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Mark Oliphant’s Adventures in Atomic Wonderland

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SYNOPSIS:

Australian physicist Mark Oliphant came to hold two oppositional views, both pro and anti nuclear weapons research. This, together with the dimensions of his ‘larger than life’ personality, impacted on his scientific reputation in the fall-out of Australia’s ‘McCarthyism’. Despite his bullying the Americans into funding the A-Bomb project, the atomic juggernaut unleashed on the world caused Oliphant to rethink his role as a scientist. Oliphant clashed with American hegemony and the Menzies Government’s duplication of the ‘Reds under the Bed’ paranoia in Australia in the 1950s. His outspokenness on the danger of nuclear proliferation found him out of step with the changed political climate of the Cold War. Drawing on neglected archival material and using a Brechtian theatrical mode, my play Ion Man’s Adventures in Atomic Wonderland investigates the tragic dimensions of a man who never fully understood, as Thomas Kuhn explained (The Structure of Scientific Revolutions), that scientific research is determined as much by politics and ideology as by the desire to understand the world.

History is natural selection. Mutant versions of the past struggle for dominance; new species of fact arise, and old saurian truths go to the wall, blindfolded and smoking last cigarettes. Only the mutations of the strong survive … History loves only those who dominate her: it is a relationship of mutual enslavement. Shame Salman Rushdie (Rushdie, 1984: 124)

More than a million people flocked to the 1948 Sydney Royal Easter Show. Crowds snaked their way through the pavilions, past the ‘Food for Britain’ stall where a cartoon bulldog, ‘John Bull recovering from war wounds’ urged them to a ‘send a souvenir gift parcel’. Eight years before its official launch, show goers could see themselves on closed circuit TV or watch the wood chopping, courtesy of the camera positioned on the roof relaying events in the ring to the monitors below. The biggest crowd lined up to see the ‘Atomic Age and Industrial Exhibition’. In the middle of the pavilion, a signpost pointed to Destruction in one direction and Progress in the other. According to the souvenir brochure, the highlight was destruction; a spectacular sound and light re-enactment of the dropping of the first atomic bomb every few minutes on a 265 square foot model of Hiroshima. Among the other exhibits was a lump of uranium. The public was assured ‘close contact for several hours would be needed to produce any symptoms of radiation sickness’. When the exhibition reached Melbourne, The Herald, announced its arrival with the headline ‘Phyllis in Atomic Wonderland’:

Phyllis Nichols, 13, of Clifton Hill, stood at the crossroads yesterday. She looked at the sign fingers which pointed to Destruction and Progress. She had covered the path to destruction and she turned with hope to the road to progress (The Herald, 1948: 2).

Australia, like the rest of the world, was catapulted into the atomic age.

The detonation of the first nuclear bomb, nicknamed ‘the Gadget’ by the Manhattan Project scientists who developed it, happened on a rainy July morning at the White Sands Proving Ground near Alamogordo, New Mexico in 1945. The scientists’ success in the New Mexico
Our tragedy today is a general and universal fear so long sustained … There are no longer problems of the spirit. There is only one question. When will I be blown up? (Faulkner, 1949)

It is not widely known that an Australian physicist, Sir Mark Oliphant, was a crucial player in the international development of the atomic bomb. My play, *Ion Man’s Adventures in Atomic Wonderland*, using Brechtian political theatre as a model, is based on episodes of Mark Oliphant’s life. Political drama anticipates that people will go to the theatre and begin to look at their society in a different way. In Brechtian drama the re-structuring of history, society and politics allows artistic thought or imagination to challenge the prevailing partisan political thought.

