

ARTICLES

Realism and *Oppenheimer*: Notes on some Brechtian theses

*May you now guard science's light
Kindle it and use it right
Lest it be a flame to fall
Downward to consume us all.
Yes, us all.*

(Bertolt Brecht, *Life of Galileo*, Scene 15)

I

Immediately striking on first viewing Christopher Nolan's *Oppenheimer* (2023) were the mannered style of much of the acting and the script's artificial exposition. Unusually for a Hollywood movie, *Oppenheimer* discourages unquestioning enjoyment of spectacle – plenty of which it intersperses on an epic scale among swathes of dialogue – and easy engagement with characters and their plight. A hermeneutic established in introductory titles – '1. Fission' and '2. Fusion' – which appear initially to function as chapter headings but are not followed up, further underlines emotional distancing. Rather like captions that establish three time scales and perspectives for one framing narrative in *Dunkirk* (Nolan, 2017), these inaugurate fragmented, interwoven accounts of J. Robert Oppenheimer's (Cillian Murphy) life: one, in colour, focalised through the

titular protagonist who, it emerges, is summarising his life as context for his security clearance hearing; and one, monochrome, through a character whom Oppenheimer's intense interest in Jungian psychoanalysis, which the film shows, justifies reading as his shadow. 'Fission' splits Oppenheimer into interacting forces that shape his character, behaviour, ability to release and coordinate others' energies, and historical influence. 'Fusion' conflates contradictory energies into the single personality whom Lewis Strauss (Robert Downey Jr.) seeks to destroy. Comprising brief scenes and staccato flashbacks between times and places, these strands disrupt themselves and interrupt each other.

Sight and Sound's review, encountered subsequently, concurs. Jonathan Romney mentions Murphy's 'husky, often monotone intonations,' thereby perceiving performance style in a filmmaking mode that supposedly predicates realism on invisibility. Such transparency may seem incompatible with spectacular celebrations of scale and special effects – Nolan frequently proclaims enthusiasm for James Bond films – but starring in action thrillers often embraces self-conscious irony, differentiating tone or modality from otherwise broadly similar treatments of serious political themes or historical injustices. Another journalist points to 'kooky characters, played by a list of famous people [...], with a lot of overacting in each of their limited time on screen,' before opining that Downey is 'terrific' and 'especially interesting': it is 'startling to watch Downey act as opposed to [...] be on cruise control with a persona he's done a million times,' the 'wisecracking likable rascal' (Ryan 2023). Romney spotlights representational inconsistencies: the 'sparseness of the realism' heightens 'more expressionistic moments,' and 'naturalism intermittently disrupted by expressionistic flourishes' results in 'a film constructed on a principle of discontinuity' (2023: 71).

Commercial success and positive reviews suggest these narrational strategies work. 'Stilted talk' – Romney's description – functions differently from that in *The Da Vinci Code* (Howard, 2006), dismissed by Mark Kermode for, among other shortcomings, characters 'explaining the plot to each other' before 'doing a bit more explaining' (2006). Certainly, in *Oppenheimer*, Romney observes, 'Corridors-of-power expositions stretch for miles: party conversations begin, "I hear

you're working on a radical new approach...". I would further argue that the dialogue downplays individuals' character, motivation or emotion. It resembles detached description of claims and conflicts summarised in a biography or encyclopaedia entry divided among the cast. Consider such lines as General Leslie Groves' (Matt Damon) question, 'Are you saying there's a chance we destroy the world?' or his exchange with Oppenheimer:

'Is it big enough?'

'To end the War?'

'To end all wars.'

Strauss quotes Einstein: 'God doesn't play dice.' Kitty Oppenheimer (Emily Blunt) delivers Hollywood's most portentous romantic subplot put-down: 'You don't get to commit sin and then ask us all to feel sorry for you when there are consequences.' Oppenheimer states of the atomic bomb, the nature of which he believes needs to be demonstrated, but not on civilians: 'They won't fear it until they understand it. And they won't understand it until they use it,' before spending his life trying to contain the technology. Further permitting Jungian interpretation – not my priority – Strauss insists: 'Amateurs chase the sun and get burned [...]. Power stays in the shadows.' Even granted these people's brilliance and monumental endeavours, this is hardly everyday speech, in reality or all but the ineptest movies. Consider how risible in another context would be Groves' barked orders, 'Build him a town – fast! Let's go recruit some scientists!', which did not preclude Best Screenplay award nominations. The tendency has another precedent, however, which adds gravitas to a film already freighted with weighty questions.

II

For me this became apparent with Kitty's declaration, 'Everything is changing. The world is repivoting in a new direction.' The last scientist whose work could justify such claims was Galileo Galilei (1564-1642), who overturned the Ptolemaic system with empirical proof of Copernicus' heliocentric theory. Analogies between Oppenheimer and Galileo are hardly new. More have appeared in responses to Nolan's film, no doubt because its source book *American*

Prometheus mentions some. One similarity at the most banal, factual, but also deeply symbolic levels is that both Galileo and Oppenheimer, as the film emphasises about the latter, had to shield their eyes to avoid blindness. Literally, Galileo's sunspot observations damaged his vision, and the Trinity personnel viewed the test through smoked glass; metaphorically, officialdom humiliated and restricted both for refusing to deny implications of their achievements. In 1954, Albert Einstein, himself a character in the film, described the hearing which removed Oppenheimer's security clearance a 'modern "inquisition"' (Rorrison 1986: ix), drawing comparison with Galileo's forced recantation of his treatise. Oppenheimer, *American Prometheus* explains,

led the effort to unleash the power of the atom, but when he sought to warn his countrymen of its dangers, to constrain America's reliance on nuclear weapons, the government questioned his loyalty and put him on trial. His friends compared this public humiliation to the 1633 trial of another scientist, Galileo Galilei, by a medieval-minded church; others saw the ugly spectre of anti-Semitism in the event and recalled the ordeal of Captain Alfred Dreyfus in France in the 1890s. (Bird and Sherwin 2023: 6; see also 547)

The same book deems Oppenheimer McCarthyism's 'most prominent victim' (548). It likens Oppenheimer's representation in a German play, *In the Matter of J. Robert Oppenheimer* (Heiner Kipphardt, 1964), based on the security board transcripts, to 'a modern Galileo, a scientist-hero martyred by the authorities in America's anticommunist [sic] witch-hunt' (578).

