinal's bow. The playwright finds no merit in the change, since it establishes a relationship between Galileo and the cardinal inquisitor which is irrelevant, and

turns Galileo's ensuing remark, 'His attitude was respectful, I think,' into a statement rather than a question.

*The Arrest*

As soon as the chamberlain appears at the head of the stairs, Galileo hastily puts the book under his arm and runs upstairs, passing the startled chamberlain. Stopped short by the chamberlain's words, he leafs through the book as though its quality was all that mattered. Left standing on the lower part of the staircase, he must now retrace his steps. He stumbles. Almost at the footlights—his daughter has run to meet him—he completely pulls himself together and gives his instructions firmly and to the point. It becomes clear that he has taken certain precautions. Holding his daughter close and supporting her, he sets out to leave the hall at a rapid, energetic pace. When he reaches the wings the chamberlain calls him back. He receives the fateful decision with great composure. Acting thus, L. shows that this is neither a helpless nor an ignorant man who is being caught, but one who has made great mistakes.

## 13

*A Difficulty for the Actor: Some Effects Become Apparent Only When the Play Is Seen a Second Time*

In preparing for the recantation scene L. never neglected in the preceding scenes to exhibit in all their fine shades the compliance and non-compliance in Galileo's conduct vis-à-vis the authorities, even those instances which would only mean anything to a spectator who had already seen the entire play once. Both he and the playwright recognised that in this type of play certain details unavoidably depend on a knowledge of the whole.

*The Traitor*

In the book there is a stage direction for Galileo when he returns to his pupils after he recanted to the Inquisition: 'He is changed, almost unrecognisable.' The change in L. was not of a 'physical nature' as the playwright had intended. There was something infantile, bed-wetting in his loose gait, his grin, indicating a self-release of the lowest order, as if restraints had been thrown off that had been very necessary.

This, like what follows, can best be seen in photographs of the California production.

Andrea Sarti is feeling sick; Galileo has asked for a glass of water for him, and now the little monk passes by him, his face averted. Galileo's gaze is answered by Federzoni, the artisan-scholar, and for some time the two stare at each other until the monk returns with the water. This is Galileo's punishment: it will be the Federzonis of future centuries who will have to pay for his betrayal at the very inception of their great career.

### 'Unhappy the Land'

The pupils have abandoned the fallen man. Sarti's last word had been: 'Unhappy is the land that breeds no hero.' Galileo has to think of an answer, then calls after them, too late for them to hear: 'Unhappy is the land that needs a hero.' L. says it soberly, as a statement by the physicist who wants to take away nature's privilege to ordain tragedies and mankind's need to produce heroes.

14

### The Goose

Galileo spends the last years of his life on an estate near Florence as a prisoner of the Inquisition. His daughter Virginia, whom he has neglected to instruct, has become a spy for the Inquisition. He dictates his *Discorsi* to her, in which he lays down his main teachings. But to conceal the fact that he is making a copy of the book he exaggerates the extent of his failing eyesight. Now he pretends not to recognise a goose which she shows him, the gift of a traveller. His wisdom has been degraded to cunning. But his zest for food is undiminished: he instructs his daughter carefully how he wants the liver prepared. His daughter conceals neither her disbelief in his inability to see nor her contempt for his gluttony. And Galileo, aware that she defends him vis-à-vis the Inquisition's guards, sharpens the conflicts of her troubled conscience by hinting that he may be deceiving the Inquisition. Thus in the basest manner he experiments with her filial love and her devotion to the church. Nonetheless L. succeeded brilliantly in eliciting from the spectator not only a measure of contempt but also a measure of horror at dégradations that debase. And for all this he had only a few sentences and pauses at his disposal.

### Collaboration

Anxious to show that crime makes the criminal more criminal, L. insisted, during the adaptation of the original version, on a scene in which Galileo collaborates with the authorities in full view of the audience. There was another reason for this: during the scene Galileo makes the most dignified use of his well-preserved intellectual powers by analysing his betrayal for the benefit of his former pupil. So he now dictates to his daughter, to whom he had for many weeks been dictating his main work, the *Discorsi*, an abject letter to the archbishop in which he advises him how the Bible may be used for the suppression of starving artisans. In this he quite frankly shows his daughter his cynicism without being entirely able to conceal the effort this ignominious exercise costs him. L. was fully aware of the recklessness with which he swam against the stream by thus throwing away his character—no audience can stand a thing like that.

