

THE VIRTUAL RENAISSANCE: SELF-CONSCIOUSNESS THROUGH  
LITERACY/TECHNOLOGY

by

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## ABSTRACT

A dialogue often consists of two opposing ideas, either spoken or written, that attempt to find a resolution in the exchange of ideas. The prefix ‘dia-’ has the dual meaning of separating and joining together with a sense of completeness. From Socratic philosophic treatises to superheroes outmaneuvering their archenemies in blockbuster movies, one speaker depends on the other to test their mettle and strengthen their point of view. Literacy practice within twenty-first century education requires a dialogue between two seemingly opposite viewpoints: the traditional print literacy and digital technology. Historically, print literacy was as disruptive to society as its digital counterpart, yet such literacy became normalized by the mid-sixteenth century, across Europe and beyond, creating a Renaissance that would become a model for education over the following centuries. Some voices on the side of traditional literacy see current technological development as a continuation of the disruptions caused by widespread dissemination of the printed word. Other voices cry out that smartphones need to be banned from classrooms, the Internet needs to be regulated, and children’s overdependence on digital tools has robbed them of creativity or higher cognitive functions.

This thesis creates a dialogue between print literacy and digital technology by inquiring into the English Renaissance and a proposed Virtual Renaissance. Through the arts-based methodologies of fiction-based research and research-based theatre, this thesis creates a dialogue between two characters, each representing an aspect of the time and place from where they belong. John Webster is an English playwright living in London during the Renaissance. Two of his most popular plays, *The White Devil* and *The Duchess of Malfi*, were staged by leading Jacobean actors in such playhouse as the Red Bull, the Globe

and Blackfriars. His dialogue partner is a Canadian researcher from the mid-twenty-first century, Nathan Plettner, whose familiarity with digital devices and computer-generated avatars allows him to interact with historical figures such as John through a process called retroprojection. His inquiry into theatre practices and their relationship with a virtual stage seeks a synthesis between both practices, listening to both the voices of the past and hopes for the future.

## LAY SUMMARY

There is a long tradition of theatre practices to immerse an audience into the story on stage, a fictional place that mirrors everyday reality. Digital technology holds the promise of similar levels of engagement in addition to interaction between the players and the playgoers. My arts-based inquiry into the recent development of virtual reality finds people who struggle to adapt or even understand this rapidly changing resource for literacy and learning. My view of VR technology is an extended analogy for theatre practices over the two and a half millennia of theatre's development. By running a simulation of plays, movies and dance, the fictional researcher Nathan will discover a virtual renaissance about to begin any moment from now.

## PREFACE

This dissertation is original, unpublished, independent work by the author, K. J. Stooshnov.

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Dr. Sandrine Han is a sensational scholar from Curriculum and Pedagogy department who breathes an artistic life into the virtual world. Like her colleague Dr. Petrina, I had the fortune to meet her during my Master's program. Her visions of culture in the digital realm are wonderful, while her critical eye for issues over representation and educational use have an important role to play in the future of learning. Finally, the professor intuitively holding my entire dissertation together, Dr. George Belliveau, has helped me get to this stage in my studies. His personable and direct interactions with others, his enthusiasm for a well-played scene as well as being mindful of the process of creating drama (and likewise dissertations) are inspirations as a scholar and my individualized self. Thank you to my whole committee for co-creating this thesis.

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## DEDICATION

To my dearest Yuko, who has been my inspiration through the long years of graduate studies. Thank you to my parents, Cathy and John, for their care and attention to details. Both the Stooshnov and Shimomura families for supporting us as Yuko and I pursue our ideas.

J.-B. LE R. D'ALEMBERT TO M. ROUSSEAU, CITIZEN OF GENEVA

A reply to your letter regarding the theatre

It grieves me to think that our former friendship and the philosophic interests of our fellow Encyclopedists were on the brink of disaster in the year 1757 when my entry on Geneva unduly received a thrashing. It stung my pride to read your letter that was published publicly a year later, and while you took care to argue your points, albeit at great length, I appreciate that you spoke on behalf of your fellow Genevans. I do not attempt to refute any statements I made elsewhere in my article with this letter, only to say the general protest I had to answer to regarding my 'Socinians' commentary was the reason for my withdrawal from further work in the Encyclopedia. The numerous faults you found for the single paragraph that expressed my hopes for a theatre in Geneva it is my present task to redress, as I noticed how a few faulty syllogisms and gross assumption led you to ban, much like Plato in his *Republic*, the flowering crown of poetry: the dramatic theatre.

A rumour has it that you took my personal thought on a possible Genevan theatre company becoming 'the best in Europe' ("*Ajoûtons que cette troupe deviendrait bientôt la meilleure de l'Europe*" in the original article) to be the issue of your enemy Voltaire, and it saddens me the most that you think he wrote this passage. Indeed, your fellow resident gave me much support when I began to research the lake-side city, but his powers of persuasion were limited to him reading the ideas I crafted on the page. You know from our happier days in Paris and other travels how much we enjoyed visits to the grand theatres. I was initially surprised to see you make such Spartan censure of these spectacles. I very strongly believe that theatre plays an important part of our moral and enlightened society, and submit that you read the following thesis, titled *The Virtual Renaissance*, to understand the educational value of the many worlds

that theatre represents. It is no longer a matter of devising laws for a company that would rise to be the best in Europe, but rather a holistic view of the virtual nature of stage and the many types of reality on a global scale. I write of an age of wonders beyond our own, and urge you to reconsider your staunch opposition to theatre.

You may wonder where I found such arguments in favour of educational and alchemical theatre practices that fall under the title of virtual reality. It may not surprise you to find that my time away from contributing to our Encyclopedia has not been idle, as I have had access to material written centuries into our future. The work that we have all contributed to, the Encyclopedia, has transformed by the end of the twentieth century into an amazing worldwide resource called the Internet. This letter would need several additional volumes to explain how this marvel came about, but to relate the Internet in terms you would understand, it is an ingenious combination of our American cousin Franklin's discovery of electricity and the Monads theorized by the German polymath Leibniz. As you read of 'digital' and 'quantum' think of these scientific terms to substitute your present-day understanding for phrases that are *de rigueur* by the middle of the twenty-first century, into which the author Stooshnov gazes. He presents his research into virtual reality as a dialogue between a man named Nathan and the historical figure of English playwright John Webster, and many of their scenes together are written in the style of plays they both investigate. Some illustrations present the various stages they visit, yet they are merely two-dimensional representations of the theatrical worlds that surround them. I have annotated Stooshnov's work, both the prose and dramatic dialogue, with footnotes to further elaborate on knowledge that is supported by other authors in the future, all of who are accessible via this wonderful Internet. I also take pride in the knowledge I secured from this resource to mention that by the early twenty-first century, Geneva has its fair share of theatres, both large and

small, in addition to several 'movie theatres' that you will soon read about in the attached thesis.

Please, dear friend, keep in mind that I ask you to consider these pages not as an attack on your philosophy or intelligence, but rather as a sober reflection on some of the assumption you make about theatres, actors and especially actresses. You simply have, as the English say, thrown the baby out with bathwater by refusing to accept the positive influence of theatre to such an austere society as Geneva. Speaking of the English, you will not find any references to Molière or Racine in the thesis, as much as I know you love to see their work. Instead, the works of Shakespeare and Webster are examined - Webster himself is one of the interlocutors who get retroprojected into the dialogue - plus two screenwriters Marc Norman and Tom Stoppard have a play about Shakespeare writing *Romeo and Juliet* as the Bard himself falls in love with an actress. There is also a chapter on Kabuki theatre from the far eastern country of Japan, and I am sorry to admit that my footnotes do not even scratch the surface of the Zen Buddhist philosophy so integral to the Japanese art form. Nevertheless all of this you will read for yourself and judge the merits of this moral and educative theatre called virtual reality.

There is much to learn in these following pages, and I wish you, too, had access to the many resources I found on the Internet. Some theorists that you would do well to keep track of and who have responded to Aristotle's statements of *Poetics* are a fellow Parisian Artaud, a German playwright named Brecht, a Brazilian drama therapist Boal and American stage director (dare I say, directress?) Bogart. One of the characters in the dialogue, Nathan, who presents himself of the retroprojecting researcher, has some Swiss heritage although he himself was born in Canada. One final name to pay attention to is the Swiss citizen and psychologist Jung, whose understanding of the mind and the alchemical influence of literature indicates the process of discovering self. All of these theorists lend their voice to the research Canadian scholar

Stooshnov builds in his thesis, which he presents mostly as a dialectical journey of discovery between Nathan and John, the latter being the playwright Webster brought forward into a dazzling future of technological wonders. Read on, and I will add a personal reflection as a postscript following the retroprojecting research I submit as a rebuttal to your initial letter (Rousseau, 1960).

## INTRODUCTION

With the advent of the digital, which I would date from, approximately, World War II, the nature of this project [a species-wide, time-defying, effectively immortal prosthetic memory] begins to become more apparent, more overt; the texture of these more recent technologies, the grain of them, became progressively finer, progressively more divorced from Newtonian mechanics. In terms of scale, they are more akin to the working of the brain itself.

Gibson, 2012, pp. 60–61

My inquiry into virtual reality (VR) and its application to drama education occupies two worlds. While researching to understand both virtual and theatrical drama, the screen and the stage seem to be the most obvious indicators of which techniques belong in which world. The literature review covers many formats within the field of literacy education such as novels, plays, movies, and digital media, plus many other subjects beyond my area of expertise: quantum physics, computer science, psychology, and philosophy, just to name a few extracurricular resources that helped to shape my understanding of VR. What I was afforded instead was a peek behind the proverbial curtain that widened the scope of my understanding of arts-based research (ABR): on one hand is digital technology represented by superpositioned qubits of information displayed holographically through a fictional process called retroprojection. On the other hand are words printed on the page, whether mass produced through a Gutenberg-styled printing press or written by hand and given to actors preparing to perform onstage. These resources can be summed up as digital and literacy,<sup>1</sup> or as my subtitle suggests, literacy/technology. In this dissertation, I explore the storytelling capabilities of VR and dramatic text in addition to numerous books and articles for multiple formats in order to determine how viewers and readers

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<sup>1</sup> There is a tendency to group literacy (the skill of reading and writing) with literary (based upon written accounts) throughout my dissertation. With the expanding field of multiliteracies in educational studies, I conflate the two terms as literacy (both the process and product of the letter), much like how digital, virtual, and reality become more ambiguous adjectives as my research proceeds.

situate themselves in the story. What emerges from this process of inquiry is self-consciousness, an ineffable yet unique sense of insight for the two main discussants in my ABR inquiry. Each chapter of this thesis includes a couple of sections that act as a transcript of a conversation during research conducted in a fictional VR space.

The majority of this ABR is a conceptual narrative situated a few decades into the twenty-first century. Understanding the rapid development of VR tools that can be brought into the classroom, specifically the applied design, skills, and technologies (ADST) recently promoted in the elementary and secondary curricula (Province of British Columbia, 2018), it is possible to foresee a future where literacy becomes more like ‘secondary orality’ (Ong, 1982) and ‘electronic interdependence’ (McLuhan, 1962), which was predicted decades before the advent of Internet-based communication such as social media. Examples of VR in my research can be viewed as technological advancements in the future that also allow the researcher to project herself or himself back into the past, for which I use the term retroprojection, in order to have a simultaneous presence in the simulations: here and now in addition to there and then. These ideas are further elaborated upon through a dialogue between a fictional researcher from the near future, Nathan Plettner, and a participant from the distant past, John Webster.

Nathan Plettner has a type of chronesthesia that is analogous to experiencing people on a quantum level: anyone whom Nathan meets becomes a cloud of possibilities that make interpersonal interaction a challenge. One moment, he is meeting a stranger, and as this person is saying her name, images of this woman’s childhood when she dreamed about being an adult (or just as often an elderly person looking back on the first time she met Nathan) flash through his mind. This kind of situation often leads to frustration on both sides: Nathan is uncertain about what point of spacetime he is experiencing, and for those he meets, it can be exhausting just

keeping up their end of the conversation, which barely gets past introductions. This psychological condition might also be why Nathan feels more comfortable with things than with people: mediated interaction through technology allows him to re-evaluate and revise how he presents himself. Even with digital devices and other objects in his life, there is more of a personal connection that borders upon anthropomorphisation: a new gadget sitting on the store shelf or a book calling out to him from the library are keenly vying for his friendship, while dropping one of these objects and stubbing his toe is tantamount to a tragic betrayal. Movies, novels, and plays are his preferred ways of understanding how people act and think,<sup>2</sup> with literary devices like flashbacks, ellipses, and foreshadowing more closely related to how Nathan experiences reality. This is perhaps what bonds him so well to the playwright and virtual research participant John Webster during his retroprojecting research journey.

Nathan's type of chronesthesia seems to match with the character of John and his similar mental state, although it would not have had such a clinical name during the English Renaissance. As little biographical information as there is on the Renaissance playwright Webster, evidence from his surviving plays reveals his understanding of events happening outside of a chronological order: characters like Brachiano and Flaminio from his play *The White Devil* witness atemporal events, and the eponymous Duchess of Malfi has moments of flashback and flashforward, while *Malfi's* Cardinal in particular claims to see other worlds on the moon (shortly after Galileo's famous discoveries were available in England). It is also relevant to mention that throughout this thesis, the retroprojection of John Webster is a fictional computer simulation of the actual playwright, and such textual hints from his plays almost invariably help

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<sup>2</sup> Quoidbach, Hansenne and Mottet (2008) draw conclusions about the personality of people with auto-noetic (or self-knowing) consciousness that are capable of mental time travel in both the past and future. Their research reveals that neuroticism and conscientiousness are two indicators of such chronesthesia, yet neither extraversion nor novelty seeking are.

to create the person who interacts with Nathan.

The deep friendship that instantaneously emerged between Nathan and John despite the occasional taunt and sarcastic swipe at each other was aided by their means of communication: VR. This form of digital interaction can be traced back in diverse ways to the information age in the second half of the twentieth century, and is more specifically narrated by first-wave VR developer Lanier (2017). At the beginning of the 1980s, universities and Silicon Valley companies had the ability to make rudimentary simulations of reality in isolated parts – grid-like representations of cities, static images of plants and detached hands able to grasp or knock over geometric solids before them – but VR still had a long way to go before becoming dexterous extensions of the body most people would recognise from their unmediated experience. Lanier describes the second wave of VR (after approximately 50 attempts to define VR in his autobiography): “Virtual reality had another revival in the mid-twenty-teens” (p. 286) brought about by developments in motion tracking as described by Ewalt (2018) and Rubin (2018). Nathan uses VR educational material throughout most of his schooling, and despite inevitable disruptions (mostly technological, political, and even ecological), the multisensory approximation of reality depicted in VR simulations becomes commonplace, a near simulacrum of the world. It allows him to connect with a like-minded individual whose consciousness is recreated as retroprojected VR through an array of quantum computing logic gate circuitry to bring the character of John Webster out of the past as a scene partner in my arts-based dissertation and an example of “*nekyia*” or spirit from the past “called up and questioned about the future” (Fidyk, 2017, p. 213 fn.1, italics in original). My approach uses of dramatic dialogue in educational research as can be found in the narrative and theatrical elements in doctoral theses such as Lea (2013), Sallis (2010) and Shigematsu (2018).

## Literature Review

The product of abnormal discourse can be anything from nonsense to intellectual revolution, and there is no discipline which describes it, any more than there is a discipline devoted to the study of the unpredictable, of “creativity.” But hermeneutics is the study of an abnormal discourse from the point of view of some normal discourse – the attempt to make some sense of what is going on at a stage where we are still too unsure about it to describe it, and thereby to begin an epistemological account.