Oppenheimer is a biopic, a genre associated with non-fiction expectations and often prestige. It is also lauded as from a director whose work, including thriller hybrids, has embraced World War II (*Dunkirk*) and quantum physics (*Interstellar* [2014]). Given ongoing controversy, albeit muted in recent decades, surrounding nuclear deterrence, and the immediate climate of culture wars, any chink in credibility would attract condemnation. It needed a reputable source. *American Prometheus* supplies that: a Pulitzer prizewinner with glittering journalistic and academic credentials, it draws on 10,000 pages of files and interviews with 'nearly a hundred

[...] friends, relatives and colleagues' (Bird and Sherwin, xii), and recounts hearings that 'addressed Shakespearean themes' (525). Another intertext, however, permeates and enriches Nolan's movie.

Bertolt Brecht's *Life of Galileo*, first written in 1938 after the Nazis had revoked the playwright's citizenship, allegorically concerns the tribulations of Marxism. Brecht perceived parallels between Galileo's struggle against the Inquisition to change the world through science and his own frustration with Marxism's impediment by fascism. There is thus some connection with Oppenheimer's political beliefs, trade union activities, and association with Communists counting against him in the 'flawed' 1954 hearing (Broad 2022), even though evidence presented, apart from his opposing the hydrogen bomb, had been considered during his appointment to lead a crucial part of the Manhattan Project.

Marxism's dialectical materialism aspires towards scientific understanding grounded in empiricism; Brecht 'thought of himself as a kind of scientist and of his plays as experiments in human behaviour, and he initially shared the vision he attributes to Galileo of a world in which science can lighten man's burden' (Rorrison 1986: xxii). Brecht learned of nuclear fission from a 1939 radio discussion by Niels Bohr Institute scientists and enthused about it as an energy source (viii; xxi). (Nobel laureate Bohr was someone Oppenheimer venerated from his undergraduate days. An influencer of philosophy beside quantum mechanics, he joined the Manhattan Project, as Nolan shows, and subsequently campaigned with Oppenheimer to share knowledge internationally and against developing the Super Bomb.)

Brecht remained aware of ongoing hostility to his beliefs after Victory in Europe, particularly anti-Communism in America. Among many intersections and similarities is that, having completed with Charles Laughton an English version of *Galileo* (1945), centred on the astronomer's recantation, Brecht revised it after Hiroshima and Nagasaki to highlight scientists' social responsibility (Rorrison 1986: viii). Another, given the playwright's identification with Galileo, is that after the 1947 American productions starring Laughton, Brecht 'prove[d] himself a master of ambiguity when cross-examined about his communist sympathies' by the House Committee

on Unamerican Activities (Rorrison 1986: ix). Strauss deems Oppenheimer 'Too slippery' for McCarthy. Doubts remain about Brecht's actions and also the enquiry's validity, as with Galileo and Oppenheimer. Uncertainty, together with alleged persecution, confirmed in Oppenheimer's instance by dependable witnesses, makes these real-life dramas compelling.

None of Brecht's versions assert absolutely whether Galileo recanted through cowardice or, as his protégé Andrea in the American script concludes (before Galileo disagrees), heroically to keep researching when denying heresy would have ended his life and precluded further discoveries (107). Having failed to institute 'the principle that the scientist had a duty to use science in the service of mankind' – essentially Oppenheimer and Bohr's position against nuclear proliferation – Galileo, in Rorrison's words, 'introduced the practice of making science subservient to the ruling classes. In Brecht's eyes his recantation is a crime, the "original sin" of the modern natural sciences' (xxii).

Brecht and Laughton's second version foregrounded this theme in terms of shaping modern warfare and, specifically, in relation to Nazi atrocities. The scientist's duty was not, as the play previously advocated, to 'Practice low cunning and survive'; rather to 'Stand up and be counted'. Previously unimaginable scientific, political, and military developments then supervened. Brecht later wrote, 'The "atomic" age made its debut at Hiroshima in the middle of our work. Overnight the biography of the founder of the new system of physics read differently' (Rorrison, xxiii). More precise appraisal was needed. On 1 December 1945, Brecht's diary proposes a new prologue:

We hope you'll lend a charitable ear

To what we have to say, since otherwise we fear

If you won't learn from Galileo's experience

The Bomb might make a personal appearance (Rorrison, 128)

The USSR knew enough by 1949 to detonate what American reconnaissance confirmed was 'a close copy of the Manhattan Project's plutonium bomb' (Bird and Sherwin, 416) and subsequently developed an H-bomb. Mutual Assured Destruction (MAD) as the ultimate deterrent had been pursued by Edward Teller. The only scientist to oppose Oppenheimer's security



Figure 1. *MAD scientist*: Teller (Benny Safdie) relishes the Trinity explosion.

clearance, Teller features in Nolan's film as well as reputedly having inspired the titular character in *Dr Strangelove or: How I Learned to Stop Worrying and Love the Bomb* (Kubrick, 1964). Alone among grim-faced observers squinting through enclosed goggles or slabs of welder's glass at the Trinity detonation, Teller (Benny Safdie), wearing sunglasses like Peter Sellers' character, smiles sinisterly in its glare (Figure 1). His policy has become an existential suicidal threat for humankind. Brecht's advocacy of socially responsible science grew more relevant as he prepared a third *Galileo* (1955) for the Berliner Ensemble. According to Rorrison, Brecht's own interpretation 'makes *Galileo* directly responsible over the centuries for the atom bomb' (xli).