### The Voice of the Visitor

Virginia has laid down the manuscript of the letter to the archbishop and gone out to receive a belated visitor. Galileo hears the voice of Andrea Sarti, formerly his favourite pupil, who had broken with him after the recantation. To those readers of the play who complained that it gave no description of the spiritual agonies to which our nuclear physicists were subjected by the authorities ordering the bombs, L. could show that no first-rate actor needs more than a fleeting moment to indicate such spiritual discomfort. It is of course right to compare Galileo's submissiveness towards his authorities with that of our physicists towards rulers whom they distrust, but it would be wrong to go all the way into their stomach pains. What would be gained by that? L. was simply making this the moment to display his bad conscience, which could not have been shown later in the scene when his betrayal is analysed, without getting in his way.

### The Laughter

The laughter in the picture [in the Model Book] was not suggested by the text, and it was frightening. Sarti, the former favourite pupil, calls and Virginia overhears the strained conversation. When Galileo inquires about his former collaborators, Sarti answers with utter frankness calculated to hurt his master. They get to Federzoni, a lens grinder whom Galileo had made his scientific collaborator even though he had

no Latin. When Sarti reports he is back in a shop grinding lenses Galileo answers: 'He can't read the books': Then L. makes him laugh. The laugh however does not contain bitterness about a society that treats science as something secret reserved for the well-to-do, but a disgraceful mocking of Federzoni's inadequacies together with a brazen complicity in his degradation, though this is simply (and completely) explained by his being inadequate. L. thus intended to make the fallen man a provocateur. Sarti, naturally, responds with indignation and seizes the opportunity to inflict a blow on the shameless recanter when Galileo cautiously inquires about Descartes's further work. Sarti coldly reports that Descartes shelved his investigations into the nature of light when he heard that Galileo had recanted. And Galileo once had exclaimed that he would willingly be 'imprisoned a thousand feet beneath the earth, if in exchange he could find out what light is'. L. inserted a long pause after this unpleasant information.

#### *The Right to Submit*

During the first sentences of his exchange with Sarti he listens inconspicuously for the footsteps of the Inquisition's official in the anteroom, who stops every now and then, presumably in order to eavesdrop. Galileo's inconspicuous listening is difficult to act since it must remain concealed from Sarti but not from the audience; concealed from Sarti because otherwise he would not take the prisoner's repentant remarks at face value. But Galileo must convey them to him at face value so that his visitor can cash them when he reaches foreign parts; it would not do at all if it were rumoured abroad that the prisoner was recalcitrant. Then the conversation reaches a point where Galileo abandons this way of speaking for the benefit of hostile ears, and proclaims, authoritatively and forcefully, that it is his right to submit. Society's command to its members to produce is but vague and accompanied by no manner of guarantee; a producer produces at his own risk, and Galileo can prove any time that being productive endangers his comfort.

#### *Handing over the Book*

L. made the disclosure about the existence of the *Discorsi* quickly and with exaggerated indifference; but in a way suggesting that the old man was only trying to get rid of the fruits of a regrettable lapse, with yet another implication beneath this: anxiety lest the visitor reject the imposition together with the risk involved in taking the book with him. As he was protesting ill-humouredly that he wrote the book only

as a slave of habit—the thoroughly vicious habit of thinking—the spectator could see that he was also listening. (Having made his eyesight worse by secretly copying the book which is endangered by the Inquisition, when he wants to gauge Sarti's reaction he is wholly dependent on his ears.) Toward the end of his appeal he virtually abandons his attitude of 'condescending grandeur' and comes close to begging. The remark about having continued his scientific work simply to kill time, uttered when Sarti's exclamation 'The *Discorsi*!' had made him aware of his visitor's enthusiasm, came so falsely from L.'s lips that it could deceive no one.