Rorty, 2016, pp. 320–321

Within the field of ABR and particularly fiction-based research (Leavy, 2016), there are many methods for preparing research to meet the critical reader’s need for clarity and insight. Barone and Eisner (1997) first discussed their method of crafting educational research, reiterated by Leavy (2016, 2018) as “creating a virtual reality” (*passim*). Scholars took an interest in the emerging technology from the late 1980s and early 1990s that had already become a passing fad when Barone and Eisner made it part of their arts-based educational research in 1997. Significantly, these authors use the concept of virtual reality sparingly in their 2012 book, switching to the synonymous term ‘virtual world’<sup>3</sup> where the arts-based text “must be sufficiently believable, credible enough for the reader to recognize it as *possible*, if not actual. It must *seem* authentic” (Barone & Eisner, 2012, p. 21, italics in original). With the resurgence of VR in the 2010s, which is explored in greater detail later in this introduction, the field of arts- and fiction-based research resumed its language of reconfiguring reality in order to tell a scholarly story by creating a sense of verisimilitude. My research examines the uptake of these approaches in ABR in the context of how both literacy education and educational technology

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<sup>3</sup> Langer (1953) finds many forms of artistic and literary expressions that are virtual worlds within the canvas, page, and performance hall. Her book is also the first recorded mention of a virtual world, yet not in the context of a computer simulation. Additionally, the etymology for each word – ‘virtual’ and ‘world’ – can be traced back to the same source since both the root words of the Latin *vir* (see below, p. 12) and Old English *wer* have the same meaning: man or mankind (Hoad, (Ed.), 1996).

have been shaped by VR and have in turn influenced my self-consciousness. One step to better understand the claims of Leavy, Barone, and Eisner related to authenticity and verisimilitude in ABR is to investigate deeply their idea of VR as it relates to research.

What follows is my attempt to make a statement about the role that VR could potentially play in the field of drama education. One reason for the use of the future tense is the scarcity of research that investigates the educational practicalities of VR. Not only has the much theorised and dreamt about technology been a staple of science fiction from Gibson (1984, 2012) to Cline (2011), but also technological determinists<sup>4</sup> like Murray (1997) and Laurel (2014) write about the potential of VR as a narrative performance space. While some recent scholars such as Moro, Stromberga and Stirling (2017) have published research specifically on the use of VR in the classroom, their impressive accounts only cover a few years of recent VR development. More academic work following in the footsteps of Barone, Eisner and Leavy has shifted towards studies of virtual worlds conducted by Han (2011, 2017), Burnett and Merchant (2017), and Gregory, Lee, Dalgarno and Tynan (2016). In order to fully investigate the impact VR will have on drama education, I present my dissertation as fiction-based research, telling a story of what is and what might be possible while drawing upon the rich arts-based history of virtual simulation from drama theorists such as Antonin Artaud, Bertolt Brecht, Augusto Boal and Anne Bogart.

The proposed re-emerging technology of VR has influenced and informed my decision to use ABR throughout my PhD studies. Virtual technology has a history extending far back into the early years of computing and simulation. Astrophysicist and science journalist Gribbin (2015) makes a point about how early computational devices dating back to the Second World

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<sup>4</sup> Scholars who follow the generally optimistic view that technology created and used by humans make an improvement in the lives of most, if not all, humans. Reese (2018) identifies McLuhan's statement about "the most extraordinary of men's technological clothing" being the computer which remains "new and ubiquitous at the same time" (Reese, 2018, p. 32) while we can only imagine how its emergent properties will evolve within the next century.

War were designed so that each program the computer operated was a virtual operating system in itself. As Ryan (2006, p. 188) mentions, a flight simulator is an example of a virtually real experience or ‘a dynamic system that models a dynamic process’, but the history of audience immersion in a simulated reality predates the computer, reaching far back into the history of art in general and theatre in particular. Aristotle (1996), one of the first Ancient Greek philosophers to take theatre as a serious subject of contemplation, praises theatre for its power of imitation: “envisaging things [such as the play’s plot through gestures] ... as if one were actually present at the events themselves” (p. 27). He also makes a point in his book *Poetics* (Aristotle, 1996) that the tragic poet is not simply reporting history as “what *has* happened, but to say the kind of thing that *would* happen” (p. 16, Italics in original translation), which brings probability into the craft of staging tragedies. Freeland (2003) underlines the benefit of mimetic possibility of tragic theatre, as it “could educate by appealing to people’s minds, feelings, and senses” (p. 21). Through epic poetry, playwrights are reaching further back into the age of heroes and legends to tell some truth about the audience’s contemporary society.

Brazilian theatre director and theorist Boal (2011) comments on and criticises Aristotle’s ‘coercive’ interpretation of theatre where the mimetic attempts to present the classical unity of time, place, and action. “Theatre,” according to Boal, “is change and not simple presentation of what exists: it is becoming and not being” (p. 28). Nevertheless, with tragedy and comedy, theatre artists present their world as they perceive it in its present state. Some of the characters may be from a culture’s (often imagined) past but are present on stage and interact with the audience as part of their everyday world. Viewed from outside Western literature, an intriguing meeting of audience and artists’ worlds can be seen in the Japanese Noh tradition, where masked actors enter the stage across a bridge between the audience’s world and the character’s mirror

world called *kagami-no-ma* (Ozeki, 2015; Udaka, 2010), a double reality conjuring up Rorty's (2016) philosophy and Artaud's (1958, 1988) theory of theatre, to be discussed later. The Noh actors prepare to cross the bridge onto the stage and have a few moments to fit their masks onto their faces and adjust their costumes. Ozeki (2015) writes inquiringly about this process of how the actor becomes a character from another time and place before being transported into the here and now.

Virtuality thus has the sense of bringing something potential and becoming into an actual or real environment, such as bringing a malfunctioning airplane into a room with a simulated flying apparatus to train pilots, to use the above example from Ryan (2006), or a masked actor from the mirror world. Putting aside the deeper question about the nature of reality for a moment, it is useful to examine the history of its probabilistic adjective, 'virtual'. Ryan (2001) discusses the modern computational uses of the term VR in connection with the literary arts as she explores the multiple levels of meaning of the adjective:

Etymology tells us that *virtual* comes from the Latin *virtus* (strength, manliness, virtue), which gave to scholastic Latin the philosophical concept of *virtus* as force or power. (This sense survives today in the expression "by virtue of.") In scholastic Latin *virtualis* designates the potential, "what is in the power [*virtus*] of the force." The classic example of virtuality, derived from Aristotle's distinction between potential and actual existence (*in potentia* vs. *actu*), is the presence of the oak in the acorn ... Exploiting the idea of fake and illusion inherent to the mirror image, modern usage associates the virtual with that which *passes as* something other than what it is.

pp. 26–27, italics in original

Ryan later highlights Jaron Lanier<sup>5</sup> and Howard Rheingold, both of whom coined the modern sense of VR as a technology that "burst into the public view in the early 1990s...through a grand

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<sup>5</sup> Scott (2016) confirms the role Lanier plays in coining the term: "The computer scientist and cyber-philosopher Jaron Lanier ... has written with both optimism and despair about the trajectory of the

flourish of rhetoric” (p. 48) that never seemed to live up to its Aristotelian virtuality of a comparable simulation of actual reality. Boal (2011) argues that “realist limitation in the theater consists in its presenting a reality which is supposedly already known” and how “the naturalistic point of view only seeks to successfully reproduce reality” (p. 76). In Boalian terms, VR as a technology has many limitations, and yet recent developments suggest that VR is having its own renaissance.

The action [in dramatic poetry] is presented not as it is in the epic, as something already past, but rather as something that happens in the very moment in which we witness it. In epic poetry the action of the characters belongs to a time that is different from that of the spectators; in dramatic poetry the spectators are transported to the time and the place where the action occurs — that is, they are in the same time and space as the characters, and hence are able to experience empathy, the present, living emotional rapport. Epic poetry “recalls”; dramatic poetry “relives.”

Boal (2011), p. 87

My thesis is an ABR inquiry into the role VR will play in the field of drama education research, projecting the audience of readers into the near future while also retroprojecting into the distant past, bringing together disparate times and places onto one stage and reliving the possibilities of virtuality in drama education. Sections of this dissertation are written as dialogue to capture the immediacy or becoming moments for VR – a field of studies still in its nascent Aristotelian acorn stage – in my attempt to suggest the alchemical process that will develop a deeply rooted oak tree of scholarly research. These observations into drama and VR also reveal the active imagination discussed as Mayes (2005) compares modern education and Jungian psychology that

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internet, believes that digitisation’s prodigious memory will be key to a sustainable global economy based primarily on exchanges of information. In *Who Owns the Future?* (Lanier, 2014) he outlines a possible world in which data is the central commodity and all of us are properly remunerated for our contributions, conscious or involuntary, to the profitable crunching undertaken in Big Data’s storehouses” (Scott, 2016, p. 103).

requires more than analysis of symbols. Instead, he calls for engaging “in a living *interaction and dialogue with*” a symbolic language “of dreams, art, myth and religion” (p. 63).

### **A Fiction-Based Dramatis Personae**

Evidence and even proof can impress people in the short term but they rarely engender lasting change. But when facts are contextualized within stories, the effect is exponential. People’s minds can be deeply affected through the alchemy of emotion plus empathy in the heat of a story. With a story, the message will stick.

Bogart (2014), p. 98

As mentioned in the preface (p. 6), Nathan and John are the primary discussants throughout my thesis. These two men can be viewed as outsiders looking into plays and performances in progress that are barely interrupted by their conversation. In many of the images for each chapter, they appear as lavender and salmon-coloured silhouettes to emphasise a thought experiment suggested by Lanier (2017) where he imagines “the universe with a person-shaped cavity excised from it” where dialogue orientates their impression of “the inward-facing surface that surrounds the cavity” (p. 47). This surface appears in this thesis unfolded as text and filtered images similar to the way a map becomes a two-dimensional representation of our spherical globe. This digital literacy exploration records my arts-based inquiry into stage plays, a movie and a dance.

#### Collaborative Arts-Based Inquirers

JOHN Webster, *English playwright, cartwright and former law student at Middle Temple*

NATHAN Plettner, *retroprojection researcher from the twenty-first century*

My main interest in theatre history relates directly to one of the high points in Western literary history, the English Renaissance, specifically plays by William Shakespeare and his contemporaries. Shakespeare’s *Julius Caesar* has been the impetus for my research so far,

because I attempt to link Shakespearean theatre practices with late twentieth-century and early twenty-first-century VR. Many of the characters performing in scenes from *Julius Caesar* are composite characters based on actual members of the Lord Chamberlain's Men, circa 1599, according to theatre historians such as Astington (2010) and Kathman (2004). The actors are identified by the family name in speech headings, and include:

Actors performing *Julius Caesar*

Richard BURBAGE, *leading actor and company owner, as Brutus*

John HEMINGES, *grocer and lead actor, later co-editor of the First Folio, as Cassius*

Henry CONDELL, *lead actor and co-editor of the First Folio, as Marc Antony*

William SHAKESPEARE, *company playwright and occasional actor as Cicero*

Richard COWLEY, *known for comic role of Verges in Much Ado About Nothing, as Casca*

William SLY, *fellow Lord Chamberlain actor, formerly of the Admiral's Men, as Cinna*

Augustine PHILIPPS, *fellow Lord Chamberlain actor, formerly Lord Strange's Men, as Julius Caesar*

Nicholas TOOLEY, *young Lord Chamberlain actor and an apprentice of Burbage, as Boy or Lucius, a servant in Brutus's home*

Projecting themselves a bit further into the future while continuing to investigate the Renaissance world of Shakespeare's theatre, Nathan and John observe a virtual adaptation of the director Madden's (1998) film *Shakespeare in Love* while delving into the screenplay of Norman and Stoppard (1998). Most of the scenes they witness show the early rehearsal process of what would eventually become the play *Romeo and Juliet*. John and Nathan peer around the Rose Theatre built inside Shepperton Studios in Surrey, England. Nathan, on the one hand, would already be familiar with the finished movie in its digital format (various digital storage and

streaming services); on the other hand, John is fascinated by action being recorded onto celluloid film, and he even catches a few glimpses of the film crew at work on the Shepperton sound stage. Many of the cast members, here identified by their first names, have multiple roles as the hired players later given parts to play in *Romeo and Juliet*. The most intriguing is the triple role played by GWYNETH, who is Viola disguised as a male actor, Thomas, in order to be cast as Romeo and later in the movie, Juliet. The award winning movie (Madden, 1998) is reimaged as a VR retroprojection in the mid twenty-first century as conjectured in Gibson’s (2012) account of Johnny X, whose experience with “the armature for what we would think of as a virtual reality” goes beyond what the original cameras captured on a soundstage like Shepperton Studio.

*Cast of Shakespeare in Love*

JOSEPH Fiennes, *male, mid-30s, performing as Will Shakespeare*

GEOFFREY Rush, *male between 50 and 60, as Philip Henslowe*

ADAM Barker

HARRY Gostelow

ALAN Cody

} *male, various ages, performing as Auditioners*

JOE Roberts, *young male in teens, as Urchin/John Webster*

MARK Williams, *male, early 30s, as Wabash*

GWYNETH Paltrow, *female, early 20s, actor disguised as boy to play Thomas Kent as Romeo (actual role Viola De Lesseps)*

BARNABY Kay, *male, late 20s/early 30s, as Nol who plays Benvolio*

BOB Barnett, *male, mid-30s as Admiral’s Man George Bryan in the role of Montague*

MARTIN Neely, *male, late teens or early 20s, as Lady Montague*

BEN Affleck, *male, early 20s as Ned Alleyn in the role of Mercutio*

The next retroprojection goes further into the future while casting back into the distant past and is a dance performance researched and choreographed by Yayoi Hirano that tells the story of how Kabuki began as an art form in Kyoto, Japan. Izumo no Okuni, who created this style of narrative dance, was a woman living in the early 1600s and thus a contemporary of Shakespeare and Webster. Soon after establishing the tradition of Kabuki performance, however, the Shogun government banned all female dancers, and henceforth into the twenty-first century Kabuki theatre companies were strictly male. Hirano's performance acknowledges these historical roots, and part of the process of putting her female-led Kabuki onto a stage, originally performed at Studio 1398 in Vancouver, Canada, was to record a comic dance in full-body motion capture and digitise it onto an avatar, creating a virtual performance of a dance from 400 years earlier. While not a traditional narrative familiar to European audiences but rather a tradition of shrine dances unique to Japan, there is much for John to wonder at when Nathan shows him this virtual performance.

*Dancer in Okuni: Mother of Kabuki*

Izumo no OKUNI, *miko dancer in Kyoto who created Kabuki theatre in the 1600s*

Webster's own play, one of the few where he was the sole author, was celebrated on stage and in print as well during his lifetime. It was rare enough for any play to be published while still being performed by its company, and even more unique that the cast of characters mentions several of the King's Men in their roles, such as Burbage, Condell and Tooley. This inclusion of the original actors in their roles gave me the initial impulse to attempt to virtually restage the play in retroprojection by developing a sense of what an initial staging might have looked like. The more that I read about present-day performance theory as I researched the field of drama education, the more I came across Bertolt Brecht (1964) and his groundbreaking

theories of modern staging. As an artist in Germany, Brecht had an interest in “possibilities of projection” for his shows, specifically using film clips and text projections as part of his staging (Brecht, 1964, p. 70). As an early twentieth-century innovator, Brecht best exemplifies the fusion of literacy and technology since some of his most renowned play scripts are modern translations of classical plays such as Gay’s *Beggar’s Opera*, Sophocles’ *Antigone* and Shakespeare’s *Coriolanus*. Nathan and John retroproject into a troubled production of Brecht and Hay’s (1998) adaptation of Webster’s *The Duchess of Malfi* where they find much uncertainty regarding questions of how much was Brecht responsible for writing, at what point Hoffman Hays or Wystan Auden were involved, and who was in the cast with so many actors leaving the production as it neared its Broadway debut. The list of characters below is a best guess as to who might have appeared on stage during previews at the Boston Shubert Theatre.

#### Characters in *The Duchess of Malfi*

Elisabeth BERGNER, *Austro-Hungarian émigré actress in USA, as the duchess*

Canada LEE, *American actor, cast as Bosola*

George RYLANDS, *British director, filling in for recently departed actor in the role of Ferdinand*

John CARRADINE, *British actor, known as ‘the Voice’, as the Cardinal*

Ben MORSE

Robert PIKE

Guy SPAULL

Michael BAY

Lawrence RYLE

*male actors as English, French and Spanish Ambassadors, Lawyer & Officer*

Whitfield CONNOR, *American actor, performing the role of Antonio*

Dialogue from both *Julius Caesar* and *The Duchess of Malfi* can be imagined as continuously being performed on stage by the above actors while Nathan and John converse about the plays they are watching. Similarly, the filming of *Shakespeare in Love* occurs around the retroprojecting researchers as a few lines of dialogue from each play blend into their discussion with synchronicity for John and Nathan. The dance performance of *Okuni: Mother of Kabuki* requires closer attention to the movements and gestures of the avatar since it is dialogue-free and responds to the piano music of Gershwin's *Second Rhapsody* as the dance was choreographed by Hirano in 2017.