In 1939 on a visit to Copenhagen, Oliphant offered German Jewish physicist Otto Frisch a job at Birmingham University where Oliphant was director of the physics department. Another German Jewish refugee physicist, Rudolf Peierls, had been at Birmingham since 1933. Oliphant and his team were working on developing radar. Frisch and Peierls, classified as ‘enemy aliens’, were excluded from working on this top secret project. Oliphant organised a laboratory and set them to work on nuclear fission experiments. Frisch had wanted to test whether physicist Niels Bohr’s prediction that the Uranium isotope 235 was responsible for fission. Their experiments led to a report ‘On the construction of a Super Bomb’. The report predicted that not only was U235 responsible for nuclear fission but a bomb of gigantic destruction could be built using much less than was previously thought. Their findings were endorsed by Oliphant and taken by him personally to the War Ministry. The immediate result of this groundbreaking report, as with all bureaucracies, was the formation of a committee, codenamed Maud, to which Frisch and Peierls, as enemy aliens, were excluded. More experiments as well as other reports, outlining not only was a nuclear fission bomb feasible but that in all likelihood the Germans were already working to develop one, ensued. By 1941, the British authorities, cash-strapped and working night and day to develop microwave radar, decided to approach the Americans for help. Reports were duly sent off and the committee members, now working under the name ‘Directorate of Tube Alloys’, waited … and waited … and waited in vain for an answer. Finally, Mark Oliphant, on a trip to the US connected to radar development, and always impatient with secrecy, security and protocol, decided to find out what had happened to the reports and what the Americans were going to do about them.

Oliphant tracked the reports down to the office of Lyman J Briggs head of the US Uranium Committee, codenamed S-1. Briggs had decided the possibility of a fission bomb was pure science fiction and had locked the reports in his safe. Not only was Briggs not interested in discussing the reports; it was obvious to Oliphant that he had not read them. Furious, Oliphant went straight to Briggs’ superiors at the National Defence Research Council, Harvard University president James B Conant and presidential science advisor Vannevar Bush, who listened to Oliphant’s impassioned pleas but were non-committal. In desperation, Oliphant caught an 18-hour DC2 flight to see Ernest Lawrence, director of the Rad Lab at the University of California, Berkeley. Lawrence, who was a member of S-1, had not seen any of the reports. Lawrence organised for Oliphant to address a meeting of the S-1 committee.

Physicist Samuel K Allison said of that meeting:

Oliphant … said ‘bomb’ in no uncertain terms. He told us we must concentrate every effort on the bomb and said we had no right to work on … anything but the bomb. The bomb would
cost $50 million … Britain didn’t have the money or the manpower so it was up to us (Allison in Rhodes, 1986: 373).

The Americans, finally convinced of the importance of research towards an atomic bomb, set up the Manhattan Project which at its height employed 500,000 people and cost $2 billion a year (Watson, 2000: 399). Oliphant was made deputy head of the British mission.

In his history of the twentieth century, A Terrible Beauty (2000), Peter Watson credits Oliphant’s gesture of offering sanctuary in Birmingham to Otto Frisch as ‘the moment when an atomic bomb moved out of the realm of theory and became a practical option’ (Watson, 2000: 392). Manhattan Project physicist Leo Szilard, who in 1939 along with Albert Einstein had written to President Roosevelt warning of the possibility of the German development of a bomb said of Oliphant: ‘If Congress knew the true history of the atomic energy project … I have no doubt it would create a special medal to be given to meddling foreigners for distinguished services, and Dr Oliphant would be the first to receive one’ (Szilard in Rhodes, 1986: 372). In fact in 1946 the US Army officer in charge of the Manhattan Project, Major-General Leslie Groves had submitted a list of proposed American decorations on ‘eminent scientists … for their contributions to the United States war effort’, only one scientist was recommended for the highest award that the US could grant to foreigners, the Medal of Freedom with Gold Palm, and that scientist was Mark Oliphant. The recommendation was turned down by the Australian Government on the grounds that the government did not confer awards on Australian citizens ‘other than for operational service during wartime’ (Cockburn, 1981: 198). Fifteen years later, Groves made no mention of Oliphant in his memoir, Now it can be told: The story of the Manhattan Project (1962). What had happened in the intervening years to make Mark Oliphant persona non grata?

After the successful deployment of the ‘Fat Man’ and ‘Little Boy’ atomic bombs on Japan, Friedrich Nietzsche’s warning from sixty years before, so long ignored, that ‘the belief that through science one had loved something selfless, harmless and self-sufficient and truly innocent in which the devil drives of humanity had no part at all,’ came back to haunt scientists like Mark Oliphant (Nietzsche, 2001: 55). For Oliphant, instead of being the culmination of Enlightenment values of progress and reason, the successful deployment of the atomic bomb coincided with the onset of deep pessimism about the future of the world. Delivering a lecture, ‘Existentialism is Humanism’ in Paris in October 1945, Jean-Paul Sartre spoke for many, including Mark Oliphant, when he said, ‘[t]he war really divided my life in two …I suddenly understood that I was a social being … I became aware of the weight of the world and my ties with all the others and their ties with me’ (Sartre in Watson, 2000: 407).