It is furthermore important to realise that when Galileo so strongly emphasises his own condemnation of the teaching activities which are now forbidden to him he is mainly trying to deceive himself. Since working, let alone sharing the results with the outside world, would threaten whatever was left of his comfort, he himself is passionately against this 'weakness' which makes him like a cat that cannot stop catching mice. Indeed the audience is witnessing his defeat when it sees him yield so reluctantly yet helplessly to an urge fostered in him by society. He must consider the risks to be larger than ever because now he is wholly in the hands of the Inquisition; his punishment would no longer be a public one; and the body of people who formerly would have protested has dispersed—thanks to his own fault. And not only has the danger increased, but he would be too late now with any contribution anyway, since astronomy has become apolitical, the exclusive concern of scientists.

#### *Watchfulness*

After the young physicist has found the book for which the scientific community no longer dares to hope, he at once changes his opinion about his former teacher and launches, with great passion, into a rationalisation of Galileo's motives for the betrayal; motives, he finds, which exonerate him completely. Galileo has recanted so that he can go on with his work and find more evidence for the truth. Galileo listens for a while, interjecting monosyllables. What he is hearing now may well be all that he can expect posterity to say in recognition of his difficult and dangerous endeavour. First he seems to be testing his pupil's improvised theory, just in the same way as any other theory must be tested for its validity. But presently he discovers that it is not tenable. At this point, immersed in the world of his scientific concerns, he forgets his watchfulness vis-à-vis a possible eavesdropper: he stops listening for steps.

### The Analysis

Galileo's great counterattack against the golden bridge opens with a scornful outburst that abandons all grandeur: 'Welcome to my gutter, dear colleague in science and brother in treason! I sold out, you are a buyer.' This is one of the few passages which gave L. trouble. He doubted whether the spectator would get the meaning of the words, apart from the fact that the words are not taken from Galileo's usual, purely logical vocabulary. L. could not accept the playwright's argument that there must be some *gest* simply showing how the opportunist damns himself by damning all who accept the rewards of opportunism; what he understood even less was that the playwright would be quite satisfied with the exhibition of a state of mind that defies rational analysis. The omission of a spiteful and strained grin at this point robbed the opening of the great instructional speech of its malice. It was not fully brought out that deriding the ignorant is the lowest form of instruction and that it is an ugly light that is shed solely for the purpose of letting one's own light shine. Because the lowest starting point was missing some spectators were unable to gauge the full height which L. undoubtedly reached in the course of the great speech, nor was it entirely possible to see the collapse of Galileo's vain and violently authoritarian attitude that coloured even his scientific statements. The theatrical content of the speech, in fact, is not directly concerned with the ruthless demonstration of bourgeois science's fall from grace at the beginning of its rise—its surrender of scientific knowledge to the rulers who are authorised 'to use it, not use it, abuse it, as it suits their ends'. The theatrical content derives from the whole course of the action, and the speech should show how well this perfect brain functions when it has to judge its owner. That man, the spectator should be able to conclude, is sitting in a hell more terrible than Dante's, where the true function of intellect has been gambled away.

### Background of the Performance

It is important to realise that our performance took place at the time and in the country of the atom bomb's recent production and military application: a country where nuclear physics was then shrouded in deepest secrecy. The day the bomb was dropped will not easily be forgotten by anyone who spent it in the United States.

The Japanese war had cost the United States real sacrifices. The troop ships left from the west coast, and the wounded and the vic-

tims of tropical diseases returned there. When the news reached Los Angeles it was at once clear that this was the end of the hateful war, that sons and brothers would soon come home. But the great city rose to an astonishing display of mourning. The playwright heard bus drivers and saleswomen in fruit markets express nothing but horror. It was victory, but it was the shame of defeat. Next came the suppression of the tremendous energy source by the military and politicians, and this upset the intellectuals. Freedom of investigation, the exchange of scientific discoveries, the international community of scholars: all were jettisoned by authorities that were strongly distrusted. Great physicists left the service of their bellicose government in headlong flight; one of the best known took an academic position where he was forced to waste his working time in teaching rudimentary essentials solely to escape working for the government. It had become ignominious to make new discoveries.

[From *Aufbau eier Rolle/Laughtons Galilei*, East Berlin, Henschel, 1956.]