### **Prologue – Perimeter Institute, Waterloo**

*At some point in the second half of the twenty-first century, a middle-aged man, Nathan, prepares to generate the light field inside the Mike Lazaridis Theatre of Ideas, flooding the stage and auditorium with a faint glow. The podium in front of the blackboards has a control panel on it, and holding each index finger and thumb in an 'L' position at opposite corners of the panel causes a duplicate image of the panel to float within arm's reach. This is an indication that the light field is working and will generate this floating control panel when needed. Using both of his hands, Nathan's fingers tap their commands onto the virtual panel.*

*Within a few moments, a salmon-coloured series of light particles begin to flash across the stage from Nathan. These particles coalesce into the shape of John, who is slightly shorter in stature than Nathan and outfitted in a plain black tunic and other Renaissance-era accoutrements. Despite his appearance, John feels instantly at home when fully materialised, and spotting Nathan, hails him with a touch of his cap.*

JOHN            Is it the appointed hour, Herr Plettner, for our research to begin?

NATHAN        John, it is good to see you. Please just wait a moment for the retroprojection to finish its calculations before you make any sudden movements.

JOHN            Wouldn't want to lose an arm or a leg in my artificial body, no matter that my proper body has transformed from a pile of bones to dust by now.

NATHAN        Let's just finish the calibrations; can you make a T-pose, please?

*John slowly stretches out his arms to his sides. Nathan slides his finger across the floating panel, causing a momentary stillness in the Theatre of Ideas.*



**Fig. 1 John Webster materialises in the Theatre of Ideas**

NATHAN      That should do it; your avatar is able to move around this space.

JOHN            And from this little room, infinite riches await?<sup>6</sup>

NATHAN      At least three plays that I have prepared as virtual reality theatres, and there will also be a visit to a movie studio.

JOHN            A moving studio?

NATHAN      Don't worry, I'll explain where we are once we get there. But first up we are going back to the Bankside Globe, a couple of scenes with your contemporaries, the Lord Chamberlain's Men.

JOHN            I barely worked with them back in their day; shouldn't you have programmed your qubits<sup>7</sup> to let us see how the King's Men performed some of my tragedies?

NATHAN      We'll get to see your *Duchess of Malfi* soon enough, just performed on a different stage in another country.

<sup>6</sup> John playfully alludes to the play *The Jew of Malta* by Marlowe (1986), an author he much admires.

<sup>7</sup> A subtle indication that John has a partial working knowledge of the quantum computers running the VR simulations while remaining oblivious to other futuristic phrases. This is not his first retroprojection.

JOHN           It better still be recited in English if you want a genuine reaction to whatever some foreigner has done to my work.

NATHAN       One of England's celebrated poets worked together with a legendary German playwright<sup>8</sup> to adapt your play, which was performed not too far away from where we currently are.

JOHN           Your sense of time and place is much different than what I understand about here and now. What is this room, exactly, and how do we retroproject from here to any of the stages throughout history?

NATHAN       We are currently in the Mike Lazaridis Theatre, one of the few stages in North America with enough computing power to run several VR simulations one after the other, and fortunately for my research project, the Perimeter Institute has provided me enough studio time to run the four space-time retroprojections with up to twenty participants.

JOHN           Virtual participants, you mean, of whom I have been given the leading role as an immaterial witness.

NATHAN       True, you are here to help me understand what I see and hear, make sense of the action from your professional playwright's perspective, but I hope to interact with you as an equal, peer and spect-actor.<sup>9</sup>

JOHN           Meaning we will be equally invisible and spectre-like to our conjured actors?

NATHAN       We will have the ability to go unnoticed by others during the retroprojection, and I encourage you to comment freely on what you see.

JOHN           Provided that I understand any of it.

NATHAN       We will also have the ability to stop the action at any time and replay a scene. And you too as a research participant only need to be involved as much as you want to be. At any point you choose, you may stop the retroprojection and no longer take part.

JOHN           And promptly cease to exist, as I understand, being a retroprojected image myself.

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<sup>8</sup> Wystan Auden and Bertolt Brecht's complicated collaboration on Brecht and Hays' (1998) *The Duchess of Malfi* is explained in editor Braunmuller's notes as well as by Lyon (1980). Previews of the 1946 adaptation toured in the states of Rhode Island, Massachusetts, Connecticut and New Jersey before a Broadway opening in New York.

<sup>9</sup> The latter is a Boalian term for simultaneous dramaturgy, where audience and actors share equal influence over the scene presented in a forum theatre. Much of Boal's (1995, 2006, 2011) writing is an elaboration on his contribution to drama.

NATHAN Your self is a mindclone<sup>10</sup> running on a different set of servers than the retroprojected stages, and all memories formed during our time together will be saved onto those specific servers while a record of our interaction will be available for my research purposes.

JOHN It is some relief, if I understand you correctly, that some part of me will still have a self while being whisked away in a fanciful future coach.

NATHAN Now you have me at a loss. What do you mean by coach?

JOHN A horse-drawn carriage that was innovated by my cartwright father, based upon French design, for which he earned a place in the Merchant's Guild and could send me to Middle Temple<sup>11</sup> only to become a playwright later in my career.

NATHAN As many printed text and historical accounts as my research could find have gone into the composition of your mind, making you as complete a portrait of your self as anyone could wish.

JOHN Confined to this room for the purposes of your research. Just to be sure, how complete a portrait of your self do you have?

NATHAN It is really hard to say, but my research aims to find out how much literature makes us who we are: in your case, a prime example of a Gutenberg-typographic man, and in my case, the influence of digital technology informs my sense of self-consciousness.

JOHN You have the reigns and are on the driver's box. Where are you taking my avatar first?

NATHAN We are going to the Globe Theatre in London ...

JOHN Bring me back to where I came from; good choice.

NATHAN To see an original production of *Julius Caesar*.

JOHN Always Shakespeare you are seeking, are you not? Might I ask why you didn't just conjure up him instead of me?

NATHAN Which Shakespeare, though? There are so many iterations of him, even after the Internet shut down, that any one of them would contradict what another version of

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<sup>10</sup> The theorised cyberconsciousness called 'mindclone' in Rothblatt (2014) is predicted to become a reality at some point in the 2040s and is similar to the artificial intelligence operating system named Samantha in Jonze's (2013) *Her* and the holographic character Joi in Villeneuve's (2017) film *Blade Runner 2049*.

<sup>11</sup> Much of the existing biographical details of Webster's life can be found in the first chapter of Coleman (2010).

him would say. Your mind, on the other hand, has a perspective unique within all retroprojections...

JOHN Thus making me the type of simpleton fit to be a shadow walking within his literary output!

NATHAN I only meant that there are not many conflicting reports about you throughout the centuries. Shakespeare was raised to the status of a living god by some authors, then brought down and had his reputation tarnished as a fraud and plagiarist. There are even some accounts of lost plays, poems and letters being attributed to him only to later be proven counterfeit.<sup>12</sup>

JOHN And yet there is just enough of his genius for your retroprojections to put him on stage as an actor.

*Nathan consults the virtual panel that appeared before him, making preparations for this first simulation.*

NATHAN You are certain that the elusive playwright Shakespeare had a role in his version of *Julius Caesar*?

JOHN As best as this borrowed brain can recall. I saw him several times on stage, always in minor roles that rarely went past the second act.<sup>13</sup>

NATHAN Sounds too good to be true. Let's see what the retroprojection does with your information.

JOHN If the wheels hold true and your steeds do not tire out, we'll see something indeed.

*The room fades out of view as the bodies of Nathan and John glow brighter, particles of light for a brief moment separate and recombine as a holograph of the Globe Theatre surround them.*

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<sup>12</sup> Shapiro (2010) and Edmondson and Wells (Eds.) (2013) recount the many ways scholars and patrons of the arts have been led to believe someone other than Shakespeare wrote the plays attributed to him, with a complex history of forgeries. This calls into question the legitimacy of the recently discovered lost letters (Tamminen, 2017).

<sup>13</sup> The most famous role Shakespeare is believed to have performed is Adam in his comedy *As You Like It*, who disappears from the rest of the play after Act II, Scene vi. Foster (1995) presents a list of probable roles performed by the playwright, assigns roles for Shakespeare based upon "recall of particular character-specific lexicon" and has him playing as Flavius and Decius in *Julius Caesar*.

## CHAPTER 1 – GLOBE THEATRE, LONDON

### Dialogue from *Julius Caesar* Act I Scenes ii and iii

*Enter NATHAN and JOHN, below, with BURBAGE and HEMINGES upon the stage, above*

NATHAN As I shouldn't need to remind you, this retroprojection is a little more complex than a horse and cart ...

JOHN And if you had more of an ear for poetics, you'd have known that I am employing a figurative example: a simile, to be precise. You would do well to heed more of what us playwrights, as well as our audiences, have to say. Isn't that the whole reason behind my participation in your research, to find out how actors and audiences interact in some virtually real simulation?

NATHAN My apologies; I am wholeheartedly all ears.

HEMINGES "Therefore, good Brutus, be prepar'd to hear;  
And since you know you cannot see yourself  
So well as by reflection ..." <sup>14</sup>

JOHN A worthy rebuke from our friend Cassius there. And I feel it is worth pursuing this simile a bit further now that we have embarked upon this reckless ride into the future, near and distant, so that you understand what I now know about retroprojection virtual reality.

NATHAN Proceed.

JOHN From what I can tell, all this digital technology you seem to be so proud over is really no fancier than the goodly coaches my family designs and sells. <sup>15</sup> You have constructed a room that takes a small company of travellers from one place unto another, and as impressive as it sounds to have entangled atomies and quantum computing engines at your disposal, these are no different than wheels to move the cart and a good number of steeds to pull you forward.

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<sup>14</sup> Quoted dialogue in this chapter comes from Shakespeare (1968) *Julius Caesar*, the edition used for Crystal and Crystal (2008) website. Speeches for each of the play's characters follow the iambic pentameter and in some cases are indented to match the 1968 edition, such as Sly's dialogue on page 45 and Burbage's on page 48 below.

<sup>15</sup> A relatively unknown biography for John Webster shows evidence that his family belonged to the Merchants' Guild and would have prospered in the relatively emergent and novel formal coach industry. See Coleman's (2010) Chapter 1.

NATHAN Yes, if we ignore almost everything I know about computing, anything can be related to a wheel<sup>16</sup> and axle, I guess.

JOHN Poets since the time of Homer have made the horse a symbol of power and imagination. Even Jack Holland, before Burbage's time, played Titus Andronicus and made use of connotation thus: "I have horse will follow where the game / makes way, and runs like swallows o'er the plain."<sup>17</sup> A subtle indication of the purpose he conceals to play out his revenge through madness.

NATHAN I can't say I recall the scene.

JOHN One of my favourites from the Chamberlain's repertoire,<sup>18</sup> and still popular amongst these groundlings today.

*Flourish and shouts.*

BURBAGE "What means this shouting? I do fear the people  
Choose Caesar for their king."

NATHAN Well, I was hoping you could tell me more about the history of the plays themselves since we still only have incomplete records of what was popular from one year to the next. I am especially keen to find out more about one of yours called *Caesar's Fall*.<sup>19</sup>

JOHN What news have you of my first collaborations? Thom Dekker had only just told me about their work a fortnight before he suggested I watch how the Chamberlain's butchered the story.

NATHAN Was your play much like this Shakespearean *Caesar*, then?

JOHN Well, yes, but I do not appreciate the tone in your voice, suggesting that I was aping my work off of this impressive yet limited vision of the late republic.

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<sup>16</sup> Reese (2018) claims that the third age of human innovation began with the concurrent invention of the wheel and written words, since both "increased commerce, aided the flow of information, and promoted travel" (p. 23) for human societies approximately 10,000 years ago.

<sup>17</sup> Shakespeare (2001, p. 95) cited by Crystal and Crystal (2008).

<sup>18</sup> The original text for this play may have belonged to another company and may have been written by a playwright other than Shakespeare (Norman and Stoppard's (1998) script suggests that both *Titus* and the *Henry VI* cycle were originated by Christopher Marlowe). Nevertheless, once the play was acquired by the Lord Chamberlain's repertoire, it belonged to the company and became the exclusive intellectual property of its resident playwright, Shakespeare (Marino, 2011).

<sup>19</sup> Webster's lost play is only known from a line in Henslowe's (1904) diary. The collaboration was between fellow playwrights Drayton, Middleton, Munday and Webster (with an unknown number of others called "the Rest"). Feldmann and von Rosador (2007) speculate about the play's content in their article.

NATHAN      Once again you are quick to take offence where none was intended. I understand that it was common practice to base a play off of other popular productions.

JOHN          And none other than William himself made use of the greatest tragedians and comedians London and Italy had to offer. It was not until I saw his Cleopatra at the Blackfriars speaking the lines of Sam Daniel,<sup>20</sup> the same ones I had in mind to use when crafting the same character for my part of *Caesar's Fall*. I did Daniel the service of a faithful adaptation, however, for a part that has no equal for the Chamberlain's play here.

*Shout. Flourish.*

NATHAN      As much as I relish in all the intrigue over who wrote what and such, from my distant academic point of view, what you and your playwrights are doing seems to be a regression.

JOHN          As opposed to the progress your electronic web represents, you mean?

NATHAN      It still represents progress, even after the global shutdown, because I, among other scholars, am in the process of recovering data mainly by interacting with the likes of you.

JOHN          And yet you accuse me, in addition to your beloved Shakespeare, of setting literature back!

NATHAN      Okay, it is more of a recursion to a more primitive form of storytelling, impressive as the literary heights you and your contemporaries achieved.

JOHN          Please explain without puffing up the minor role you think we all play.

NATHAN      How were stories told before you set quill to parchment?

JOHN          You mean pen and ink. Let's see, there were the Church pageants and moralities plays, travelling minstrels, heralds and criers ...

NATHAN      All of who recited the written word, but before them?

JOHN          The Greeks, like Socrates, who ran his Academy through dialogue with his followers.

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<sup>20</sup> The first mention of Daniel's tragedy came in 1594, and certain scholars (Kermode, 2000, p. 131) discuss the possible influence Daniel may have had on either Shakespeare's tragedy or Webster's lost collaboration. Hughes-Hallett (1997) points out that Daniel's tragedy was one of many written "sixty years before" Shakespeare's tragedy *Antony and Cleopatra* (p. 149).

NATHAN      Getting warmer. Think about the theatre back then; it was mostly tragedies performed with a large chorus: the voices of the polis, Thespis stepping out as the first protagonist<sup>21</sup> and all that. What about before them?

JOHN          Epic poets like Homer and Hesiod?

NATHAN      Hardly any of them held a pen in their hands. They were the original bards singing for their supper, as it were.

JOHN          And that is how you see us playwrights? Blind and beggarly?

NATHAN      No need to take further offence; what I have seen of your work is miles away from what was happening in the *Odyssey*. And most of what you and your collaborators wrote was performed on stage over the centuries, often outliving the original manuscript catching fires or lining baking pans.<sup>22</sup>

JOHN          If we were lucky enough. So how many literary scraps survived that Hackstop<sup>23</sup> crisis, as you claim?

NATHAN      Enough for me to find you and hopefully discover some more. But what I call regression is that since the Gutenberg printing press, most knowledge and creativity is stored in print, yet your plays were written for the stage.

JOHN          Hey, even big names like Marlowe and Kyd paid dearly to get most of their plays sold as books shortly after they were on stage. More than Shakespeare cared to, outside of the few cheap quartos his Men left behind.

NATHAN      His friends Condell and Heminges made up for this lack later on,<sup>24</sup> but it is the staging of plays that I see as the regression, or rather recursion ...