The beginning of the Cold War is said to have been signalled by Winston Churchill at Westminster College in Fulton, Missouri on March 5, 1946. In accepting an honorary degree, Churchill said:

From Stettin in the Baltic to Trieste in the Adriatic an iron curtain has descended across the Continent. Behind that line … the populations … are subject … not only to Soviet influence but to a very high and in some cases increasing measure of control from Moscow (Churchill in Baggott, 2009: 390)

As Churchill’s metaphoric ‘iron curtain’ fell over Eastern Europe, the world changed. The political and ideological biases operating in the debates surrounding scientific achievement in the post war period impacted on dissenting voices such as Oliphant’s. Scientists lined up on opposite sides in the post war nuclear debate. Rivalries between laboratories and nations that
had existed prior to the Second World War, although put on hold during wartime collaboration on the Manhattan Project, resumed after the dropping of the atomic bombs on Japan. Oliphant and fellow Australian scientist, George Briggs, were appointed technical advisors to the Australian delegation at the 1946 United Nations International Control of Nuclear Weapons Debate. The leader of the delegation was Dr Herbert ‘Doc’ Evatt. Oliphant’s moral anguish over the destruction caused by the Japanese atomic bombs led him to lobby the first United Nations General Assembly to adopt the Soviet proposal for the dismantling of all existing nuclear weapons. Oliphant advised Evatt to accept the Soviet proposal requiring stockpiles of all existing nuclear weapons—at that time only two—to be dismantled. Evatt refused. America believed that it held a monopoly on atomic and thermonuclear bomb development despite protests from scientists such as Oliphant that there was no secret in bomb physics and the inevitability of a Soviet bomb being developed sooner rather than later.

With the collapse of the alliance between the Soviet Union, Britain and the US, Western countries experienced a wave of anti-communist hysteria. In Australia this hysteria served the careers of many conservative politicians, including Robert Menzies, helping them to discredit opponents. The Menzies Government, swapping British imperialism for American hegemony and happily following US Senator Joseph McCarthy’s lead, demonised anyone with even slightly left-leaning principles. Communist accusations ousted many left-wing scientists from government institutions. Oliphant’s outspokenness in the press and at disarmament rallies in the changed political climate meant that he was out of step with the ruling conservative political paradigm. In 1951, Oliphant, now director of the School of Physical Sciences at the newly established Australian National University, was invited to attend a nuclear physics conference in Chicago. Refused a US visa, Oliphant was told that his public speeches and statements were ‘providing bullets for the Russians and other enemies to fire back at the US’ (Cockburn, 1981: 188). The Menzies Government refused to intervene stating the decision was ‘entirely for the Government of the United States to determine’ (Cockburn, 1981: 189). The Government was not prepared to defend Australia’s leading nuclear physicist of the day, Oliphant was branded a communist sympathiser. Three years later, the mud was still flying. In 1954, at the time of Robert Oppenheimer’s controversial security clearance suspension, an unidentified US State Department official was quoted in The Washington Post as saying about Oliphant: ‘he is a do-gooder, one of the boys who monkey around with pinkos … Oppenheimer lovers’ (Cockburn, 1981: 191).

When former Federal Education Minister, Julie Bishop gave an address at the history summit in 2006 ‘Forgetting our past, failing our future’, she stressed the importance of the teaching of ‘Enlightenment values such as scientific progress … We cannot allow the nation's past to be rewritten in the service of a partisan political cause,’ she said (Bishop, 17/8/2006). Yet, in many written histories Oliphant’s role in obtaining the support of the Americans is downplayed or not mentioned. My play speculates that Oliphant’s impatience with what he considered the American overemphasis on security and his subsequent outspokenness on the morality of using the bomb led to his inclusion on many ASIO reports and his later exclusion from the nuclear hierarchy. In The Structure of Scientific Revolutions (1962). Thomas Kuhn critiques the idea of scientific objectivity and the pursuit of ‘truth’ and ‘progress’. Kuhn asserts that a scientific paradigm not only includes prevailing attitudes to scientific theory but also to political, ideological and economic influences:

Two groups of scientists see different things when they look from the same point in the same direction … Both are looking at the world, and what they look at has not changed. But in
some areas they see different things, and they see them in different relations one to the other (Kuhn in Preston, 2008: 63).