III

Historical and biographical similarities between the 'Physicist to the court' (Brecht, 82) and his counterpart in the US Government's war effort – both polymaths, theorists who

adopted pragmatism, and, the dramatisations insist, sensualists – merely contextualise this study's main point: *Oppenheimer's* relationship with realism. That slippery concept is meant not in terms of documentary veracity, which, as mentioned, seems impeccable. (Indeed, biographer Bird observes that David Hill, who in the film testifies against Strauss, was a Manhattan Project scientist whom his and Sherwin's 25-year investigation overlooked yet Nolan's research unearthed ['Meet the Press', Blu-Ray special feature 2023]). Neither is realism here concerned with Nolan's claim that IMAX is unprecedentedly 'Close [...] to how the eye sees' ('Making of...', Blu-Ray special feature 2023); nor with filming at real locations. Rather it describes representational conventions and conformity to dominant beliefs. Narrational strategies indicate formal and thematic similarities and ideological implications between the film and Brecht's play.

In isolation, some echoes amount to little or, while highly suggestive, seem coincidental. For example, *Galileo*, insisting 'I betrayed my profession', refuses to shake hands with the

idealistic Andrea (Brecht, 109). Teller apologises and shakes Oppenheimer's hand after testifying against him. Embedded in the film's last fifteen scenes – which alternate, with overlapping dialogue, between six locations and eight temporal events (some in Oppenheimer's imagination) – and after Strauss' aide (Alden Ehrenreich) has told him 'no one really knows' what Einstein (Tom Conti) and Oppenheimer 'said to each other' at a meeting the film portrays three times, Nolan dramatises an actual documented incident when Kitty stood 'stone-faced' as her husband 'grinned and shook Teller's hand' after President Johnson awarded Oppenheimer the Fermi Prize (Bird and Sherwin, 576). Another parallel – following convention whereby protagonists are constrained and silenced by lesser mortals claiming authority – is when *Galileo* implores, 'Listen to me, Andrea: don't talk to other people about our ideas', because 'The big shots won't allow it' (Brecht, 18): akin to the 'Compartmentalisation' protocol that contradicts Oppenheimer's instinctual interconnection of everything and precludes international sharing he advocated to prevent an arms race. (Oppenheimer's leadership encourages openness – ironic, in that meetings with Teller to keep him at Los Alamos enabled the hydrogen bomb.) Brecht has *Galileo's* former pupil, who introduced the telescope to him, wryly comment after the scientist's supposed improvements that gave Venice mercantile and naval superiority, 'I see you've made the casing red. In Holland it was green' (21). Oppenheimer too harnesses existing theories and technologies. Both characters end up in good health and, *Galileo* says, 'Corresponding comfort. The depth of my repentance has earned me enough credit with my superiors to be permitted to conduct scientific studies on a modest scale under clerical supervision' (103), mirrored in Oppenheimer's tenure as Director of the Institute for Advanced Study, writing and lecturing while producing little research.

Galileo's first scene shows the scientist using an apple to represent Earth in a vivid illustration of planetary motion. *Oppenheimer* too uses familiar objects to demonstrate ideas, including the goldfish bowl and brandy glass gradually filled with marbles to depict uranium and plutonium resources. A chemical chain reaction on an explosives freighter illustrates the nuclear bomb concept. Oppenheimer is always beside a



Figure 2. What would later be called ‘A-bombed trees’, themselves prefiguring mushroom clouds, on *Oppenheimer*’s curtains.

blackboard when someone asks an administrative question, answered with a rapidly chalked diagram.

Specifically, *Oppenheimer* makes great play with an incident that starkly delineates its protagonist’s ambiguity when – early in the film and his career – he leaves a cyanide-laced apple for his supervisor. Romney deems this ‘an economical symbol of science turned toxic (Cambridge, Isaac Newton’s apple – neat, no?)’ (2023: 71). Both dramatisations mobilise it as a foundational symbol, from the Garden of Eden, of knowledge and its dangers. *Oppenheimer*’s apple is side-lit, near chiaroscuro, resembling a planetary body. Poisoning it – the film’s first motivated event – overshadows his persona from the start. This follows a montage of incandescent explosions and swirling plasma, light and heat, beginning with what is retrospectively a flashback to his younger self captivated by raindrops rippling a puddle ahead of subjective visions of cold blue particle traces. Internal symbols in a sustained image system, these link to ripples in a pond during the meeting

with Einstein; in bathwater at his lover’s suicide; debris falling into the sea after the chemical chain reaction; explosion shockwaves animatedly superimposed in his imagination on a map of potential targets; literal thermonuclear shockwaves when he imagines global conflagration; and metaphorically to conceptualise his work’s geopolitical effects. The apparent murder attempt, then, in screenwriting terms is an inciting incident in the ‘Fission’ strand, casting doubt – including in *Oppenheimer*’s own estimation – over his integrity; and in the ‘Fusion’ strand as a blemish, officially documented – as it was (Bird and Sherwin, 46) – usable as the first in a growing dossier to control him.