JOHN          Into primitive forms of storytelling, you mean? I still have yet to be convinced.

NATHAN      Okay, go back to the bards, what did they do?

JOHN          Told stories with the repeated epithets over and over again: “rosy-eyed dawn”, “fleet-footed Achilles”, “the man of twists and turns” ...

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<sup>21</sup> Boal (2006) impressively recounts the “undisciplined actor’s off-the-cuff one-liner” delivered to the tyrant Solon, thus carving a new path for theatre artists (p. 65).

<sup>22</sup> Hamilton (1994) suggests that this latter use of play scripts might have been the fate of some of Shakespeare’s lost plays (pp. 111–112).

<sup>23</sup> Rumoured to be a likely cause of a global Internet blackout prompted by a preemptive attack against so-call election hackers and initiated by the former United States’ President Zuckerberg in his attempt to overturn a Federal Communication Commission regulation.

<sup>24</sup> Collins (2009) and Bryson (2007) narrate how the First Folio came into existence after Shakespeare died.

- NATHAN Using simple mnemonic devices, one bard could improvise his way through the metrical structure while staying within the rhythmic pattern and pass the story on to another. When the printed word came along, holdouts like Socrates could complain about discussion and debate losing their essential spirit, but the trade-off was a more efficient way to pass stories from one generation to the next.<sup>25</sup>
- JOHN True. By the time of the Romans, poetry flourished, and a more gruesome form of theatre seemed to mimic the gladiatorial matches of the Colosseum.
- NATHAN As is often the case when one type of media or entertainment succeeds another, the original takes on new elements, such as a lengthy speech by a tragedy's Messenger being replaced by a pig's bladder full of blood being spilled across the stage.
- JOHN An improvement in stagecraft, I would argue, that turns the audience of such oratory into spectators of bodily harm.
- NATHAN Some would argue that it robs your audience of the imaginative abilities to conjure up the images on their own, yet spectacle is fundamental to my research into virtual reality.
- JOHN These retroprojections you speak of – are they nothing more than just pure spectacle, ghostly images these computers set before our eyes?
- NATHAN The progression comes from the advent of the digital, from the actor's voice and body to the work of hands as in your playwright's manuscript, and finally down to the fingers pressing keyboards, clicking buttons, tapping and swiping screens. Similarly, the range of spoken language reduced to twenty-something letters (depending on what language is being transcribed) and into a computation of numbers, and with digital devices, all that human knowledge is represented in only ones and zeros.
- JOHN So the retro- part of your projection has a whole cast of players springing up from the singular atomies. Next you'll tell me about the innovative ways of telling stories through Democritus' empty void.
- NATHAN Not even that. The quantum computers took us into the infinite array of superpositions between the one and the zero, deep inside the silicon chips hiding behind our screens.
- JOHN Sounds silly enough to be true of your future.

---

<sup>25</sup> Ryan (2001), with echoes of McLuhan (1962), Bolter and Grusin (2000) and Hutcheon and O'Flynn (2012).

NATHAN But the actors on the stage have pretty much continued in the same form as when Oedipus first gouged out his eyes, an off-stage event nevertheless but still embodied by the actor.

JOHN Not true. What I have seen and written for the stage goes deeper than celebrating some drunken pagan god. Our actors delve into the mind, exploring the Christian conscience with words and gestures.

NATHAN And gallons of blood lent out from the butcher's shop. Yes, I'll give you that much: you got inside the heads of your characters and brought the audience along for the ride.

JOHN And yet, unlike my simile of the carriage, not far enough, you are about to say, aren't you?

NATHAN Not really. Apart from the more sophisticated smoke and mirrors retroprojections can make, plays in my era are similar enough to yours. Audiences still want to see action on a stage on the human scale. Except, of course, at the height of the Internet, when projecting a virtual reality in the form of interactive light fields was possible. With the right equipment, a network of computers provides powerful machines learning from one version of a play and shares it with countless others in the network, there truly were infinite riches in a small room, as Shakespeare would say.

JOHN Marlowe, you mean. What use are words, then, when everything in your mind's eye appears before you?

NATHAN Admittedly yes, the virtual stage never really got a chance to reach the poetic heights of earlier times; sadly, there never came a cyberbard as Janet Murray<sup>26</sup> predicted in *Hamlet on the Holodeck*. Even with the proverbial one hand tied behind our back, after the Internet shut down, retroprojection still has the ability to bring you, and these players, from every multipositional view to new audiences through postsymbolic communication.<sup>27</sup>

HEMINGES "That my weak words ..."

*Enter Phillips, Shakespeare and other in procession, followed by Cowley.*

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<sup>26</sup> Murray (1997) closes out her speculative assessment of the direction stories will go with the help of digital tools by suggesting a cyberbard with the same insights as Shakespeare will create something that achieves the same literary heights as *Hamlet*, though not necessarily a direct adaptation of the revenge tragedy.

<sup>27</sup> An argument in the appendix of Lanier (2017) suggests that such communication "will open our perception wider than words" by using the example of preliterate ancient times when the colour blue did not exist "until there was a word for it" (p. 294).

JOHN           And it is your intellectual pursuit to re-establish a link to my ‘primitive’ state of playwriting? Is your inquiry into how we tried to pry into the minds of characters and audience alike with our words?

BURBAGE      “The games are done and Caesar is returning.”

NATHAN       If you could only prove that this feat was your intent, it would be pure gold.

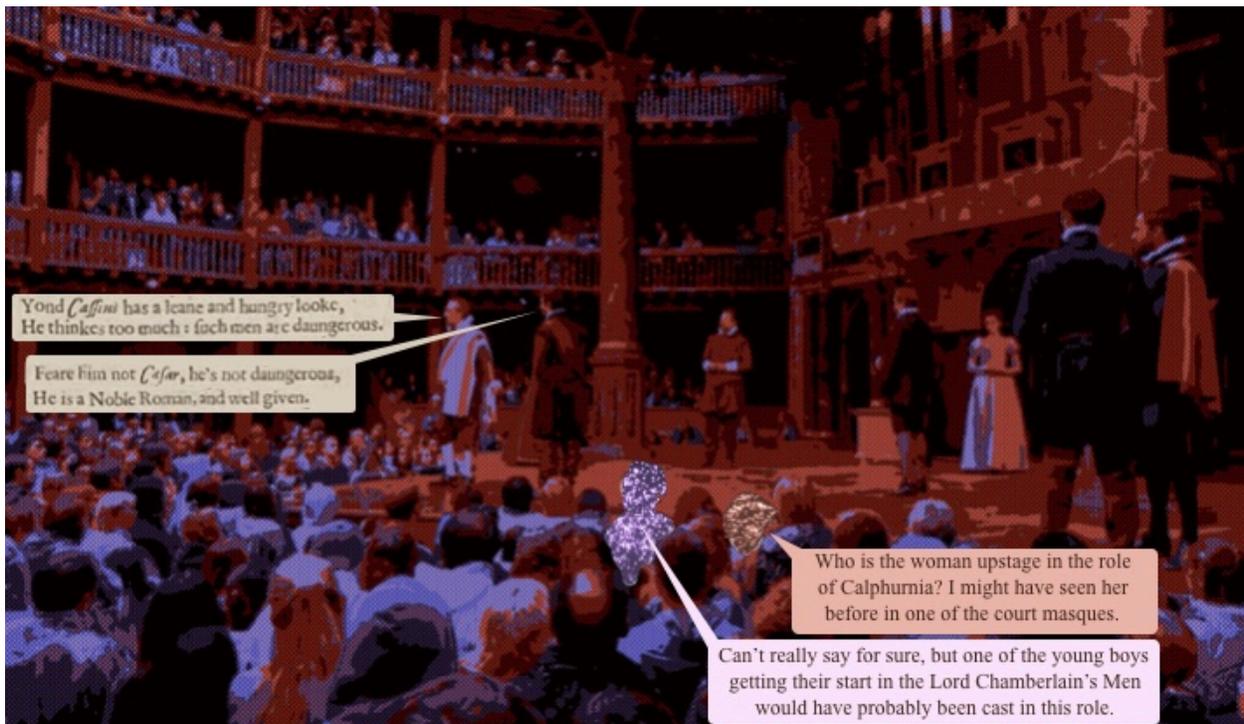
JOHN           Meaning if we could see into someone’s mind to observe the change in attitude, one could measure the change in virtue and worth.

PHILLIPS      “Antonio.”

CONDELL      “Caesar.”

NATHAN       Biometric feedback allowed doctors in my time to make a model of someone’s brain and attempt to determine what goes on in a person’s mind based upon predictions about a collection of flashing synapses.

JOHN           Of course your future has such another machine – no doubt one that stopped working when the Internet fell silent.



**Fig. 2 Caesar (George Irving) enters with Antony (Luke Thompson) in Dromgoole and MacGibbon (2014)**

JOHN           It might be Alice or Joane, I forget which of the Burbage sisters had a majority stake in the family business, many lifetimes ago.

NATHAN      The actors on stage are more of an approximation of the Lord Chamberlain's Men, based upon a constructed memory from a simulation of your mind. We are teetering very close to one of Baudrillard's simulacra<sup>28</sup> that it will soon be hard to tell one version of the past from another.

JOHN          You conjured me out of my place in history to pry into my mind, didn't you? Can you not determine whether my memory has wrought a faithful vision of the past?

NATHAN      I can only know as much as you are willing to tell me. The retroprojection sets the stage, your mind peoples it with what I hope are accurate portrayals of your fellow countrymen.

JOHN          Let's hope for both of our sakes your quantum machines have made a worthy copy of my mind!

NATHAN      We still have accurate maps of the brain and its functions, yes, but no knowledge as far as I was aware to measure a person's worth or virtue. Consciousness remains as much a mystery as it was for the first natural philosopher that thought about thinking up until the recent collapse of civilisation following the Hackstop.

JOHN          And yet we are able to measure the mettle of a character's conscience<sup>29</sup> on our humble stage.

NATHAN      And what do your findings show?

JOHN          Everyone has the potential to be transformed from dull lead to the philosopher's gold, yet it is necessary to work out the impurities first. Aristotle calls this peripeteia, or the turning points that lead to disaster.

NATHAN      Has it ever happened, though? Has this alchemy stunt ever worked outside of being a metaphor for transformation on stage used by playwrights both good and bad?<sup>30</sup>

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<sup>28</sup> A foundational philosophical distinction by Baudrillard (1994) examines the nature of reality and cultural representations of it in various media. A simulacrum exists as a symbol without a counterpart in reality, something imaginary, yet the "simulation envelops the whole edifice itself as a simulacrum" (p. 6) revealing something accepted as real, like history performed on a stage.

<sup>29</sup> Strohm (2011) points out that 'conscious' and 'conscience' were used interchangeably in most European countries up until the seventeenth century: "The West has no monopoly on ethical self-scrutiny or principled inner rejection of ethically repugnant behaviour. ... Buddhist and Hindu equivalents come closer to what modern English calls 'consciousness' than to 'conscience'" (p. 3).

<sup>30</sup> Healy (2011) suggests that Shakespeare would have had a working knowledge of alchemy, which is woven into his poems and plays. My research into Webster's attitude towards these mystical arts remains ambiguous given the unflattering impression from his play *The White Devil* yet prompts my travesty-generated experiment in Chapter 4.

- JOHN            It only works as a metaphor for the search for hidden truth about one's self accomplished most by following arcane formulae and observing the minor external changes.
- NATHAN        So your work as a playwright is simply to give voice to the troubles of your times, presenting them on stage as foreign 'others' so as to not put your own neck on the chopping block, or more likely to prevent you getting locked up in the Tower.
- JOHN            You make it sound like I am the criminal when everyone knows artists are allowed some creative license.
- NATHAN        Not in the least; I actually applaud your attempt to give answer to one of the toughest questions researchers have regarding whose voice gets included in a play, transcribed into a book, or what have you.
- JOHN            The toughest question being?
- NATHAN        "How in a fictional work do you create authentic characters that resonate and have truth to them?"<sup>31</sup>
- JOHN            And are any of these questions you are prepared to answer by carting me through one retroprojecting experience after another?
- NATHAN        I've got an entirely different set of research questions that I am working on, mainly how does VR shape our understanding of theatre and approaches to drama education? It is important to realise here that going to see a play became an important part of a young person's schooling, and when it was not possible to see a play in a theatre such as this one, a virtual theatre was set up in the classroom by the teacher providing students with scripts.
- JOHN            Many teachers in the London of my youth, especially many of the professors at Middle Temple, see play-going as a distraction from our studies. The deans often found me truant from the law books and had to drag me back from the theatres.
- NATHAN        A similar story could be argued about VR in my childhood, which was too often confused with gaming and treated as a distraction.<sup>32</sup> And yet the teachers who

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<sup>31</sup> Quote from Sinclair and Harris (2017, p. 71) who continue to explore their research-based theatre project as follows: "The nature of our playwriting collaboration shifted as Kurt and Barb [characters in *Critical Plays*] took shape. From talking about them as abstract representations of encounters and experiences in academic life, we turned our focus to talking through them as characters endowed with purpose but also their own 'virtual' experiences played out through the scenes in the play and events reported but not seen" (p. 71).

<sup>32</sup> Swingle's (2016) psychological research is a prime example of the neurological and societal risks of gaming, the Internet and digital devices. She cites over a hundred books and articles from leading medical and sociological authorities. Gallagher and Freeman (2011) explore the use of digital technology internationally for ethnographic research within a drama education context.

created that virtual stage in their classroom were really trying to capture all of this around us for the students to study.

COWLEY “But those that understood him smiled at one another, and shook their heads; but for mine own part, it was Greek to me ...”

JOHN Perhaps it is all the digital wizardry that makes it harder to follow what is happening on stage. Anyone who had a decent set of ears on either side of one’s head could attend to the subtle character shifts and plot twists.

NATHAN True. We had an issue before the Internet went dark where people could not keep track of information that used to be common knowledge, like facial recognition or orientation on a map, without the web interface showing up at pertinent moments. Cognitive offloading, I believe it was called.

JOHN Switching off one’s conscience, you seem to be saying. No wonder your age is so troubled when a disruption occurs.

BURBAGE “Come home to me, and I will wait for you.”

HEMINGES “I will do so: till then, think of the world.”

*Exit Burbage*

NATHAN Don’t be so quick to accuse; you have the same issues here yourself in your times. Clocks and calendars to keep track of the hours and days, written decrees and spoken sermons to keep everyone up to date. Even backstage, every player had scripts and plots<sup>33</sup> to know when to come on and speak his parts. It just happens that much of your cognitive offloading was analogue rather than digital, not that one was better or worse than the other.

JOHN So why doesn’t your mirror magically make the text of *Caesar’s Fall I* supposedly have locked away in my mind suddenly appear in your hands?

NATHAN All that we have to go with is what communicates between this interface and the retroprojection servers. I would gladly just upload the complete playtext if only we could recover the file (*points at John’s head*) locked in here.

JOHN Yet I am just as much a part of these grand simulacra, as you call it, as that interface. And what does this floating rectangle actually do?

NATHAN It is a virtual panel that allows us to move around the virtual stage so that we can stop and replay at any point. Think of it as the coachman’s handle brake and driving whip.

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<sup>33</sup> Tribble (2011) provides a wealth of information on the practice of actors using plots to manage their entrances and exits. Usually a sheet of paper posted backstage, they worked together with cue sheets to avoid confusion and keep the play running smoothly.

JOHN           It is set out like a page from any old book, is it not? Perhaps not all the traditions from the times of Gutenberg died out when things went digital.

HEMINGES    “Caesar’s ambition shall be glanced at,  
And after this, let Caesar seat him sure,  
For we will shake him, or worse days endure.”

*Exit HEMINGES*

*Thunder and lightning*

NATHAN      Ah!

JOHN           Be not frightened – merely a stage trick to mark the next scene, and to wake the drowsy groundlings – perhaps to awake you from your virtual stupor.

*Enter from opposite sides COWLEY with his sword drawn and SHAKESPEARE*

JOHN           Always the playwright, even in the few scenes he performs, doling out character traits in his dialogue.

NATHAN      I’ve heard about his playing, but it is hard to imagine him in the flesh, on the stage.<sup>34</sup>

JOHN           Nay, it is the projection that you have brought across space and time, as if he were a passenger riding in carriage. Your power of imagination makes it only seem so.