For Kuhn, science is not cumulative as the paradigm determines what kinds of questions and answers are in order. Paul Feyerabend in his essay ‘How to defend society against science’ also contends that scientific results often depend on non-scientific elements such as politics and economics. He said: Science is just one of the many ideologies that propel society … science may influence society but only to the extent to which any political or other pressure group is permitted to influence society (Feyerabend, 1981: 162).

For Kuhn and Feyerabend there is no value-neutral objective rationality in science, the assessment of a body of knowledge is relative to the interests of the social group in power at the time.

The contradictory nature of Oliphant’s character can be seen in his persistence in getting the bomb project up and running knowing its potential for mass destruction and his complete reversal at its success. Oliphant’s single-mindedness in his pursuit of developing the atomic bomb as outlined in my play Ion Man’s Adventures in Atomic Wonderland has echoes of Galileo’s conflict with the Papacy dramatised in Bertolt Brecht’s Life of Galileo. Brecht’s play was first written in 1938. It was revised in collaboration with British actor Charles Laughton after the dropping of the atomic bomb in 1945, and revised again at the height of the Cold War in 1953. In Brecht’s view the pursuit of science for science’s sake is immoral when the scientist does not consider the outcome for humanity. Brecht stated:

Galileo’s crime can be regarded as the original sin of modern physical science … The atom bomb, both as a technical and social phenomenon, is the classical end product of his contribution to science and his failure to society.

After 1945 and the dropping of the atomic bomb, Brecht wanted to make clear his point that scientists have a social responsibility and that scientific advancement was not an end in itself. In revising Galileo, Brecht included this speech:

**GALILEO** To what end are you working? Presumably for the principle that science’s sole aim must be to lighten the burden of human existence. If the scientists limit themselves to piling up knowledge for knowledge’s sake, then science can be crippled and your new machines will lead to nothing but new impositions. You may in due course discover all there is to discover, and your progress will nonetheless be nothing but a progress away from mankind. The gap between you and it may one day become so wide that your cry of triumph at some new achievement will be echoed by a universal cry of horror … I handed my knowledge to those in power for them to use, fail to use, misuse—whatever best suited their objectives (Brecht, 1966: 108).

Similarly in my play about Oliphant, as articulated by his Manhattan Project colleague Robert Oppenheimer, Oliphant’s dilemma is that ‘[w]hen you see something that is technically sweet, you go ahead and do it, and you argue what to do about it only after you have had your technical success’ (Oppenheimer in Cockburn, 1981: 122).

Brecht used his ‘epic’ history plays, such as Life of Galileo, to discuss contemporary politics. Brecht, selling his message, stated, ‘my plays are forced to deal with political matters’ (Brecht, 1964: 68). Almost half a century later it was Peter Brook’s contention in The Empty
Space (1968) that theatre could not afford to ignore Bertolt Brecht, asserting that Brecht was ‘the key figure of our time, and all theatre work today at some point starts or returns to his statements and achievement’ (Brook, 1968: 80). Central to Brecht’s ‘epic theatre’, the development of a radical new theatre, was a departure from naturalistic dramatic theatre: ‘The premise for dramatic theatre was that human nature could not be changed; epic theatre assumed not only that it could but that it was already changing’ (Brecht in Watson, 2000: 232). Writing during the rise of Hitler in Germany during the 1930s, Brecht was moved to devise a mode of theatre that would be an antithesis to ‘Fascism’s grotesque emphasising of the emotions’ (Brecht in Mumford, 2008: 63). Brecht emphasised a Marxist interpretation of his characters actions, not as hero or heroine, but as flawed characters who often make decisions that serve their own interests (Mumford, 2008: 77). As Sartre said of epic theatre:

Epic theatre’s aim is to show us the individual’s adventure … and also to show us… the implications and reciprocal correlations of which a system is composed and which involve people in systems (Sartre, 1976: 115).