The weight of similarities hints that *Galileo* has inflected *Oppenheimer*’s purpose and strategies, undermining from within its ‘Great Man’ version of history. Kitty echoes this, repeatedly bucking *Oppenheimer* up, but whether as an ambitious Lady Macbeth or dutiful, supportive wife is unclear. On the other hand, the way science was harnessed, the bomb



Figure 3. Poised between light and darkness, *Oppenheimer* (Cillian Murphy) tries on his signature hat and pipe as mushroom clouds obstruct his vision.

would have appeared under other leadership; yet wherewithal may have been lacking had *Oppenheimer* not introduced quantum physics to the USA.

Bird and Sherwin report that in the 1940s *Oppenheimer* became ‘transfixed by’ Henry James’ ‘The Beast in the Jungle’: an enigmatic ‘tale of obsession and tormented egotism in which the protagonist is haunted by a premonition that that he was “being kept for something rare and strange, possibly prodigious and terrible, that was sooner or later to happen”’ (ix). They note his interest in Sanskrit texts and specifically ‘karma’, contrary to his humanist early education (101). Accordingly, the film’s extraordinary production design implies some kind of teleology in *Oppenheimer*’s existence even while, like Brecht’s *Galileo*, he personifies wider forces. During the pivotal Chevalier incident, during which, as otherwise conflicting accounts agree, he rejected as ‘treason’ a casual dinner-party approach to share scientific secrets with Soviet contacts, a ginkgo leaf motif on *Oppenheimer*’s kitchen curtains resembles mushroom clouds (Figure 2); moreover, that species – since known in Japan as *hibakujumoku* (‘A-bombed trees’) – would become famous for surviving Hiroshima. Again, when he occupies his Los Alamos office, trademark window stickers repeat the image (Figure 3). Incidental events, too, together suggest destiny. *Oppenheimer* at Cambridge accidentally breaks glass equipment, indicating ineptitude for laboratory work. He deliberately shatters wine glasses during introspective, undefined problem solving, which intimates that entities

once smashed cannot be reconstituted – including the pre-atomic age power balance or his reputation. When Kitty angrily urges Oppenheimer to challenge Strauss, she throws a whisky glass, narrowly missing him.

Galileo's observation, 'Everything is in motion, my friend' (6), refers to the planets and, as Brecht intended, figuratively the challenge to 17th century ecclesiastical authority and the 20th century arms race. Audiences to judge accordingly need to observe critically, reflectively, externally, not locked into dramatic tension or the psychology of the moment. The same is true when Strauss claims about Oppenheimer, 'He wanted to be the man who moved the Earth' or when Bohr (Kenneth Branagh) reiterates Kitty's point: 'It's not a new weapon. It's a new world.'

Conventional expectations of what commentators broadly call 'mainstream film' include that 'Skill in exposition means making it *invisible*. As the story progresses, the audience absorbs all it needs to know effortlessly, even unconsciously. The famous axiom "Show, don't tell" is the key' (McKee 1998: 334). That advice is antithetical to Brecht's interest in moving audiences to their own conclusions. Brecht's epic theatre, as he termed it, rather than constructing internally consistent, self-contained, incontrovertible demonstration of some claimed truth, *tells* by various means what playgoers need to know. This is to *show* them what he believes by means of their own logical processing of contradictions through which the play guides them.

While *Galileo* has only 15 scenes, these comprise numerous interactions, frequently interrupted and shifting between 52 characters and unspecified 'senators' and 'men, women, children' (3-4). Multiple modes of narration include lecture-style expositions and demonstrations; dramatic monologues; disputations; what Michel Chion in cinema calls 'textual speech' (1994: 172-176) – anonymous voiced prologues, children singing commentary, and, merging into diegesis, summary exposition by a ballad singer and his wife, alongside the protagonist's recounting of past events elsewhere; conventional dialogues; official proclamations; ceremonial addresses; readings of letters 'before the curtain' (98) – that is, by neither the writer nor recipient; banners; and projections of slogans, scene descriptions, and major preoccupations such

as the image of 'Jupiter and its accompanying stars [...] on the cyclorama' as Galileo and Sagredo continue astronomical calculations overnight, indicated by the stage darkening (27). Didacticism begins with not only facts verbally imparted but Galileo's teaching of his pupil through the Socratic method so that audience members – with three hundred years of scientific hindsight – reach similar conclusions and so become potentially more amenable to the play's politics, presented rationally, while otherwise distanced emotionally.

Oppenheimer closely accords with principles that guide Brecht's Modernism. Brecht had met Sergei Eisenstein, a pioneer of montage techniques: these 'reveal parallel considerations to his own explorations in the epic theatre. What Brecht found congenial was the constructivist principle of cinematic montage premised on the idea of interruption and collision' that 'brings together images or shots that do not "fit" and insist on being "read" by the spectator' (Silberman 2009: 40-41). Vsevolod Meyerhold's theatre, in which Eisenstein had worked and which helped shape his filmmaking, 'offered', Sylvia Harvey explains, 'an interplay of discordant elements, and very little in the way of a single viewpoint, a unified position from which to see and judge the world as represented in the theatre.' Consequently, the spectator is 'not "formed" in an unproblematic way, invited to take up and accept a given position, but rather invited to take part in the construction of the play's meaning by working on the various discordant elements' (1978: 64). *Oppenheimer* exceeds what David Bordwell (2006) terms 'intensified continuity', a 21st century mode in which rapid editing prioritises action over immediate comprehension and is a contemporary resurgence of the early 'Cinema of Attractions' that valued spectacle over narrative (Gunning 1997). *Oppenheimer* could be described as 'fractured continuity'. Disorienting time shifts, within alternate narratives, utilising different stocks, force spectators to link events and work at conclusions concerning causality and morality. *Literal flashbacks in Oppenheimer function* as cinematic equivalents to Galileo's spatial and temporal displacements accomplished through Chion's 'textual speech': images and events evoked verbally which 'accentuate the gulf between narrative speech [expository dialogue] and image and [...] create contradiction, gaps, discord between the two' (174). While Oppenheimer's