NATHAN      Just wait until you see what these connected devices (*points to JOHN’s head and the panel simultaneously*) can do for my retroprojected simulation of your *Duchess of Malfi*.

JOHN           The one taken to some foreign land by an English poet and German playwright?

NATHAN      We’ll cross that retroprojected bridge when we get to it. It is best to keep our minds focused on the present play before getting too far ahead of ourselves.

JOHN           I feel that I am already too far-gone for any getting ahead of myself to matter. But one thing troubles my mind, or whatever passes for my mind in this simulation: you basically have complete control of what I do and say with your floating panel in front of you, do you not?

NATHAN      There is a limited amount of functions this allows me, yes, which directly affects your person in each of the retroprojections.

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<sup>34</sup> Tradition and educated guesses, as Foster (1995) points out, are all scholars currently have to work with in cases where Shakespeare’s roles are speculated.

JOHN            So with a tap of your finger you could have me speak German or Spanish, even erase me from this virtual space, could you not?

NATHAN        There are safeguard measures in place to prevent anything so drastic, and it wouldn't look good for my Board of Research Ethics review if I tampered too much with the way you choose to participate. But indeed, yes, there are a few control functions that I have that, in theory, may influence the way you respond. But you may rest assured that it would do me no good unless you retain the autonomy of your mind. I wouldn't get far in understanding consciousness if I denied you this part of your self.

JOHN            And the only benefit is that you are able to take me to places and plays I would not have been able to see in my natural lifetime in order to answer questions that only I have the ability to answer, all going towards some greater good of a future civilisation obsessed, it seems, with information.

NATHAN        “And take upon's” our fellow player in the role of Cicero up there once wrote “the mystery of things / As if we were God's spies”,<sup>35</sup> so the people from my corner of space-time will know just that much more about our collective past once we get our Internet back to its full capacity.

JOHN            Tell me more about the catastrophe that changed your internetted world.

NATHAN        There is not much known after the Hackstop but the occasional story from people close to us of the hardship we all had to go through.

JOHN            All of you, the whole world, affected by something with such a ridiculous name?

NATHAN        There were other names for it before everything went dark: pre-emptive data protection, anti-encryption hacking safety measures, the battle over net neutrality; none of them were able to do what governments and the old tech monopolies claimed would happen.

JOHN            All of it sounds like the absurd excuses my parliament would give for building more of an armada to fight off the Catholic hordes.

NATHAN        I was still a child when we were hardest hit and only had my parents, family friends, and other survivors who could tell me what happened. Big business was threatened by the same hackers, they say, who had already infiltrated democratic elections, setting up powerful puppets who some claim were laying the groundwork for some sort of privacy-annihilating software. Quantum computers were running faster than humans could keep up with, breaking encrypted codes before we could change them. It was like we were asking for the trouble that followed.

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<sup>35</sup> Shakespeare (1996) Act V, Scene iii.

JOHN            Were you literally asking for it?

NATHAN        While quantum computing gave with one hand, it crushed any form of resistance with the heel of the other palm. Hackers had always been part of the early adaptors to the new economy of information, and the only way to stop them was to shut down the Internet.

JOHN            And did this stop them?

NATHAN        Who knows? A lot of other problems arose when the Internet went blank and prevented the global storehouse of information from being freely accessed by the majority of people. Pretty much every scrap of recorded history was wiped out aside from whatever data was stored on a server at the time of Hackstop. The poetic justice, they say, came with rumours that the hackers who were the initial instigators of these attacks lost every part of the fortune they supposedly were amassing: the bitcoins that suddenly vanished with the rest of our digital history.

JOHN            It sounds like I would lose my mind having to exist in your electronic age.

NATHAN        Fortunately, the quantum computers have enough stored data among their memory banks to keep a simulation like this (*gestures around the virtual Globe*), and you for that matter, operating without the Internet.

JOHN            And you are absolutely certain that whatever this *me* is (*he holds his arms out in front of him; as he crosses them, one forearm passes through the other in a minor glitch*) is at least real enough to be the mind of John Webster?

NATHAN        Nobody can say for certain what's inside your head, or mine, but I made sure the qubit coding would be close enough to a signature consciousness that we could get this far into my research. The computers running this retroprojection are close to the dream of artificial intelligence:<sup>36</sup> a really complex box of wires that can think and act like the actual human your mind is based upon, yet there is no way to know what you're thinking unless I ask you questions based upon a context you are familiar with – in your case, the theatre.

### **Interlude: Quantum Computing and Consciousness**

As mentioned in the introduction, Gribbin (2013) states that any type of computer program is a virtual machine, rendering all digital devices from the simplest calculators and clocks to the most

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<sup>36</sup> Reese (2018) distinguishes between the narrow artificial intelligence (AI) and artificial general intelligence (AGI), where the former runs automated programs limited to primary functions such as responding to environmental stimulus. The latter, a computer that responds to stimulus outside programmed instructions, is closer to retroprojection avatars. According to Reese, this type of intelligence “does not currently exist, nor is there agreement about how to build it—or even if it is possible” (p. 61).

advanced central processing unit capable of performing the related tasks of storing information and performing operations with that data. The programming language for all of the classical computers is binary, a series of ‘on’ and ‘off’ commands that make use of the stored information in the computer’s memory and perform an operation. Quantum computing breaks away from this model with an advanced architecture of logic gates that allow users access to nearly infinite superposition states between the binary of zero and one (Hu & Fan, 2012), revolutionising the speed at which operations are performed and granting greater access to information in the computer’s memory (Gribbin, 2013).

While many of the classical computer functions can be performed by a human being using the most basic tools, such as pencil and paper or chalk on a blackboard, the human brain has the ability to outperform such computers, according to Rosenblum and Kuttner (2011), “by working on many paths [i.e., operations] simultaneously” (p. 253) when it comes to complex problems such as the shortest distance between cities, known as the *travelling salesman problem*.<sup>37</sup> Quantum computer architecture ensures that even the most complex problems may be solved almost instantly, such as factoring sets of large numbers into prime factors. However, in exchange for greater computer power, these quantum operations involve more uncertainty in some cases where an operation goes beyond human comprehension.

Knowledge of what an operational quantum computer will be able to achieve for fields such as science and medicine, finance and governance, etc. has been taken to the marketplace with great optimism. From developing high-tech companies such as D-Wave Systems in Burnaby to Microsoft’s Station Q in Santa Barbara plus advancements in research at multiple global academic centres such as Sydney, Tokyo, Hefei, Basel, Bristol and beyond, webpages and

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<sup>37</sup> Lidar (2013) argues that the logic gates are not designed to autonomously figure out problems that are nearly unsolvable, but instead champions the decoherence-free subspace that allows for more processing power of the qubits.

journal articles proclaim new possibilities to advance humanity's natural and artificial intelligences. The humanities, however, tend to get overlooked in the race for quantum supremacy, yet it is the authors, artists and others who align with an avant-garde understanding of computation. There is much potential for creativity that quantum computers will afford artists, just as the history of quantum theory influenced artists such as Pablo Picasso<sup>38</sup>, Virginia Woolf and James Joyce, the latter pair of authors being prototypical examples for my *Quantumeracy Reading List* (Stooshnov, 2018a). It may or may not be mere synchronicity that cubism, *To the Lighthouse* and *Finnegans Wake* are products of the same decade that brought Pauli's exclusion principle, Heisenberg's matrix formulations and Dirac's quantum mechanics to the lecture hall chalkboard. Each of these physicists' theories seems to come full circle by laying the groundwork for computing in general and eventually inspiring the advent of quantum computers within a century of these foundational theories first being proposed.

The architecture for quantum computing was prompted by Feynman's (1982) insistence on how to simulate non-classical nature with the requisite quantum computers. Science journalists enthusiastically wrote about the coming change that quantum computers will bring, such as Gribbin (2013) noting how they "actually provide *better* representation of reality" compared to human perceptions (pp. 179–180, italics in original) and Falk (2008) stating that "we bear witness to quantum theory's reach" (p. 178). Physicist Turok<sup>39</sup> (2012) sees the development of quantum computers as opening "entirely new avenues for us to experience and

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<sup>38</sup> Overlie, in her interview with Bogart (2012) describes the impact of Stanislavski and Moscow Arts Theatre on American theatre, "it was certainly affected by quantum physics, Picasso's Cubist theories, Freud's theories of the time [1922/23] but it was manifested on the stage" (p. 472). Miller (2010) also makes a similar statement about Kandinsky, Stravinsky and Schönberg. Arts-based researchers Gergen and Gergen (2018) indicate Picasso's *Guernica* as accurately representing the nature of the world "by virtue of social agreement" (p. 56). A similar arts-based statement has the artist himself claiming every painting he made as "all research" (Kamen, 2018, p. 546).

<sup>39</sup> Turok is also the long-standing director of the Perimeter Institute where Nathan and John's narrative takes place.

understand the universe” (p. 69). The stage is set, it seems, to have a more accurate simulation of quantum mechanical reality, leading to thoughts on VR from the godfather of the new medium, Lanier (2017), and the inventions that comprise a McLuhan ramp of technological development going beyond achieving practical tasks, but also fostering “new dimensions of personhood – potentially even empathy” (pp. 298–9) along the same lines as the Joycean ‘aesthetic arrest’<sup>40</sup> one experiences with moving works of art or powerful storytelling. Ryan (2006) takes a social science view of virtual narratives made possible by the advancement of computer technologies since they eventually “become sufficiently sophisticated to implement the Holodeck” (p. 116) or fully immersive and interactive environment as mentioned in Murray’s (1997) classic text (as well as in the *Star Trek: The Next Generation* television series). Turok (2012) returns to his point about the “door-openers to the future” that might allow us to “be the means for the universe to gain a consciousness of itself” (p. 201).

Once consciousness enters the picture, however, it is up for debate whether the present-day designs for quantum computers match or even come close to the theorised function of a human brain. Reese (2018) repeatedly states that it is too soon to tell if artificial general intelligence will become a reality in the next five or five hundred years, if it is likely to happen at all. Proponents for artificial intelligence within a few decades such as Kurzweil (2012) and Rothblatt (2014) are eager to see beyond the technological singularity to a point where computers act like human brains. Researchers at the University of Waterloo (Litt, Eliasmith, Kroon, Weinstein & Thagard, 2006), on the other hand, demonstrate that the emerging technology will not be able to achieve this transhumanist vision of quantum cognition, presenting

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<sup>40</sup> The term, first mentioned as ‘esthetic arrest’ in Campbell (2003), is an integral part of Weigler’s (2011) PhD dissertation. Weigler also cites the term through Kuffinec (2003) who traces her theatrical understanding of aesthetic arrest by way of Anne Bogart and describes the experience as “moments in a performance when one is stopped in one’s tracks” (p. 17).

computational, biological and psychological arguments in favour of a neurocomputational or classical computer modelled after the human brain. Further afield is another transhumanist argument put forth by Bostrom (2003) that advanced civilisations have already designed a brain-like computer and our current human population exists inside its simulation. Talbot (2011) and Smolin (2001) leave out mention of quantum computers in their discussion on Pribram's (1980) and Bohm's (1980) holographic principle, where the entire universe is a projection of someone's mind and vice versa. Such *brain-in-a-box* puzzles are as difficult to accept as they are to disprove, and they recall Rorty's (2108) example of "the Galactic hypnotists ... [manipulating] scientists since the time of Galileo" that nevertheless would not prevent human knowledge of the world as it is (p. 286). Similarly, to bring in the perspective of virtual reality design, both Lanier's (2017) "spacetime topological quantum computers" (p. 267) and Rubin's (2018) "LifeLenz" (p. 236) look ahead into possible futures where virtual and mixed realities are part of everyday human existence, aided by advanced and mostly harmless computing activity.<sup>41</sup>

To return to Feynman's (1982) proposal for quantum computers, he speaks of the benefit for humans creating and learning from computer simulations – "we never understood how lousy our understanding of languages was, the theory of grammar and all that stuff, until we tried to make a computer which would be able to understand language" (p. 486) – and similar breakthrough points in the field of psychology. While no definitive claim has yet been made that quantum computers will or will not be able to replicate the consciousness of the human mind, it is still significant to look back to the quantum mechanics that have already made advances in quantum computing possible. Receptive avant-garde artists and authors were quick to make

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<sup>41</sup> Lanier (2017) finishes his thought by adding that "the little knots in time and space" would hypothetically "change the curvature of the universe" (p. 267). But as Douglas Adams posthumously points out in his screenplay, "those who study the complex interplay of cause and effect in the history of the universe say that this sort of thing is going on all the time" (Jennings, 2005).

sense of the potential of the complex theories of subatomic particles since they were being figured out with chalk and chalkboards by leading scientists like Pauli, Heisenberg and Dirac. Of these three, Heisenberg (2007) is the most generally familiar name in quantum physics and writes about “such fundamental concepts as reality, space and time” that run into confrontation with older ways of thinking, leading to “entirely new developments which cannot yet be foreseen” (p. 2). Heisenberg’s mentor, the physicist Pauli, had some insight into the unknown, which is explored later in this paper based upon his interactions with the psychiatrist Jung (Miller, 2010; Dunne, 2015). Inspired by his former patient and colleague, Jung (1990) writes about his field thus:

To inquire into the *substance* of what has been observed is possible in natural science only where there is an Archimedean point outside. For the psyche, no such outside standpoint exists—only the psyche can observe the psyche. Consequently, knowledge of the psychic substance is impossible for us, at least with the means at present available. This does not rule out the possibility that the atomic physics of the future may supply us with the said Archimedean point.  
p. 207

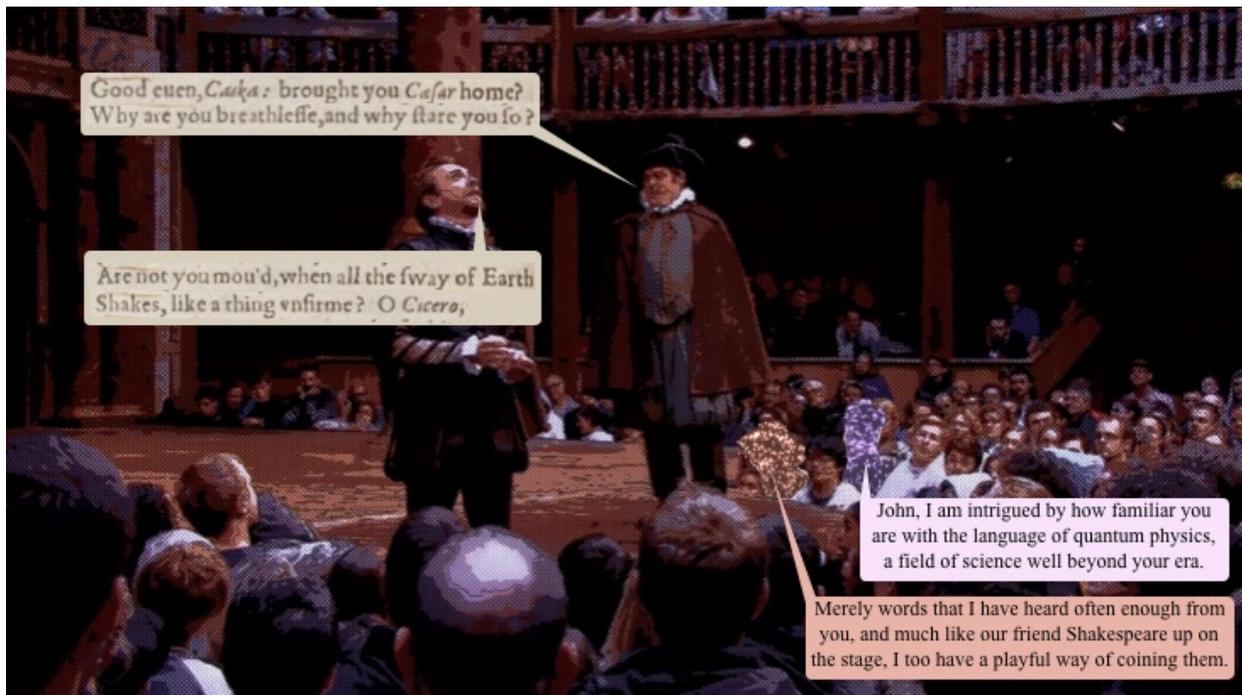
Such a hypothesised objective point of observation is a topic to return to in forthcoming sections of this thesis, but there is a small glimmer of hope that the atomic or quantum physics will afford future scholars such as Nathan the range of operations of quantum computers, accessed through the interface of VR and retroprojection, to step outside one’s consciousness and observe the self. Such self-consciousness, according to the classical scholar Ellrodt (2015), first appeared in print with the *Essays* of Montaigne (1993), and Shakespeare adapted Montaigne’s “spontaneous reflexivity”, which would appear on stage in “[a] monologue of Brutus in *Julius Caesar*” (Ellrodt, 2015, p. 73) centuries before either quantum physics or computers were invented or conjoined.