According to Raymond Williams Brechtian theatre’s most characteristic element is that of ‘critical presentation, rather than simple theatrical illusion’ (Williams, 1968: 147). In order to undermine theatrical illusion, Brecht instructed that ‘Life of Galileo be presented as a piece of historical “ham” … The stage décor must not be such that the public believes itself to be in a room in medieval Italy or in the Vatican. The public must remain always clearly aware that it is in a theatre’ (Brecht in Williams, 1968: 147). Reacting against the verisimilitude associated with realism, Brecht called for a dismissal of nineteenth century naturalism as a past form that could ‘no longer move anybody’. Theatre, he said, ‘must keep up with … all the advances of the times and not lag several thousand miles behind’ (Brecht in Willett, 1964: 67). Flushed with optimism Brecht confidently expounded a new way forward for society: ‘Once I’ve found out what modes of behaviour are most useful to the human race I show them to people and underline them’ (Brecht, 1964: 67). In presenting ‘an entirely new sort of art capable of influencing modern people’, Brecht implored artists to embrace the grand narrative that scientific progress was showing stating: ‘science has found new dimensions … it’s time for art to find new expressions’ (Brecht, 1964: 67). The ‘new dimension’ science had discovered was quantum mechanics. At the time Brecht was elucidating his theory of epic theatre, German physicist Werner Heisenberg had published his ‘uncertainty principle’—in the subatomic world of the atom the exact position and precise velocity of an electron cannot be determined at the same time, therefore cause and effect can never be measured, and can only be understood using the rules of probability. According to Heisenberg: ‘Even in principle, we cannot know the present in all detail … everything observed is a selection from a plenitude of possibilities and a limitation on what is possible in the future’ (Heisenberg in Watson, 2000: 261).

In Poetics, Aristotle defined tragedy as ‘the imitation of an action that is serious and also, as having magnitude complete in itself’ in the medium of poetic language and in the manner of dramatic rather than of narrative presentation, which incorporates ‘incidents arousing pity and fear, wherewith to accomplish the catharsis of such emotions’ (Aristotle, 2007: VI). Brecht developed his theories on theatre undermining Aristotelian dramatic three-act structure as a way of deliberately alienating the audience from the emotional experience of drama in order to lend clarity to the social and political relevance of the text. Brecht critiqued dramatic Aristotelian theatre by contrasting it with epic theatre:

The dramatic theatre’s spectator says: Yes I have felt like that too—Just like me—It’s only natural—It’ll never change—The sufferings of this man appal me because they are
inescappable—That’s great art; it all seems the most obvious thing in the world—I weep when they weep, I laugh when they laugh.

The epic theatre’s spectator says: I’d never have thought it—That’s not the way—That’s extraordinary, hardly believable—it’s got to stop—The sufferings of this man appall me because they are unnecessary—That’s great art; nothing obvious in it—I laugh when they weep, I weep when they laugh’ (Brecht, 1964: 71).

A process of alienation is necessary to startle the audience out of its political apathy or certainties: ‘When something seems “the most obvious in the world” it means any attempt to understand the world has been given up’ (Brecht, 1964: 71). Brecht, Louis Althusser said, ‘wanted to make the spectator into an actor who would complete the finished play’ (Althusser, 1971: 204).

Brecht dismissed traditional Aristotelian theatre as archaeological curiosities, ‘important historical documents’ able to ‘illuminate the way in which earlier ages regarded human relationships’ and nothing more (Brecht, 1964: 66). Brecht believed the effect of a play’s Aristotelian or nineteenth century naturalist structure on an audience is static because ‘its task is to show the world as it is’, whereas in contrast, epic theatre’s effect on an audience is dynamic, ‘its task is to show the world as it changes (and also how it may be changed)’ (Brecht, 1977: 6). Rather than continue with the tradition of Aristotelian European drama, Brecht wished to create a new and progressive form. In antithesis to Aristotelian theatre and plays that emerged in his wake whether Shakespearean, Jacobean, nineteenth and twentieth century naturalism, Brechtian epic theatre does not begin with an individual but with a problem:

The essential point of the epic theatre is perhaps that it appeals less to the feelings than to the spectator’s reason. Instead of sharing an experience the spectator must come to grips with things (Brecht in Willett, 1959: 168).