### Appendices to 'Building Up a Part'

#### Sense and sensuality

The demonstrative style of acting, which depicts life in such a way that it is laid open to intervention by the human reason, and which strikes Germans as thoroughly doctrinaire, presented no special difficulty to the Englishman L. What makes the sense seem so striking and insistent once it is 'lugged in' is our particular lack of sensuality. To lack sensuality in art is certainly senseless, nor can any sense remain healthy if it is not sensual. Reason, for us, immediately implies something cold, arbitrary, mechanical, presenting us with such pairs of alternatives as ideas and life, passion and thinking, pleasure and utility. Hence when we stage a performance of our *Faust*—a regular occurrence for educational reasons—we strip it of all sensuality and thus transport the audience into an indefinite atmosphere where they feel themselves confronted with all sorts of thoughts, no single one of which they can grasp clearly. L. didn't even need any kind of theoretical information about the required 'style'. He had enough taste not to make any distinction between the supposedly lofty and the supposedly base, and he detested preaching. And so he was able to unfold the great physicist's contradictory personality in a wholly corporeal form, without either suppressing his own thoughts about the subject or forcing them on us.

*Beard or no beard*

In the California production L. acted without a beard, in the New York with one. This order has no significance, nor were there any fundamental discussions about it. It is the sort of case where the desire for a change can be the deciding factor. At the same time it does of course lead to modifications in the character. People who had seen the New York production confirmed what can be seen from the pictures [in the Model Book], namely that L. acted rather differently. But everything essential was still there, and the experiment can be taken as evidence to show how much room is left for the 'personal' element.

*The leavetaking*

Certainly nothing could have been more horrible than the moment when L. has finished his big speech and hastens to the table saying 'I must eat now', as though in delivering his insights Galileo has done everything that can be expected of him. His leavetaking from Sarti is cold. Standing absorbed in the sight of the goose he is about to eat, he replies to Sarti's repeated attempt to express his regard for him with a formal 'Thank you, sir'. Then, relieved of all further responsibility, he sits down pleasantly to his food.

*Concluding remark*

Though it resulted from several years of preparation and was brought about by sacrifices on the part of all concerned, the production of *Galileo* was seen by a bare ten thousand people. It was put on in two small theatres, a dozen times in each: first in Beverly Hills, Los Angeles, and then with a completely new cast in New York. Though all the performances were sold out the notices in the main papers were bad. Against that could be set the favourable remarks of such people as Charles Chaplin and Erwin Piscator, as well as the interest of the public, which looked like being enough to fill the theatre for some considerable time. But the size of the cast meant that the potential earnings were low even if business was really good, and when an artistically interested producer made an offer it had to be rejected because L., having already turned down a number of film engagements and made considerable sacrifices, could not afford to turn down another. So the whole thing remained a private operation by a great artist who, while earning his keep outside the theatre, indulged himself by displaying a splendid piece of work to a (not very large) number of interested parties.

Though this is something that needed to be said, it does not however convey the complete picture. Given the way the American theatre was organised in those years, it was impossible that such plays and such productions should reach their audience. Productions like this one, therefore, should be treated as examples of a kind of theatre that might become possible under other political and economic conditions. Their achievements, like their mistakes, make them object lessons for anyone who is looking for a theatre of great themes and rewarding acting.

[From Werner Hecht (ed.), *Materialien zu Brechts 'Leben des Galilei'*, pp. 78-80. In the last of these notes Brecht is perhaps being undeservedly kind to Laughton, since the actor's wariness of Communist associations, at a time when Brecht and Hanns Eisler were being heard by the Un-American Activities Committee, appears to have been another strong factor in deciding him to close the play.]

## NOTES ON INDIVIDUAL SCENES

[Scene 11]

### *Could Galileo have acted any differently?*

This scene gives ample reasons for Galileo's hesitation about escaping from Florence and seeking asylum in the North Italian cities. None the less the audience can imagine him putting himself in the hands of Matti the ironfounder, and discover various tendencies in his character and situations which would support this.