and Strauss' focalisations inform 'Fission' and 'Fusion' respectively, both are contradictory and challenged by what is shown, spoken or already known. Almost subliminal flourishes, such as racked focus that converts what appear to be stars to raindrops on a train carriage window, convey Oppenheimer's intuition of universal interconnectedness. A speaking cast as large as Brecht's – *Oppenheimer* eschews composite characters – includes famous actors, some barely recognisable, in supporting roles, such as Gary Oldman as President Truman. Albeit an *Ocean's 11* (Soderbergh, 2001) kind of showing off, commercial valorisation of directorial status and the project's prestige, this undercuts assumptions casting brings through expectations accrued in star presence. Different from an unfamiliar performer, potentially this reinforces that this is a representation, open to scrutiny and criticism. Conversely, however, Murphy as Oppenheimer carries with him previous roles: almost exclusively as anti-hero, antagonist, villain or, at best, victim – characters not unproblematically sympathetic or typically admirable. Such contradiction will inform the present argument's conclusion.

Seemingly free association between events, until connections are forged, is demanding. Cerebral interaction with the film's formal and thematic logic is likely to continue beyond the screening, if only to make sense of it in recollection or discussion. This contrasts with emotional engagement with character psychology or prescribed cathartic reactions. These imply, Marc Silberman suggests, 'the problem is over, has been confronted, and the spectator can move on rather than dwell on an unresolved situation, a continuing social ill and be moved to do something about it – that is, to complete the fictional performance in real life' (2009: 38), notwithstanding Noël Carroll's insistence that 'artworks, in the standard case, command attention, not action' (1997: 201).

The 'Fission' strand's narration is akin to stream-of-consciousness. Oppenheimer's abstract thoughts and heightened perceptions feature visually and aurally, alternated with over-the-shoulder dialogue shots in which the side of his head exceeds the frame height yet, marginalised by the screen's width, is blurred by selective focus on what he experiences. Oppenheimer, ostensibly driver of – yet just another witness to – his own life, actively controls and passively responds,



Figure 4. Extremely close over-the-shoulder shots and restricted depth of field align the spectator closely with Oppenheimer's (and, elsewhere, other characters') perspectives while maintaining separation. Oppenheimer is both central to and a witness to his own experiences.

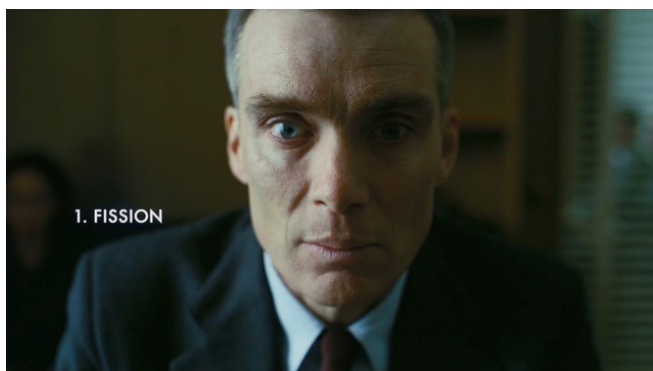


Figure 5. Massive frontal close-ups reinforce Oppenheimer's magisterial status and authority yet expose him to scrutiny, while suggesting also a mirror to encourage reflection on ultimate responsibility for the world order his efforts ushered in.

central to yet detached from events that quiver between internal and external focalisation (Figure 4). Close-ups render him larger-than-life, unfathomably God-like, looking down – presumably IMAX screening enhances this – suggesting objective scrutiny while connoting a mirror in which the spectator can empathise with his agitation and responsibility (Figure 5). (The script was first person, pre-publicity reported.) Disconcerting percussion, portending bottled-up forces, psychic, sexual, political, and atomic, functions as conspiracy-thriller soundtrack, maintaining tension, and as part of internal monologue. It recurs, for example, when a union meeting applauds Oppenheimer and later when he faces questions about Jean Tatlock (Florence Pugh). Momentary cutaways include fantasies such as flying home after bombing Germany as a V2 rocket streaks overhead; copulating with Tatlock at his hearing as Kitty looks on while he recounts his affair with the deceased woman; and standing, incongruously and anachronistically, dwarfed in the corner of the frame, among intercontinental missiles (Figure 6). His visions

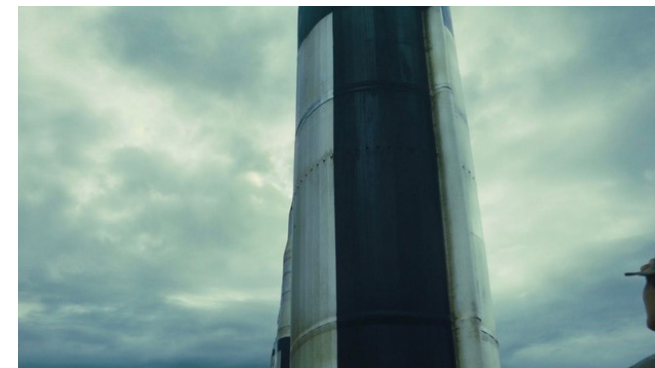


Figure 6. Split-second cutaways show how Oppenheimer (bottom right) in his imagination is dwarfed and marginalised by the enormity of what his science unleashed. Intercontinental ballistic missiles came after his involvement with nuclear research but are central to the Mutual Assured Destruction he anticipated and sought to prevent.