Theatre practitioner Hilary Glow states in *Power Plays: Australian Theatre and the Public Agenda* (2007) that ‘the Australian theatre has been … a place of public deliberation and passionate discussion of the causes and consequences of political and ideological change’. Glow argues that Australian playwrights must write within the framework of naturalism in order to satisfy the commercial imperatives of mainstream theatre and the preconceptions of audiences. Citing Rachel Fensham and Denise Varney, Glow states mainstream theatre audiences are largely comprised of ‘an aging Anglo-European middle class … [sharing] a set of cultural values and identifications marked by similar tastes and patterns of behaviour, language and customs’. Glow’s view of mainstream theatre audiences assumes they will not understand the representation, aesthetics and imagination of a Brechtian play. Yet, with the resurgence of Brecht in theatres overseas, including for example the recent acclaimed mainstream New York production of *Mother Courage* with Meryl Streep, I feel a Brechtian mode of theatre has particular relevance in exposing values, politics and science, especially when applied to an Australian subject where, without sermonising, institutions within the national and political spheres can be challenged by simply reporting what has happened.

British playwright Sir David Hare revised Brecht’s *Life of Galileo* for London’s Almeida Theatre in 1994. A long-time exponent of Brechtian theatre, Hare elucidates Brecht’s aim stating Brecht ‘sought out whole new languages … in which every constituent element of an evening might be reconceived’ (Hare, 2005: 141). Hare states:
A snobbery is in play here … whereby works about man’s hopeless position in the universe are assumed to be wrenched from inside the dramatist’s furthest being, whereas works which address themselves to social injustice are taken to operate on some lower level of suffering (Hare, 2005: 14).

Rather than believing that Brechtian theatre had had its day, for Hare, the collapse of Eastern European communism made Brecht’s work all the more relevant, enabling contemporary political theatre to be made free of communist overtones. To illustrate the endurance of Brecht’s plays, the 2008 revival of The Resistible Rise of Arturo Ui for London’s Lyric Theatre starring Zimbabwean actor Lucien Msamati is as relevant today with its reference to Robert Mugabe as it was to Hitler 60 odd years ago.

In Life of Galileo, Brecht included transcripted dialogue taken from Galileo’s trial records as well as excerpts taken from his Discorsi Mathematica. Like Brecht’s Life of Galileo, Ion Man’s Adventures in Atomic Wonderland is a history play using a mix of invented and verbatim transcripted dialogue. While nothing in the narrative is knowingly untrue, it is, in the end, a fictional account of real events. For example, what was said at Oliphant’s interrogation over Oliphant’s report documenting the expected radio-active fall-out from the atomic bomb which he sent unauthorised back to the UK is speculation on my part – however, that Oliphant wrote and sent the report and was interrogated is not in dispute – what was actually discussed, I haven’t uncovered. Similarly, Michael Frayn’s popular Copenhagen (1998) is a Brechtian play dramatising a meeting between the Danish physicist Niels Bohr and German physicist Werner Heisenberg in 1941 and addresses the moral dilemma faced by the scientists involved in atomic bomb research. Frayn, in his postscript to the play, stresses that the dialogue is based on written history. Where there is ambiguity in the play about what happened, Frayn asserts that this ambiguity exists within the recollections of the participants. While striving for historical accuracy the play is, in the end, a drama where once ‘all the external evidence has been mastered, the only way into the protagonists’ heads is through the imagination’ (Frayn, 1998: 97). Frayn says:

The great challenge facing the storyteller and the historian alike is to get inside people’s heads, to stand where they stand and see the world as they saw it … and this is precisely where recorded and recordable history cannot reach (Frayn, 1998: 97).

In Political Theatre in Post-Thatcher Britain (2008), Amelia Howe Kritzer asks ‘what is political theatre?’ answering that ‘making political issues or actions visible constitutes the fundamental operation of political activism’ (Kritzer, 2008: 9). In presenting and constructing a political issue or commenting on an issue thought to be political, the playwright is initiating a dialogue with the audience ‘in which audience members … use the new perceptions and ideas made available in the performance to challenge perceptions and ideas they had previously recognised and accepted’ (Kritzer, 2008: 12). Kritzer contends ‘the stage remains a site of remarkable freedom and power with the potential to … present a full range of public issues … that engage the audience in constructing and exploring new political landscapes’ (Kritzer, 2008: 224). An example of the potential power of theatre was that despite the strictures on other forms of dissent, Athol Fugard’s plays attracted wide audiences in South Africa while, nevertheless, confronting the apartheid regime. The press coverage surrounding the single Australian performance in Melbourne of Caryl Churchill’s eight-minute play Seven Jewish Children highlights the power theatre has as an instrument of dialogue and debate.