## Continuation of Act I Scene iii and Act II Scene i

JOHN            If I could take all I've learned so far of your quantum devices, write some of it into my play ...

NATHAN        You already would have, and such a play would have been known for centuries as an anomalous text with outrageous ideas of the future.

JOHN            Like spacious worlds in the moon, barely to be known by my audiences – probably one of those lost plays I wrote, ignored by disentangled minds!



**Fig. 3 Casca (Christopher Logan) and Cicero (Paul Rider) in Dromgoole and MacGibbon (2014)**

NATHAN        You are certain, then, he is playing the part of Marcus Cicero?

JOHN            Who else but him would take on such a minor role in this throwaway scene?

NATHAN        I have read that Cicero's works were a major factor in the Italian Renaissance<sup>42</sup> just like Shakespeare's poems and plays are at the heart of the English Renaissance.

<sup>42</sup> Brotton (2006) cites Grafton and Jardine's (1986) investigation of Renaissance scholars who made Cicero one of the 'persuaders' for fourteenth- and fifteenth-century humanists like Petrarch and Guarino Guarini. On a similar note, Gidley (2017) refers to de Jouvenel's (2017) account of the distinction Cicero made between 'facta' and 'futura' where the Italian and English Renaissance fell within "the realm of the 'possibles'" (Gidley, 2017, p. 50) or uncertainty.

JOHN           Of all the nonce words you have mentioned, this renaissance makes the least sense. I detect Latin origins, the idea of a second birth or renewal ... what is being born again? And wherefore does this Faustian rustic from Stratford get all the glory?

NATHAN       Do not fret, John Webster, you are among the acclaimed Renaissance dramatists within the academic circles where I come from.

JOHN           Yes, that digitised world where nobody reads books, and the great Alexandrian Library you called the Internet lost due to some planetary catastrophe. And now you use this retroprojection coach to ride around different centuries looking for scraps of literary history, of which my works are a mere tritium quid compared to the works of Shakespeare.

NATHAN       May I remind you that we agreed to come watch this play, again, for the sole purpose of finding your lost play *Caesar's Fall*, and one of the reasons we keep returning to this more familiar play on Caesar is that we're trying to trace back any inspiration you had for your early Roman tragedy.

JOHN           I appreciate the effort you make, but if you seek a scrap of paper upon which *Caesar's Fall* might be writ, it were better you tried retroprojecting Middleton or Munday: it is more of their play; Dekker and I were brought in to write the Cleopatra scenes, inspired partly by Daniel's fine drama.

SHAKESPEARE "Indeed, it is a strange-disposed time;  
But men may construe things after their fashion ..."

NATHAN       *Signore Renaissance* seems to offer his rebuke, and while I do not doubt your claims of co-authoring such a play, there is little information on any of the authors you mentioned so far, other than your friend presently upon the stage.

JOHN           None of the plays of Richard or Thomas? A true loss for the ages! And yet what of the works of that dog Jonson?<sup>43</sup>

*Exit SHAKESPEARE*

NATHAN       Not as far as my records show, unless you can share some details about his plays.

*Re-enter HEMINGES*

JOHN           'Tis no great loss, then, to have never heard or seen the likes of Jonson! He is an ill-favoured scribe whose very words were a bludgeon for the auditors while his plays a stealthy rapier aimed at his fellow authors.

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<sup>43</sup> John Webster may have a justifiable distaste for fellow playwright Ben Jonson for having been infamously arrested for his seditious play *Isle of Dogs*. Jonson was also involved in a public rivalry between Webster's collaborators John Marston and Thomas Dekker that became known as the 'War of the Theatres' (Sampaolo, 2016).

NATHAN Not a fan of his works, I see.

HEMINGES “A very pleasing night for honest men ...”

NATHAN You’ll be happy to know, then, that hardly any trace of Jonson’s plays is to be found many centuries hence.<sup>44</sup>

JOHN And if any trace does appear, do your best to eradicate it.

COWLEY “It is the part of men to fear and tremble  
When the most mighty gods by tokens send  
Such dreadful heralds to astonish us.”

NATHAN You really are forcing upon me a breach of ethics. Any evidence of the Early Modern plays, written by you or your Renaissance peers, adds to the collective database. It was bad enough to have nearly all of it wiped out, and each play that I can find through this retroprojection is a window into the past. Wilfully destroying or altering plays that were performed goes against my academic code of conduct.

JOHN This data that you are collecting and re-establishing on your Internet is vast, and some places have great treasures, while others mere trash. I had hoped that you brought me along on this retroprojection journey to help you distinguish between these two types.

NATHAN My method of data collection must not be based solely upon your preference; every lost play that is found again has some bearing on further discoveries. Is there not something good that you can say about Jonson?

JOHN Nothing yet for this bricklaying labourer.<sup>45</sup>

NATHAN There you go; you would have let this small treasure go unnoticed just because of a personal grudge ...

HEMINGES “Therein, ye gods, you make the weak most strong;  
Therein, ye gods, you tyrants do defeat ...”

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<sup>44</sup> Nathan may be stretching the truth a bit, because he would have at least known of Jonson’s (1966) comedy *The Alchemist* since his satire on projection was the initial impetus for his research journey. See Bogart’s (2007) fundamental forces in the research question section of the next chapter for a more detailed discussion on the part of alchemy in this ABR.

<sup>45</sup> A sly allusion to his rival’s modest family background, since Jonson’s stepfather was a master bricklayer and in the published text of Webster’s (2004) *The White Devil* he praises “the laboured and understanding works of Mr. Johnson” (p. 4/123).

JOHN            You seek to unlock the mystery of our craft? So it is; there is more than enough of this arcane knowledge seeking in the plays we have seen so far. Even what I saw of *Antony and Cleopatra* at the Blackfriars, another play inspired from the work Dekker and I did on *Fall* ends up being the *putrefactio* from a long line of other literary works.

NATHAN        There you go, like spinning gold from the common chaff.

JOHN            You seek the projection of alchemy, and need look no further than this very scene before you.

NATHAN        There is indeed something alchemical, as audiences journey across spacetime to witness Caesar's epoch-making assassination<sup>46</sup> which became the basis of my first retroprojection project. This simulation was built upon a transformative framework that makes ideas stored on the page, or in my case hidden in digital files severed from worldwide servers, and allows me to discover the atoms of the collective unconscious. It is a very big deal to understand these concepts in relation to drama and literacy education, at least from where I come from: the university that is supporting my research here at Perimeter.

JOHN            University I understand, and atomies are a familiar enough idea, and yet what you are studying and even where you came from are as mysterious as volumes of alchemical treatises. What brings you here?

*Thunder still*

NATHAN        This, this ... all the valuable insights into authentic theatre practices, how things were done back in your time. The sudden noises, excitement in the audience, the interaction between characters upon the scaffold and the attentive multitude around the stage: all of this makes for exciting theatre.

JOHN            And is this not true of the plays you watch in your time? By the sounds of it there aren't enough of my plays to be heard nor seen, yet every time you speak of theatre Shakespeare seems to be the first and only name that slips out of your mouth!

NATHAN        Yes and no; please keep in mind that there has been a much longer history of critical discourse based on the collected works of ... of ... well, it goes without saying. Yours are of equal importance, I am certain; thus, it is my job to track down any traces of anything you wrote. And we are more likely to find these missing texts by stimulating your memory with familiar material.

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<sup>46</sup> Falk (2008; 2014) mentions this historical nexus point several times across his writing, as does Bryson (2007). Witnessing such a brutal yet precisely timed moment of history has held the fascination of physicists and biographers alike.

JOHN My simulated memory, you mean. So does nobody in one's own body ever get on a stage to perform a play, far away from this retroprojected reality?

NATHAN True, since the Internet's crash, there has been a renewed interest in traveling troupes going from town to town. One of my favourite theatre companies is Station Eleven,<sup>47</sup> named after a novel that eerily predicted society falling apart just a decade or so before it actually happened. They did a great job with *Mr. Burns*.<sup>48</sup>

JOHN And now your research into the theatre of the times – my times, to be precise – will furnish these Station Eleven Players with more material to perform?

NATHAN More than that, it is the ability to peer into theatre practices and continue developing arts-based research.

*Enter SLY*

COWLEY “Stand close awhile, for here comes one in haste.”

HEMINGES “’Tis Cinna, I do know him by his gait ...”

JOHN Are we just entertaining ourselves with the texts and claiming it as your research?

NATHAN We are giving speech to words that haven't been heard since the Internet crashed.

JOHN (*reads script on the control panel*) You mean ‘gentle’, ‘elements’, ‘mixed’ and ‘Nature’? These are all ideas lost to future generations?

NATHAN Yes. Individually they are still familiar and very much in use thanks to the British Empire and the impact it had on education. But “that Nature might stand up/And say to all the world, ‘This was a man!’” are words that will continue to resonate in the minds of audiences who appreciate the complexity found in Brutus’ conscious.

JOHN Thanks to you and this arts-based research?

NATHAN Someone has to, you know, keep the words of the ancients alive.

JOHN And mine are just not ancient enough, are they? People hear “This was a man!” and think how wonderful Shakespeare was for writing such moving words. I am alarmed to hear how history relegates me to stand in his shadow.

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<sup>47</sup> Mandel (2015) writes a novel about a deadly epidemic wiping out most of civilisation, with electrical power and the Internet switched off for a period of twenty years.

<sup>48</sup> Washburn (2014) gives the apocalyptic switched-off civilisation a pop culture spin as numerous theatre companies adapt and modify a partially remembered episode of *The Simpsons*.

NATHAN Don't be so glum about it; you are fondly remembered, too, thanks to your *Duchess*.

JOHN A play where I took care to capture the conscience of the time. Does the line "I am the Duchess still" resonate with anyone beyond my corner of space-time? How about your man Stoppard? Did he crib any of my lines,<sup>49</sup> or is his work only stolen passages from Shakespeare, notorious for borrowing them from someone else?

NATHAN Just like you and Dekker made this (*gestures to the actors on the stage*) part of your *Caesar's Fall*?

JOHN Thought you didn't know anything about this lost play of mine. Give me a chance to show you what really happened at the end of the Roman Republic.

NATHAN Based upon what? You weren't there, just like Shakespeare wasn't, and your play is just another version of the same events reported in Plutarch and Livy.

JOHN Shakespeare merely scratched the surface of the leather-bound armour. What Dekker and I did to Middleton's *Two Shapes* was to explore the alchemical roots of a society transmuting itself from a republic into an empire.

NATHAN Lots of other authors had a fascination with ancient Rome. One of the authors I studied in school, Bertolt Brecht,<sup>50</sup> wrote about the business affairs that brought about the end of the Republic because Julius Caesar had become too big to fail.

JOHN I am talking about my England, still very much an empire in your day, is it not?

NATHAN Hard to tell who is doing what, with the Internet gone ...

JOHN And yet the coin you keep in your pocket has Queen Elizabeth on it!

NATHAN The second (*shows him such a coin from his pocket*). King Charles issued it as a commemoration on her hundredth birthday.

JOHN All of this happening because Ol' Bess, the first, granted those East India Adventurer their charter,<sup>51</sup> and her Royal Navy to protect their overseas

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<sup>49</sup> Stoppard's (1999) play *The Real Thing* has the character Henry mistake the "classy stuff" that his partner Annie is rehearsing for one of Webster's plays, but it turns out to be Ford's (2014).

<sup>50</sup> Brecht's (2016a) unfinished novel about Caesar was abandoned so that he could escape the fall of the Weimar republic with the rise of National Socialism. His exile in America (Lyon, 1980) produced, among other projects, his adaptation of Webster's *The Duchess of Malfi*, as is explored in Chapter Four of this dissertation.

<sup>51</sup> One of the first global corporations to form, the British East India Company won their Royal Charter for a "pretended voyage to the East Indies" (Sainsbury (Ed.). 1864, pp. 99–102), which ominously rewarded deceit and greed for many generations to come.

investment. No wonder James would go around calling himself Augustus Maximus when he inherited the empire his predecessor built.

NATHAN So what was the big state secret you had hidden in your play?

JOHN It was hardly a secret at all: the rich and powerful bend the laws to their advantage, and the poor suffer for it.<sup>52</sup>

NATHAN And that brought about *Caesar's Fall*?

JOHN We each were promised ten pounds, split five ways.<sup>53</sup>

NATHAN Well, you've got me curious now. So let's hear what you wrote.

JOHN It was a while ago, and so many pages ended up being cut.<sup>54</sup> While I would like to think of it as my first success as a playwright, working with very talented artists, the truth is I really can't recall a single line of it.

NATHAN Most likely due to there being very little trace of it on the Perimeter computers or any other database. The fact that Henslowe made mention of it in his diary that has survived the ages is reason enough to be satisfied. And while the simulacrum of your mind is incomplete, with regards to this lost play, I still feel like there is one unexplored connection that will be made if we keep watching Shakespeare's play.

JOHN That seems to be your answer for everything! Always Shakespeare? Do you in the future always have to consult your electronic screens and virtual retroprojections before you have an idea of what anyone else is talking about?

NATHAN Listen, I want to understand, and if there is any way to ensure that your words survive the fall of the Internet, I would be happy to make that discovery with you. It took me years of study to get to this point; I barely understood one line in ten

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<sup>52</sup> Goldberg (1987) has much to say on this topic of power and politics in *The White Devil*: "In fact, during the reign of James, when the King and his best friends trafficking on a large scale in titles of honour, the court was a centre for the exchange of human value to money. *The White Devil* expresses Webster's perception of the irrelevance of lingering ideals of courtly reward for honourable service and a period when relationships at court were based no longer on feudal service (or, as in Henry's time, on an alliance between the monarch and the gentry), but rather on competition in a labour market heavily favoured the men at the very top" (p. 24).

<sup>53</sup> The collaborators ended up with a bit less: £8, as recorded in Henslowe's (1904) *Diary*.

<sup>54</sup> Coleman (2010): "The most common way for collaborative writers to work in the period was probably to use the play's outline to divide up the acts and scenes between themselves, and then for each writer initially to compose their parts more or less in isolation from their colleagues (Ioppolo, 2006, p. 32). Critical history has tended to overlook collaborative pieces at the expense of sole-authored ones, although this may result in an inaccurate view of what was clearly a very important professional activity" (pp. 18–19).

that you speak. We really need to find out if these ideas on stage relate to any with which you might already be familiar.

JOHN I trust that you, with all the wizardry you have, will be able to let me know when it looks like I may have found something you seek?

NATHAN I have a couple of questions that will guide you to the answers we both want to know.

JOHN Please ask.

NATHAN The first is a general question about how virtual reality shapes our understanding of theatre and approaches to drama education?

SLY “Yes, you are.  
O Cassius, if you could  
But win the noble Brutus to our party –”

JOHN Couldn't tell you that, since I barely understand the connection between this virtual reality and retroprojection. Do they have any connection to theatre?

NATHAN Right now, the simulation I am running is as theatrical as I can manage, but it is more about the learning process we take from the stage and apply in the digital realm of VR.

JOHN And calling upon long-dead playwrights is the best way to find an answer, is it?

NATHAN There is a certain number of forces, like the pull of a magnet towards a metal object, that attracts an audience to the theatre.

JOHN I should hope that there is something compelling them to see the plays that I wrote, or else I would have returned to the career set out for me as a lawyer.

NATHAN Such is what might have been a very different path for you, and a great loss to those who study drama.