alternate with newsreel associations of black-and-white footage dramatising Strauss' official, Government version. 'Fusion,' employing similar stylised, over-the-shoulder, shallow-focus shots for Strauss and others, is comparatively dull and objective. 'Fission' constantly tracks forward, homing in on Oppenheimer, through doorways, approaching mountainous landscapes or venerable buildings in aerial shots, revealing stars imploding or particles escaping, uniting the cosmos in an inexorable progress. 'Fusion,' reducing kaleidoscopic miscellany to monochromatic binaries, is shot mainly from Strauss' eye-level, often receding, maintaining distance (Figure 7).

Eventually identified as rapturous applause, the Los Alamos team's stamping feet after their project ends the war, the partly diegetic, partly non-diegetic din is ambiguous, not triumphant. 'Subjective-internal sound' (Chion 1994: 76) indicates Oppenheimer's anguish. As the wall behind him expressionistically trembles and shimmers, he struggles to voice platitudinous praise; with diegetic sound cut, as during the test explosion, he imagines radiation stripping skin from those before him, reducing them to charred remains. He perceives hysterical joy and relief as shock, horror, and despair; a man vomiting, perhaps from celebratory or reality-blocking alcoholic excess, recalls radiation sickness. Some I have



Figure 7. 'Fusion' observes Strauss (Robert Downey Jr.) externally. Monochromatic film stock, while distinguishing his narrative strand from Oppenheimer's, expresses his simple binary view of complex matters.

spoken to condemn the film for marginalising the bomb's Japanese victims. Yet Oppenheimer realises his accomplishment in terms of what he has done, and its consequences could do, to fellow humans he conceives as like himself, not caricatured or dehumanised as the politicians' and strategists' alien other.

As documentary drama, such details as flashes and traces of flames, alternated with close-ups, convey Oppenheimer's obsession with and visualisation of quantum particles, associated with energy and destruction, otherwise meaningless to most viewers. Delineating his character, they function too as further symbolism. Opening captions' identification of Oppenheimer with Prometheus recalls, in the life of a thinker enthused by Modernism, James Joyce's classical allusions to Daedalus and Ulysses. Yet the film is uninterested

in his personal problems, individual character arc, suffering, remorse or redemption; or those of any other character, including Japanese victims. Kitty's alcoholism, clearly indicated, and portrayed by Bird and Sherwin as looming large in the marriage, is – irrelevant to wider consequences – never mentioned. As Jim McGuigan wrote concerning political television drama, 'emphasis on a single individual's experience' means 'a possible audience response is to sympathise with [that individual's] personal problems and regard him as just another individual in a difficult situation' (quoted by Tulloch 1990: 116). The film's concern is what events represent in human evolution and exposing Oppenheimer to scrutiny and judgment. Although, before opposing the hydrogen bomb, he insists he does his work and others decide its outcome, the film does not condone the equivalent of the Nazi excuse of

following orders; he is shown squirming at projected images of nuclear devastation, although the obscene remains off-screen, as with concentration camp footage in *Judgment at Nuremberg* (Kramer, 1961).

IV

Colin MacCabe coined the term classic realist text (CRT) in an influential but contentious essay, 'Realism and the Cinema: Notes on some Brechtian Theses' (1974). The term refers to a ubiquitous structure, rather than style or subject matter, that comprises discourses – ways of understanding – competing to establish a preferred truth, and that therefore is highly ideological. A narrative constructs this truth: a representation, not reflection or refraction of reality against which it can be directly compared but selective incorporation that marginalises inconvenient disruptions. It creates the illusion of allowing freedom to interpret while actually subjecting readers to a particular understanding. MacCabe starts with the 19th century British novel, then extends his argument to audio-visual media, especially film.

Conflict that drives any narrative arises from different ways of understanding and controlling reality. According to MacCabe, however, the classic novel does not set discourses against each other equally, leaving them to slug it out. It hierarchises them, favouring some more highly. In the realist novel, MacCabe claims, dialogue expresses competing views. Inverted commas mark speech as 'object language' (1974: 8). Additionally, a novel contains narration and description without quotation marks. The narrator's voice, even if anonymous, comments on and judges characters' opinions and behaviour, encouraging readers to approve some over others. This narrative discourse is a 'metalinguage', guiding understanding and response (8). In narrative film, MacCabe stresses, it is *literally* 'unwritten': cinematic technique, striving for invisibility, appears to show things as they are. Accordingly, film's ideological power is reinforcement of dominant assumptions, unquestioned because not stated.

In MacCabe's terms, the reader identifies with the metalinguage in a position of 'dominant specularity' (12): all-knowing, all-seeing, God-like above conflict. This

describes precisely *Oppenheimer's* closing shots of global conflagration that illustrate the logical conclusion of MAD, confirming Oppenheimer's fears concerning the 'Chain reaction' he and Einstein unleashed. We look down and judge from a superior position, aligned with Oppenheimer in accord with MacCabe's thesis that dominant specularly occurs through visual narration, which *shows* the truth, transcending versions advanced in dialogue. But because the CRT ensures dominant specularly as closure, 'it cannot deal with the real as contradictory' (12).