Cold War anti-communism is still presented as a theme in contemporary theatre and film. Melissa Reeves 2004 play The Spook is based on a true story of a teenager recruited by ASIO
to spy on the members of a small, rural branch of the Australian Communist Party, set in the early 1960s. Tony Kushner’s *Angels in America* (1991) features Roy Cohn, a key pro-McCarthy player in the House Un-American Committee (HUAC) hearings and Ethel Rosenberg, executed as a spy following the anti-communist purges. George Clooney, writer/director of the 2005 film *Good Night and Good Luck*, which dramatises journalist Edward R Murrow’s conflict with Senator McCarthy during the HUAC hearings, believed that the events portrayed would have impact with modern audiences, commenting, ‘I thought it was a good time to raise the idea of using fear to stifle political debate’ (Clooney, in Brooks, 22/09/2005). The relevance of using an ambiguous Brechtian mode of theatre for *Ion Man* is that it presents a model to show Oliphant’s misguided and naive assumption that there is no concealing the ‘truth’ as he sees it. Like Brecht’s Galileo, Oliphant, confident in his superior knowledge, believed that in taking on the system he would prevail. After pushing for the atomic bomb project, Oliphant believed it should never again be used for military purposes. Despite his ‘good’ intentions, Oliphant and his fellow Manhattan scientists unleashed a danger with which the world is still grappling. My play, utilising Brechtian strategy, attempts to present a narrative that shows Oliphant in his complexity. Simultaneously it requires that an audience is able to reinterpret an error of history in its depiction, or lack thereof, of Oliphant.

When the US heralded in the atomic age by blowing up a fleet of captured enemy warships manned by a crew of pigs, goats and sheep dressed in army uniforms at Bikini Atoll, a live radio broadcast heightened the dramatic tension by using a metronome to mark the countdown to the explosion, followed by a melodramatic warning uttered before its symbolism had warn thin: ‘Listen world, this is the crossroads’ (‘Operation Crossroads,’ Part 4). Over half a century later, Gareth Evans in his 2009 Stephen Murray-Smith Memorial Lecture, ‘The Challenges of Nuclear Disarmament’, pointed out that the world is still stuck at the nuclear crossroad. Evans said:

The present reality is this. Twenty years after the end of the Cold War there are at least 23,000 nuclear warheads still in existence, nearly every one of them having many times the destructive power of the bomb that devastated Hiroshima … The wheel has now turned again … four US realist cold war warriors—Kissinger, Schultz, Nunn and Perry—arguing, startlingly, that the risks of retaining nuclear weapons outweigh any possible usefulness (Evans, 11/10/2009).

My objective in writing *Ion Man’s Adventures in Atomic Wonderland* was to find the artistic representation of a political and scientific debate, which included resolving the inevitable tension between historical and scientific accuracy, and dramatic demands. Using Brecht as a model, the drama does not purport to understand the real motivation behind characters’ actions; it is enough to present a dramatisation of events, the choices made and the ramifications that followed; the times, the words and the situation. In this way the audience can make up its own mind. As playwright David Hare says, ‘art takes us to a place that journalism can’t’ (Hare, 2005: 14). The audience, aware of what happened to dissenting voices during the anti-communist purges of the 1950s, becomes the interpreter of history. My play ends as with many of Brecht’s plays, ambiguously. Oliphant stands alone at centre stage reflecting on the atomic bomb. He says:

OLIPHANT: Amazing all that combined brainpower – I mean just think of it – extraordinary. The cream of Britain, the cream of the US and all those scientists who managed to escape the Nazi’s. All that scientific brainpower and what was the outcome? A method to annihilate the whole world that begins as a tiny burst of energy released when the nucleus splits in two.

SINGER at MICROPHONE (Tune: ‘Ring around a Rosy’)

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15/12/2010