JOHN I am sure there would still be enough of Shakespeare to fill a full score of Perimeter Institutes.

NATHAN Back in the Internet days, a place like Perimeter was able to connect with other institutes around the world and have shared lecture spaces projected across the stage for synchronous TED Talks and occasionally a retroprojected stage show.

JOHN Any of mine get performed, in addition to the perennial favourites?

NATHAN Why yes, of course; there was Gemma Arterton’s reprise of your *Duchess* at the Sam Wanamaker Playhouse<sup>55</sup> that was modelled upon your century’s Blackfriars.

JOHN So why are we not watching mine instead of this?

NATHAN Once again, this was back when the Internet allowed all sorts of things to be shared across the globe, and I only just managed to program the four shows that I think will help answer my research questions.

JOHN Well, you had better get on with asking them, since you only told me about magnets and distracted me with talk about a retroprojection show based upon my play that I will not get to watch. What more could you need to know?

NATHAN Plenty. The next two questions relate to the magnetic forces that director Anne Bogart mentions as being fundamental to theatre, and which of them also make VR compelling.

COWLEY “His countenance, like richest alchemy,  
Will change to virtue and to worthiness.”

NATHAN Bogart provides her own analysis of VR, comparing it to the reality the audience perceives when they attend live shows in a theatre. Given that any of the magnetic forces provides a theoretical frame for an exploration of VR, how does VR change or remediate these forces?

JOHN Remediate? Are you seriously seeking answers by simply using the old lawyer’s trick of obfuscation to make me, your immaterial witness, admit that I do not know what to make of what I see and hear before me?

NATHAN Admittedly, it is a loaded question full of phrases I don’t expect you to get right away, but remediation is a very simple process, and one that you had a perfect aptitude for: it is when you take one form of literary art, such as a book, and you change its form to something else, like a play on stage or a painting. The switch from one medium to another changes something fundamental ...

JOHN Magnetic, you mean.

NATHAN If it helps, yes. When you originally brought your *Duchess* to the stage, or your Cleopatra in *Caesar’s Fall*, you must have been aware of what impact these plays had on your audience, a different feeling than if each of them were to read the same books from where you got these stories.

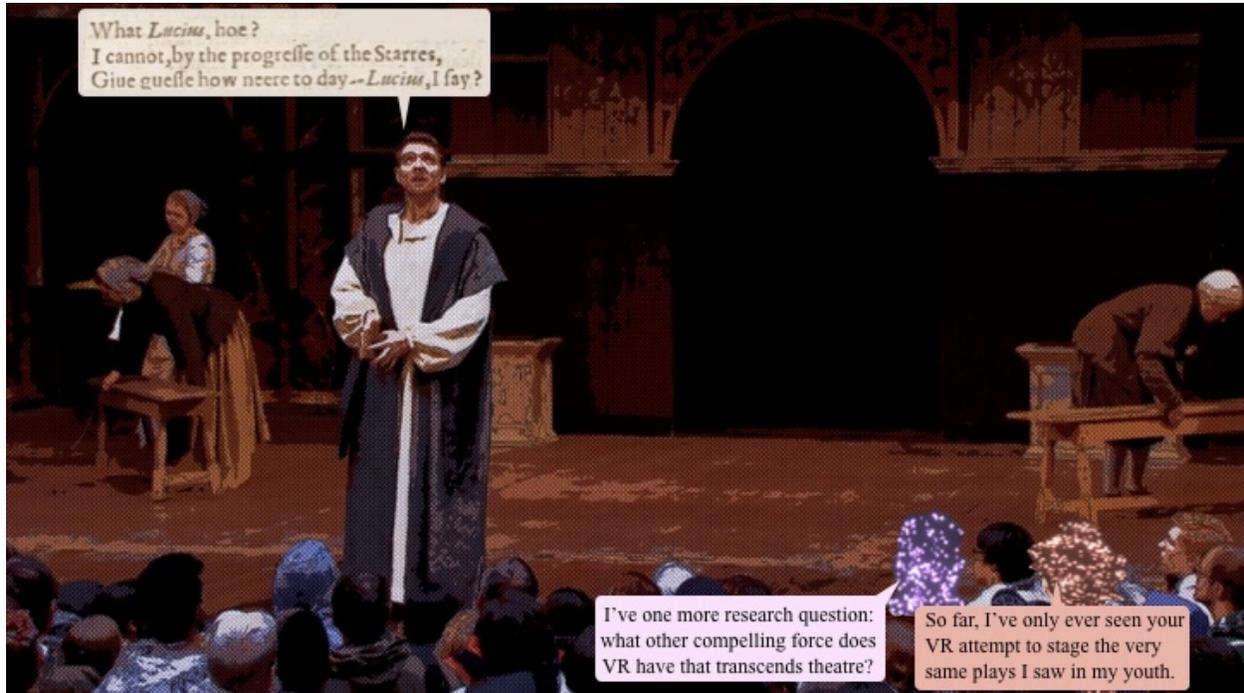
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<sup>55</sup> Arterton as the titular Duchess of Malfi was cast in the inaugural play in 2014 for the new indoor theatre based upon the seventeenth-century Blackfriars Theatre that belonged to the King’s Men. The fictional reprise of the Dromgoole and Russell (2014) production featured much of the same cast and crew and made use of the latest advancements in retroprojection to bring parts of the original 2014 production back before audiences.

JOHN Obviously, yes. The human connection to tragic heroines on stage, and a sympathetic audience to witness their eventual triumph over the miserable men, many of who are reflections of those in the audience who frequently behave much worse! It is much easier to get that across to auditors, especially since the whole lot of them could barely read their own name, let alone Latin and Italian books.

*Exeunt HEMINGES, COWLEY and SLY*

*Enter BURBAGE in his Orchard*



**Fig. 4 Brutus (Tom McKay) in Dromgoole and MacGibbon (2014)**

*Enter TOOLEY*

TOOLEY “Called you, my lord?”

JOHN And somehow you expect me to answer this grocer’s list at once?

NATHAN Don’t worry, the answers will emerge as we watch.

*Exit TOOLEY*

JOHN You certainly have a roundabout yet entertaining way of seeking answers. And what happens after these answers emerge out of this or that retroprojection, like some sea creature from the briny depths? What do your answers have to do with me?



*TOOLEY gives BURBAGE a letter*

BURBAGE “Get you to bed again, it is not day.  
Is not tomorrow, boy, the first of March.”<sup>56</sup>

JOHN Caesar’s murder as the climax of the play, not the strange halfway point at which Shakespeare places Caesar’s death.

NATHAN Over the centuries, it has become accepted that this structure is the way Caesar’s story was told.

*Exit TOOLEY*

JOHN Then perhaps you have found an answer to one of your questions related to the magnetic forces at work in your retroprojected virtual reality: the audience has some way to shape the story playing out around them, sees the many different viewpoints all at once. It is entirely based upon spectacle.

NATHAN It sounds like you are talking about the degrees of freedom that let us walk around the stage, change our position to get a better view of the actors, is this what you mean?

JOHN Is it not possible that instead of just standing over the shoulder of Burbage or the boy, we could also take part in the play in any of the roles we choose?

NATHAN The first-person perspective is an option, but then it becomes like a video game where your sole purpose is keeping up with the text rather than entertaining any of its ideas.

*Enter TOOLEY*

TOOLEY “Sir, March is wasted fifteen days.”

*Knock within*

BURBAGE “’Tis good. Go to the gate: somebody knocks. –  
Since Cassius first did whet me against Caesar,  
I have not slept.”

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<sup>56</sup> Sanders makes a note in his text (Shakespeare, 1967) that the First Folio mistakenly has “first of March” instead of the more appropriate “ides” confirmed within twenty lines when the Boy re-enters to tell Brutus “March has wasted fifteen days” (pp. 172–3). Uncertainty about dates, in addition to a “curious little conversation” mentioned in Kermode (2000, p. 87) about where in the east the sun rises, indicates a possible allusion to the Elizabethan calendar controversy in Shapiro (2005) and Sohmer (1999).

JOHN           Quite true; I wouldn't want to conjure up the torment going through this version of Brutus at the moment he decides to strike against Caesar.

NATHAN       The preferred method of watching these plays is the third-person ghost mode so that the audiences are able to walk and stand wherever they want, and it is only during asides and monologues where the actor avatars catch a glimpse of the audience's gaze.

JOHN           It sounds like you are missing out on some of the most exciting parts of theatre, however, when the players can respond to even the quietest gasp or whisper from the auditors.

NATHAN       It is still possible to switch modes within a scene if you have access to the control panel as I do now (*his hand gestures make the floating panel appear again*), and I can offer you a quick demonstration of how the viewer goes from ghost mode to interactive scene partner.

JOHN           Perhaps it can wait until we reach another simulation. I am very keen to find out what has happened to my *Duchess of Malfi*.

NATHAN       All in good time. In the next retroprojection you'll get to meet yourself.

*Nathan enters some information onto the panel; the scene around him and John begins to fade into the Mike Lazaridis Theatre of Ideas as Burbage continues his speech.*

BURBAGE                           “O, then, by day  
Where wilt thou find a cavern dark enough ...”

## CHAPTER 2 – SHEPPERTON STUDIO, SURREY

### Research Questions

The point at stake here is not the presumption of knowing everything. It is the opposite: an awareness that yesterday's ignorance may have light shed on it today, and that today's might be illuminated tomorrow.

Rovelli, 2018, pp. 235–6

Archimedes' ancient text *The Sand-Reckoner* is a direct address to King Gelon of Syracuse, who attempts to count all the grains of sand in the known universe. While not exactly a dialogue, physicist Rovelli (2018) makes note of the “playful yet profound” (p. 235) treatise possibly inspired by the plays of Sophocles and Euripides that Archimedes would have had access to at Sicily's Taormina amphitheatre. This conjecture presents a meeting point between science and the dramatic arts, drawing attention to the many ways of knowing that are represented in writing, particularly the philosophical, spiritual and scientific dialogues most famously expressed by Plato's Socratic dialogues, many Buddhist koans (Suzuki, 1964) and Galileo's *Dialogue Concerning the Two Chief World Systems* (Galilei, 1953), among other examples of a dramatic structure used to share the way different interlocutors view reality. Exploring the many ways reality is recreated on stage, Bogart (2012) provides a transcription of questions and answers from stage directors in her *Conversations with Anne*, where she observes how theatre and dance present “each gesture [as] a question as opposed to an answer. That notion of waking up inside of somebody ... maybe it is scientific in that it's more of a quantum notion of the universe as opposed to a classical notion” (p. 156). Finally, Boal (2006) summarises the history of theatre in his account of Thespis' “off-the-cuff one-liner, an irresponsible gag, turned into well-articulated discourse” (p. 65), which informs the methodology of my current research into VR framed through drama education and the self-consciousness through my arts-based

inquiry into both literacy and technology.

This section situates my research questions within the framework of fiction-based research (Leavy, 2016; 2018), first by responding to the previous chapter with further commentary on Shakespearean dialogue. Much of the action in the Roman tragedy allows its audience “access to imaginary and possible worlds” as Leavy (2018) describes how fiction in an arts-based context permits researchers “to reexamine the worlds we live in, and to enter into the psychological processes that motivate people and the social worlds that shape them” (pp. 190–191). Brutus continues to be praised as noble (most tellingly in Antony’s praise for him, as Nathan mentions above), yet his intermingling with the other conspirators lowers his status and causes civil unrest, leading to the civil war that ended the Roman Republic. Norman Sanders (1967), editor of the New Penguin edition of *Julius Caesar*, makes note of Casca’s line from Act I Scene iii and how “Casca sees Brutus’s support in terms of alchemical practices” inspired by Plutarch’s account of Brutus, yet the metaphor added by Shakespeare “is more appropriate in that both Brutus’s favour and alchemy were unsuccessful in their operation” (Shakespeare, 1967, p. 171). The assumption here is that Shakespeare knowingly tips off audiences that the stated purpose of the assassination is doomed to fail, just as any attempt to transmute lead or base metals into gold was an old-world delusion. Other scholars disagree and suggest that the playwright and poet had more respect for or at least curiosity toward alchemy, such as Clark (1970) in *Shakespeare and Science* (Chapter V. The Art of the Alchemist), Healy (2011) in *Shakespeare, Alchemy and the Creative Imagination*, and Falk (2013) in *The Science of Shakespeare* (Chapter 11. “Fair is foul, and foul is fair...”: *Magic in the age of Shakespeare*), who each devote at least one chapter to the playwright’s interest in mystical arts, based upon textual evidence.

Once alchemy became an avenue of inquiry into both drama education and VR, I began to pay attention to the explication of arcane science as it was used by theorists such as Artaud (1958, 1988), who makes the connection within theatre practices between alchemy and VR, and Bogart (2007) again, who makes alchemy one of the seven fundamental forces of theatre and then later calls for an Artaudian sense of VR in her theatre productions. This dissertation continues to explore through my research questions outlined below the storytelling capabilities of VR and dramatic text through dialogue between Nathan and John. In other places, discursive prose sections unfold contemporary educational theory such as the distributed cognition model (Petrina, Feng & Kim, 2008) and situated learning (Duffy, 2014) to bring it forward a few decades to find its place with the fictional practice of retroprojection. One such touchstone is Tribble's (2013) research into the social practices of early modern stages such as the Globe Theatre. She makes use of distributed cognition based upon Vygotsky and other sociocultural theories; therefore, I begin with the metaphor of Shakespeare's play *Julius Caesar* as a prototype for VR-like simulation where an audience is brought back into a reconstructed moment from the past, "capturing verisimilitude" (Leavy, 2018, p. 200) and staging it like an everyday scene in the audience's present (and presence). Similarly, Ellrodt (2013) suggests the role of Brutus (followed closely by the character Hamlet) as the first instance of self-consciousness in English drama, and if the VR stage follows this example, the technology provides an opportunity to learn about the postmodern and posthuman consciousness. With these sociocultural theories in mind, my first research question examines

1. How does VR shape our understanding of theatre and approaches to drama education?

Responses to this question as well as follow-up ones appear in this and subsequent chapters. The responses are largely embedded within the character of Nathan who discovers and reveals

insights on the topic through his interaction with John, as they watch the play(s) in a non-interactive “ghost mode” that separates the viewers from the action. One of the main discoveries in my research relates to Bogart (2007; 2012) and Leavy’s (2018) belief that VR already is theatre in both the Artaudian sense and modern technological meaning. As Ryan (2015) states, the language of the classical computer is one of binary possibilities, yet the multiverse of probable in-between states that operate within quantum computers might get us closer to what centuries of theatregoers experienced. Boal (2011) points out that Aristotle’s (1996) study of Greek theatre, unlike Plato’s dismissive writing on the subject, was all about becoming. Aristotle saw tragedy much the way that Boal claims “[t]heatre is change and not simple presentation of what exists: it is becoming and not being” (p. 28) for both the protagonist and, more importantly, the virtuous development of the audience. Caesar’s death in the middle of Shakespeare’s play is hardly the catastrophe, but Brutus’ decision to join the conspirators becomes the first of three climaxes that raises him in Rome’s esteem. He firstly believes in the curing Rome of Caesar’s ambition by killing his spirit, yet Brutus joins the conspirators to kill the man. The plot turns to Brutus’ second peripeteia when he and Cassius have their falling out over gold, and finally his defeat by the spirit of Caesar (who addresses Brutus as *thy* evil spirit). In their theoretical writing, Brecht, Artaud and Boal sought to transform the Aristotelian tragic and epic structure imposed upon theatre, including some of the most classically themed Shakespearean plays. Bogart, for her part, accepts that many different interpretations occur at the same time in theatre:

Art is an act of the spirit. It asks you to be a conduit for something larger than yourself. You listen to voices from the past in service of the common culture you share with those around you.