However, the MAD scenario remains hypothetical, albeit a real and beyond terrifying threat: Teller and Truman's intention in developing the Super Bomb, and the nightmare Oppenheimer and Bohr opposed. That atomic annihilation has not happened confirms for militarists the logic of deterrence. That constant and undiminished danger preserves and defers likelihood of annihilation powerfully supports anti-nuclear sentiment. *Oppenheimer* ends with this paradox. Contradiction challenges spectators to formulate their position in light of those presented in three hours of dialogue. This advances beyond what MacCabe terms the 'progressive realist text' (22). These contest the CRT's assumed worldview, break new ground, address broader questions, and present alternative perspectives to those foisted by bourgeois drama. They offer a different angle but, like the CRT, attempt to bring interwoven discourses to closure to resolve contradiction.

Strauss' dullness, vindictiveness, conformity, and duplicity contrast with Oppenheimer's manifold talents, passions, evident flaws, and charisma. However, bigger themes suggest that *Oppenheimer* approaches 'subversive' cinema in offering no overarching discourse against which to judge characters' discourses (24). If MAD works, Oppenheimer was wrong, is one CRT closure; but while it remains, the annihilation threat he opposed overshadows everything. That Oppenheimer was right, if MAD fails to contain nuclear conflict, is another CRT closure; but nobody will know. A radically subversive strategy, MacCabe suggests – the 'revolutionary' text – would provoke viewers to participate actively in creating meaning (1974: 21). Self-reflexive filmmaking would encourage awareness of watching an artificial construction rather than seduction into an illusion of reality.

Contradictions the CRT and progressive realist text repress have counterparts in theoretical physics. MacCabe recognised this, likening the revolutionary text to a 'post-Einsteinian [...] conception of representation in which both subject and object are no longer caught in fixed positions' (25). According to Robert Jay Lifton:

Oppenheimer had a series of conversations with Niels Bohr [...] [who] had developed the concept of 'complementarity,' [...] that two very different findings in physics can be equally true, depending on the vantage point or the instruments utilized by the observer (Rhodes 1986). (For instance, matter could be accurately represented by particles or by waves.) (2023)

However, one interpretation must be chosen to render observations useful. Oppenheimer and Bohr extended this principle to 'instinct and reason, free will, love and justice,' according to science historian Jeremy Bernstein (quoted by Bird and Sherwin, 274). They applied it to the atomic bomb. Lifton continues:

If used, it would bring a new dimension of destruction but would also create an equally new dedication to peace. As the biographer of the Los Alamos community put it, 'The bomb for Bohr and Oppenheimer was a weapon of death that might also end war and redeem mankind (Rhodes 1986).' (2023)

Analogously, *Galileo* scene 7 suggests, as Rorrison summarises, 'what one sees is not necessarily true, whereas what is true may not be perceived. So paradoxically Galileo's arguments for a materialistic universe are based on interpretative vision. Seeing is not believing.' (121) That principle – associated with quantum mechanics – as well as different approaches, for example theoretical and pragmatic, could apply to moral judgments concerning Oppenheimer. His multilingualism implies capacity to embrace diverse perspectives. Fractured narration presents him viewing Cubist paintings and reading T. S. Eliot's 'The Waste Land' (1922). (Eliot became a Fellow at the Institute for Advanced Study in 1948 at Oppenheimer's invitation [Bird and Sherwin, 377]). That disjointed poem concludes 'These fragments I have shored against my ruins' (l. 430) before assertion of madness, amid quotations from Dante's *Purgatorio* and *Inferno*, interspersed with a storm

and proclamation of subsequent 'peace which passeth understanding' (l. 433) from the *Upanishads*, which, the film shows, Oppenheimer keenly read. One might figure the 'World's greatest scientist' as the King on his quest – literally in the desert – risking making the planet a desert. Yet he is more a facilitator, as when shuttling between Teller, with whom he disagrees morally, and Einstein, whose relativity was incompatible with quantum mechanics, to establish whether a chain reaction could ignite the atmosphere and what the geopolitical consequences of that possibility might be. With the film's inconclusiveness, 'peace,' which to Oppenheimer in the poetical context meant 'peace of mind' (Bird and Sherwin, 100), could be successful (within its own terms) mutual deterrence – or, after deafening thunder, a universe from which humankind has vaporised itself.

V

Unlike Galileo, forced to recant or face banishment from power, Oppenheimer actually 'never faced this sad choice [...] because he always defended the decision to both build the atomic bomb and to use it' (Zachary, 2013). Kitty tells him, 'Stop playing the martyr.' Charismatic, naïve, arguably arrogant – to a security board member's comment, 'I thought Berkeley had the leading Physics department,' he replies, 'Yes, once I had built it' – his ambiguity is expediently mythologised. The source book's subtitle, *The Triumph and Tragedy of J. Robert Oppenheimer*, posits a double narrative to cast him individually, rather than humankind, as Prometheus. Contradictions, uncertainties, unanswerable questions, fascinate. These, which Bird and Sherwin liken to relative perspectives in *Rashomon* (Kurosawa, 1951) (195; 248), *Oppenheimer* keeps open, causing spectators to negotiate a view.