[The actor Laughton showed Galileo in a state of great inner agitation during his talk with the ironfounder. He played it as a moment of decision—the wrong one.] (Connoisseurs of dialectics will find Galileo's possibilities further clarified in the ensuing scene 'The Pope', where the inquisitor insists that Galileo must be forced to recant his theory because the Italian maritime cities need his star

charts, which derive from it and of which it would not be possible to deprive them.)

An objectivist approach is not permissible here.\*

[Scene 14]

*Galileo after his recantation*

His crime has made a criminal of him. When he reflects on the *scale* of his crime he is pleased with himself. He defends himself against the outside world's impertinent expectations of its geniuses. What has Andrea done to oppose the Inquisition? Galileo applies his intellect to solving the problems of the clergy, which these blockheads have overlooked. His mind functions automatically, like a motor in neutral. His appetite for knowledge feels to him like the impetus that makes him twitch. Scholarly activity, for him, is a sin: mortally dangerous, but impossible to do without. He has a fanatical hatred for humanity. Andrea's readiness to revise his damning verdict as soon as he sees the book means that he has been corrupted. As to a lame and starving wolf, Galileo tosses him a crust, the logical scientific analysis of the Galileo phenomenon. Behind this lies his rejection of the moral demands of a humanity which does nothing to relieve the deadliness of that morality and those demands.

[...]

Once Galileo knows that his book has set out on its journey towards publication he changes his attitude again. He proposes that the book should be prefaced by an introduction sharply condemning the author's treachery. Andrea passionately refuses to pass on such a request, pointing out that everything is different now; that Galileo's recantation gave him the chance to finish this immensely significant work. What needs to be altered is the popular concept of heroism, ethical precepts and so on. The one thing that counts is one's contribution to science, and so forth.

At first Galileo listens in silence to Andrea's speech, which builds a golden bridge for his return to the esteem of his fellow scientists, then contemptuously and cuttingly contradicts him, accusing Andrea of squalidly recanting every principle of science. Starting with a denunciation of 'bad thinking' which seems designed as a brilliant demonstration of how the trained scientist ought to analyse a case like his own, he proves to Andrea that no achievement is valuable enough to make up for the damage caused by a betrayal of mankind.

\*Objectivists who prove the necessity of a given sequence of facts are always in danger of slipping into the position of justifying those facts (Lenin).

*Galileo's portrayal in scene 14*

The fact that the author is known to all and sundry as an opponent of the church might lead a theatre to give the play's performance a primarily anticlerical slant. The church, however, is mainly being treated here as a secular establishment. Its specific ideology is being looked at in the light of its function as a prop to practical rule. The old cardinal (in scene 6) can be turned into a Tory or a Louisiana Democrat without much adjustment. Galileo's illusions concerning a 'scientist in the chair of St. Peter' have more than one parallel in contemporary history, and these are scarcely related to the church. In scene 13 Galileo is not returning 'to the bosom of the church'; as we know, he never left it. He is simply trying to make his peace with those in power. One can judge his demoralisation by his social attitude; he buys his comfort (even his scientific activity having degenerated to the status of a comfort) by means of hackwork, unashamedly prostituting his intellect. (His use of clerical quotations is thus sheer blasphemy.) On no account should the actor make use of his self-analysis to endear the hero to the audience by his self-reproaches. All it does is to show that his brain is unimpaired, never mind what area he directs it to. Andrea Sarti's final remark in no sense represents the playwright's own view of Galileo, merely his opinion of Andrea Sarti. The playwright was not out to have the last word.

Galileo is a measure of the standard of Italian intellectuals in the first third of the seventeenth century, when they were defeated by the feudal nobility. Northern countries like Holland and England developed productive forces further by means of what is called the Industrial Revolution. In a sense Galileo was responsible both for its technical creation and for its social betrayal.

[*Crime and Cunning*]

The first version of the play ended differently. Galileo had written the *Discorsi* in the utmost secrecy. He uses the visit of his favourite pupil Andrea to get him to smuggle the book across the frontier. His recantation had given him the chance to create a seminal work. He had been wise.

In the Californian version [...] Galileo interrupts his pupil's hymns of praise to prove to him that his recantation had been a crime, and was not to be compensated by this work, important as it might be.

In case anybody is interested, this is also the opinion of the playwright.