Teller informs Oppenheimer, 'No one knows what you believe.' Loved and admired, hated by others, Oppenheimer helped to deliver nuclear weaponry but also end the war. Lauded, he expressed doubts and self-deprecation. His security clearance guaranteed credibility but was removed when he opposed nuclear deterrence. Rorrison summarises the

position of Brecht's protagonist as presented in scene 14 of *Galileo*:

Science, he says, is involved on two fronts. It seeks to understand the physical universe but also to better the lot of mankind and change society. The ruling classes seek to control the scientists and make them serve their interests. Galileo bowed to this control and threw away a unique chance to establish a 'Hippocratic' code of conduct for scientists and thus to secure the benefits of science for all of mankind. Galileo has betrayed his profession and spawned a breed of inventive dwarfs who will sell their discoveries to the highest bidder (xix).

Advocating arms control and advising the Atomic Energy Commission, Oppenheimer analogously failed to assert control over the technoscience he had served.

While Oppenheimer was extolled as God-like, 'the most respected scientific voice in the world', should one accept his statement to Kitty: 'We're selfish, awful people'? Was being 'father of the atomic bomb' just patriotic propaganda? Groves itemises Oppenheimer's faults at their first meeting, yet already recognises they are developing 'The most important thing [...] in the history of the world.' Do Oppenheimer's famous words, 'Now I am become Death, the destroyer of worlds,' express unimaginable remorse, or self-aggrandisement – indeed, according to complementarity, both?

Was Oppenheimer right to beat the Nazis in creating nuclear bombs, or were fears of German research unfounded? Was he a monster for unleashing that monstrosity or a saviour for preventing World War III? Biopics seek agency in personage, individualising and reinforcing contradictions their supposed revelation of truth promises to settle. Part of a nationwide effort, was Oppenheimer personally responsible or forced, 'with scores of other great minds', by the military-industrial complex 'into a conflict and pressured to find a solution' (Perfas 2023)? He accepts he 'Couldn't run a hamburger stand', yet coordinated some of the world's finest talents. Is he disingenuous to argue, 'Because we're building it doesn't mean we get to decide how it's used'? While he exercised scientific authority, could he influence strategy? Oppenheimer learns of Hiroshima and Nagasaki from the radio like everyone else.

'It was you on the cover of *Time*', insists Truman after Oppenheimer denies the bomb was his achievement. Yet when Oppenheimer expresses remorse about blood on his hands, Truman asks whether any Japanese survivor 'Gives a shit about who built the bomb'. Is he an American hero or a Jewish scapegoat? As Steven Shapin argues, a character of 'spirituality, of moral vision, and of cultural breadth', with 'steely blue eyes', can sell a movie whereas examining 'industrial organization and huge expenditures' would not (Perfas 2023).

That Oppenheimer provides ways 'to think about science and morality, science and politics, science and religion, science and philosophy, about the role of the intellectual in modern society' (Shapin, quoted by Perfas 2023), stresses the parallels with Galileo. (Crucially, each 'and' separates science as a supposedly pure pursuit somehow transcending morality, politics, religion and philosophy that guide and fund it.) In either case, the persona embodies what remains unresolved – not contested binaries but everything that might simultaneously be true, however contradictory: 'complementarity', as Bohr and Oppenheimer might have understood.

VI

Empty formalism made *Tenet* (Nolan, 2020) and *Memento* (Nolan, 2000), albeit impressive art-house variations on the high-budget thriller, films that rely on conventional chronology, consistency, and causality to make sense; each promises a classical narrative if the spectator can crack the puzzle of its narration. *Oppenheimer* plays with narrative more productively. Its storytelling demonstrates that as history it is multiply mediated: adaptation of a biography based on numerous sources that recount conflicting testimonies and speculations – interpretations of interpretations of interpretations. Oppenheimer, a conjuncture of forces and decisions, is akin to how Nolan is a name ascribed to a vision enabled, and compromised, by market opportunities and constraints that determine thousands of people's collaboration, competition, and cooperation on an enormously expensive, time-limited project. As Brecht thought Galileo exemplified his own status and responsibility, and 'Oppenheimer continually emphasized

that science needed the humanities to better understand its own character and consequences' (Bird and Sherwin, 377), Nolan here exploits commercial clout to deliver entertainment that reminds world audiences of humanity's precarious existence while the Doomsday Clock – created by Manhattan Project scientists in 1947 – counts down.

'Bourgeois' theatre, Brecht believed, employs illusionism: a sense of events being self-contained, fully-formed, unchangeable, with fixed meanings, that positions the spectator through identification. He aimed instead for *verfremdungseffect*: 'estrangement', 'distanciation', or 'alienation' (Brecht 2001: 16; 23). Conventional theatre, he objected, created 'a substitute for life', someone else's problems experienced through a simulation of their response. Instead, Peter Wollen explains, Brecht advocated 'a representation – a picture, a diagram, a demonstration: he uses all those words – to which the spectator remained external and through which he / she acquired knowledge about (not gained experience of) the society in which he / she, himself / herself lived (not the life of another / others)' (1982: 201-202). The problem with experimental modernism as political strategy is reaching an audience. As Harvey noted, since the Russian revolution, again specifically after May 1968 – and always somewhere – debate has continued between 'film groups who saw the primary concern as being the search for new formal structures, and those who saw it as being primarily a question of swift and effective communication in a language already understood by the mass of the people' (1978: 56). *Oppenheimer*, far more than one troubled person's narrative, offers a timely reminder, after decades of apathetic individualism, of dangers and contradiction continuing from the politics that ensnared its protagonist. His experience of contradiction – internal as well as externally imposed – and its inconclusive resolution, is shared by the spectator by means of the self-conscious, overt narration of ostensibly a conventional blockbuster. If the film's institutional context compromises its ability to engage fully adequately with thematic and formal issues it raises, it is significant for raising them.

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