Bogart, 2007, p. 46

As much as it excites our curiosity to see how events played out in the past, or even how

things might be in the future, drama always places what is on stage as ever-present: the actors and audience feel together each choice the protagonist makes, and even with the outcome well-known in advance, drama nevertheless opens up endless interpretations. It is no surprise that much of Bogart's writing emphasises the quantum uncertainty as it relates to consciousness brought into play in her theatre. The here and now becomes there and then through the audience's acceptance of the narrative happening before their eyes and ears. Rosiek (2018) makes a connection between the audience's acceptance and Barad's (2007) "Intra-actions [that] are determined in part by the way the inquirer creates an 'apparatus' for an inquiry—an experimental instrument or a methodological practice—and in part by the way material reality requires certain things of our apparatuses" (Rosiek, 2018, p. 638). In the case of my research, the stage is such an apparatus in that a fictional retroprojection of actors on a stage, even though they are currently words printed on a page, has an agency of its own, and a potential for the audience to see things not present in the reader's reality.

Virtual reality offers an illusion of being present in an event, a 360° panoramic simulated environment that transports the viewer to take in as many sights as the simulation can provide. Bogart suggests that theatre creates this type of VR with bodies, wooden floorboards, brick, mortar and paint. Artaud's (1958) total theatre model, which he calls his 'Theatre of Cruelty', also includes light and sound in addition to the many intangible qualities of voice that do not simply rely on written dialogue. There are several other factors from theatre practices that can be applied to VR, leading me to the first research sub-question:

- a) Which of Bogart's "multiple magnetic forces" (2007, p. 64) fundamental to theatre are present in a VR experience?

Here the choices are open to a combination of compelling or fundamental forces for the audience to experience: empathy, entertainment, ritual, participation, spectacle, education and alchemy. In

a dissertation within the Faculty of Education, the fundamental force of education should be in the forefront, but even Bogart (2007) herself is not too keen on a pedantic style of theatre. She claims that most children know to avoid any type of entertainment from the latest video game, trending TV show, movie or a star's social media once it starts instructing them. Brecht's (1964) concept of epic theatre transformed into didactic theatre late in the German playwright's career, finding a balancing point between the seemingly opposed fundamental forces of entertainment and education, explored in a contemporary theatre context in Freeman (2016). Boal (2011), who adapted Freire's (2000) *Pedagogy of the Oppressed* as a theoretical framework for his *Theatre of the Oppressed*, finds his clear view on the educational purpose of the theatre as follows:

Theatre is the most natural form of learning, and the most primal, since the child learns to live by means of theatre, playing, acting characters – and, through the other arts, looking at himself and painting, singing and dancing. It is true that this learning, this *apprenticeship*, utilizes the prevailing social structures and ethical values of each society; to avoid the passive acceptance of this society as it is, ... [we] must learn to live in society and also to question it.

Boal, 2006, p. 37,  
italics in original

Boal challenges Aristotle's insistence on the object of tragic theatre as a political impetus, where catharsis leads to the perfection of the social ethos. Instead, Boal encourages the spect-actor to critically determine the crux of workshop scene and form a collective response to actions on the stage. As he evokes Freire's learner-centred model for educators, Boal (2006) claims that "[e]ducation is transitive" (p. 110) and needs other people, either in the audience or actors sharing the stage; there is something alchemical and uncertain about the interaction promoted in dramatic art between performer and audience. This is the bulk of my research into VR, alluded to wistfully in the educational history of Nathan, whom one can suppose grew up and was educated in an environment where digital technology, VR and the Internet (while it was still available, at

least) impacted the way he learned.

The next sub-question further investigates the impact of VR as a medium:

- b) Bogart's (2007) minimal analysis of VR (p. 91) reinforces the purposes of this research. However, her seven forces provide a theoretical frame for an exploration of VR. How does VR change or remediate these forces?

To support my claim that the uncertain alchemy, chief among the fundamental forces, is key to both drama education and VR, we need look no further than Barone and Eisner (1997), who allude to VR in their 1997 chapter, and in their follow-up book (Barone & Eisner, 2012). They quote Iser (1974) as they discuss

the creation of a *virtual world* by a literary author. This virtual world can also be located through the particular physical realities it evokes. These realities are more apparent in the literary genre of social realism. In this kind of literary work especially (although by no means exclusively), the author acutely observes and documents the telling details of human activity.

Barone & Eisner, 2012, p. 74,  
italics in original

At this point, it will be useful to clarify the differences between virtual world and VR: the former is the unlimited literary space imagined by Langer (1953), often realised as a mapped-out environment created inside a computer simulation for a single purpose, typically a game that others can join in and follow commonly accepted rules. Two quotes from Fedeli (2016) illustrate the single-purpose game-centred nature of a virtual world, drawing on the classical philosopher (and cameo appearance in Shakespeare's *Julius Caesar*) Cicero, who "proposed dramatization, for the acquisition of the rhetorical methods of controversy" (p. 67). Fedeli mentions the possibility for an educator to "transcend abstract principles and allow his students direct access to arguments in action" (Mendelson, 1998, p. 29, cited in Fedeli, 2016). However, Fedeli seems to confine all the learning to the user's navigation of the virtual space:

The importance for the user to perceive the avatar as a body that occupies a physical space in the virtual world is strengthened by the participant statements reporting the wish to observe and control the avatar, and observe and comprehend the avatars with whom they interacts [sic].

p. 80

It is a programmed world the viewer or user enters, and the only events that happen in this world are ones already constructed by the world's designer. All possible interactions for the user are already put in place according to the designer's plan and programming. The human body is often the basis of a virtual world avatar and is integral to being in the simulation, whereas VR, in most cases, is body-less in the sense that a recognisable human body is not often required to experience and interact with the world within the 360° panoramic display. With VR as Lanier (2017) describes, one is able to experience how "consciousness remains and is real" within the VR simulation, a "technology that exposes you to yourself" (p. 58). Virtual reality is a direct connection to the experiences themselves mediated through filters, and in the case of augmented or mixed reality, presents a layer of information on top of the viewers' surroundings. Gibson's (2015) line "information flows both ways" (p. 70) between past and future is the basis of retroprojection while it remains virtually real approximation of where and when. It is still the VR viewer in the present who is conscious of what is happening. Uncertainty in VR is one of the key factors, just like in theatre where the outcome may be written and all events leading up to the final catastrophe or denouement rehearsed and performed in keeping with the playwright's text, but for an attentive audience, every moment is as unknown as one's own future. This is related to the many-worlds theory in quantum physics where every moment branches out into infinite possibilities, none of which are known between different multiverses. Once again, a virtual world is constructed so that all who partake in the virtual experience should have similar events happen, if varied from one player to the next based upon the point of view.

The following question may only be partially explored until the future of John and Nathan's interaction becomes a reality, but from the context of present-day technologies,

2) Are there additional forces that make VR compelling?

Here I would put forth retroprojection, the made-up word that has some similarities to other fictional concepts such as the role-playing in various movie simulations in both the novel (Cline, 2011) and film version (Spielberg, 2018) of *Ready Player One*, or the “Binarily Augmented Retro-Framing” technology as seen in Russo and Russo's (2016) blockbuster *Captain America: Civil War*. The audiences of various media across centuries have found ways of seeing themselves in the artificial world of the authors, playwrights and filmmakers, and with the emergence of VR as “the last medium” (Chocano, 2014), there is an opening for discussion about reflexive metaphor that drama education and VR each reveal something new about each other since the dialogue between John and Nathan continue their research in mixed media.

### **Dialogue from Scene 28 – Int. Rose Theatre – Day.**

*Back inside the Mike Lazaridis Theatre of Ideas as the Julius Caesar retroprojection finishes its fade out and NATHAN prepares the next simulation.*<sup>57</sup>

JOHN

Something about the last visit did not sit right.

NATHAN

It is always tricky to capture all of reality, but what I find works best is to have soft focus, not looking so much directly at objects in front of you but opening up your vision to the edges of perception.<sup>58</sup>

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<sup>57</sup> The shift from Shakespeare's (1968) play to Norman and Stoppard (1998) screenplay changes the orientation of the text in this chapter. Stage directions continue to be in italics, yet quoted portions of the description appear as part of the text. The ‘slug line’ that state the scene number, location and time of day are approximately similar to what would be found on the shooting script although not directly quoted from the published screenplay. Dialogue between characters is double indented, following industry standards. Hall's (2014) stage adaptation of the screenplay, not represented here, uses stage formatting.

<sup>58</sup> Soft focus helps “develop awareness of the group and the surrounding space” (Bogart & Landau, 2006, p. 29) encouraged for all participants in training with the authors' viewpoint technique.

JOHN

What I saw and heard didn't bother me so much as what was missing: the smell of the old Globe.<sup>59</sup>

NATHAN

Yes, and you can thank me for that! I decided to switch off the olfactory simulators for all our retroprojections into the past, knowing what I do about London's bathing habits and Shoreditch's sewage works.

JOHN

Barely noticed it before, only aware of its absence.

NATHAN

The mind has a funny way of compensating for a missing sense. It fills me with dread even to think what a theatre like the Globe would have been like full of grubby groundlings with all their unique scents – surely it would have blown one of the retroprojection processors.

*The next retroprojection appears around both men, who are on the middle balcony of the three-tiered, open-air Elizabethan theatre similar to the Globe. As they look down at the stage below, they start to see some human activity as performers and others come and go.*

JOHN

Wouldn't want our stench to affect your chances of recovering the Internet, I see. You say the name of this play is called *Shakespeare in Love*?

NATHAN

Screenplay, actually, and yes.

JOHN

And this is what you think Shakespeare wrote, a screenplay on love?

NATHAN

It started off as a pitch from Mark Norman, an American screenwriter, who pictured a romantic comedy about Shakespeare falling in love.

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<sup>59</sup> Not making an anachronism, John simply refers to the first Globe Theatre (1599–1613) as the site of his early collaborations while the rebuilt Globe (1614–1642) was where his *The Duchess of Malfi* was staged after opening at the Blackfriars Theatre.

JOHN

With whom, Anne?

NATHAN

With one of the players who acted in *Romeo and Juliet*.

JOHN

Sounds scandalous, and a bit far-fetched to imagine him “doing the deed” with one of the apprentice boys.

NATHAN

There may be some liberties taken with history as you remember it, but in this story he falls in love with a woman named Viola, who later inspires him to write the character into his play *Twelfth Night*.

JOHN

Eight years after he wrote *Romeo*, you mean – sounds like quite a drawn-out attachment. Funny that I never heard about this player named Viola.

NATHAN

The movie’s timeline gets shifted around a little bit, mostly due to the playwright Tom Stoppard and his involvement with the screenplay.

JOHN

He’s the one who wrote *Arcadia*, isn’t he?

NATHAN

Glad you remembered.

JOHN

It is very hard to forget that haunting play.<sup>60</sup>

*From the gallery above JOHN and NATHAN, they see two other men, GEOFFREY and JOSEPH, listening to ADAM auditioning on the stage below. JOHN and NATHAN have a secluded view of men above as well as the actors on stage.*

ADAM

“Was this the face that launched a thousand ships,  
And burnt the topless towers of Ilium?  
Sweet Helen, make me immortal with a kiss!”

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<sup>60</sup> A memory, stored somewhere in John Webster’s holographic mind, of another retroprojection research project involving Stoppard’s (1999) play, as narrated in Stooshnov (2016).

NATHAN

Now the scene begins.

GEOFFREY

“Thank you!”

JOHN

This young pup of an actor thinks he’s performing Marlowe.  
He looks like he just came from the Children of the Chapel.

*“ADAM leaves the stage, soon to be replaced by a HARRY.”*

NATHAN

Not him, those men above?

*He points to GEOFFREY and JOSEPH, “[who both] look a bit deflated.”<sup>61</sup>*

NATHAN

Pay close attention to what happens between those two as  
they watch what happens on the stage.

JOHN

Rather distracting way of staging a scene, having to rotate  
between the stage and the upper gallery – how much of the  
show would those seated on lower tiers have missed out  
because these whispering fools stay aloft?

NATHAN

The blocking of this scene defies the unity of place your  
playwright-self might be used to; you just have to see it as a  
directorial technique of shot-reverse-shot common to the  
medium we are examining.

HARRY

“I would like to give you something from Faustus by  
Christopher Marlowe.”

*Immediately upon hearing HARRY, JOHN leans over to have better look below, his hand  
tentatively lingering on the wooden beam in front of him.*

JOHN

None of this feels right. It is not just the lack of smell, but it

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<sup>61</sup> Scene description written in the original screenplay (Norman & Stoppard, 1998) is mostly retained and integrated with action involving JOHN and NATHAN plus first-named actors from the *Dramatis Personae* (pp. 12–13). Screenplay description is quoted and unless otherwise indicated all comes from the same source with some of the character names altered.

JOHN (Cont'd)

doesn't look like any theatre I've been to in my natural life.

GEOFFREY

"How refreshing."

NATHAN

It will make more sense once you get used to the way movie dialogue happens.

HARRY

"Was this the face that launched a thousand ships,  
And burnt the topless towers of Ilium?"

JOHN

Are we trapped in another one of those absurdist plays, where the characters repeat everything ad nauseum?

NATHAN

Take your time to adjust to the scene. I chose this one particularly because of the repeating lines, some that you yourself know by heart.

JOHN

Everything seems like it is lit up with your electronic lights... Look you, what just happened there? (*pointing to the stage, where ALAN suddenly appeared*)

NATHAN

Just another actor. Seems like he will soon be repeating the same lines as before.

JOHN

But what of the second one, before him, who just vanished?

NATHAN

It probably just means the action was cut from one scene to the next, using filming editing transitions.

ALAN

"Was this the face ..."

JOHN

This is an abomination of what plays were like in my era; allow me to make it stop.

ALAN

“... that launched a thousand ships ...”

JOHN

STOP! Blasted simulation!!

ALAN

“... and burnt the top ...”

NATHAN

Pause.

*Everyone except for JOHN and NATHAN holds their position; both JOSEPH and GEOFFREY are frozen as they exchange despairing looks at each other while ALAN keeps an orator's stance.*

JOHN

Where are we?

NATHAN

Not in any Christopher Marlowe play, I can assure you. It's the movie I was telling you about, *Shakespeare in Love*.

JOHN

This screenplay that Stoppard and Norman Markham wrote is being staged with lines from Marlowe. I think more than just historical liberties are being exercised here.

NATHAN

Trust me on this one, John; I watched this many times when I was growing up. It was one of the first retroprojected full-length movies to win the Isola di Vecchio Award at Venice.<sup>62</sup>

*JOHN digs his nails into the wooden beam in front of him, peering over the edge to the pit below.*

JOHN

And none of this looks natural; the entire playhouse is hollow, like there is too much light coming in from all angles, yet none of it from above ...

NATHAN

Such a highly awarded movie; I am surprised I didn't mention it when we started researching Stoppard. This film

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<sup>62</sup> The presently unnamed award for VR productions at the annual Venice Film Festival takes place on the Lazzaretto Vecchio Island, and the name for the award most likely will derive from this place of honour among VR pioneers. *Shakespeare in Love* winning the coveted Isola di Vecchio was a major upset for supporters of the much more expensive retroprojection remake of *Xanadu*.

NATHAN (*Cont'd*)

was a family favourite we would watch on the old DVD player. It became a retroprojected VR experience after the screenplay was adapted into several stage musicals in the twenty-tens.

JOHN

A highly awarded what? This is unlike any play I have heard or seen, within your DVR machine or out. The actors are painted up like they belong in a tapestry, except for that crowd down there with the strange black jewellery.

*He gestures below to the open courtyard, currently unoccupied from NATHAN's point of view.*

NATHAN

Please describe what sort of people you see "down there."

JOHN

They are better suited for an argosy of tallships than most stagehands I have seen. They are tangled in a mess of rigging, and many have these uncomfortable black carbuncles pressed against the side of their heads.

NATHAN

Incredible! And what are these people wearing?

JOHN

Some of the strangest outfits I have seen: mostly blue leggings, an assortment of dyed fabric, and everyone seems to be carrying a large cumbersome object, yet they mostly stand quietly watching the actors on stage.

NATHAN

If I could see what you are seeing, it sounds like they are the film crew working on a studio stage.

JOHN

Film crew? You had better explain.

NATHAN

Those people are all artists, like painters and sculptors, except their canvas is a photographic frame, shaping light and shadow. When it is projected together with others in a film reel, it produces a motion picture, sometimes called a movie. I never got to see a crew working; all the video made in my day was created on computers.

JOHN

Of course, all of this is a scenario being run by your quantum computers, so I should learn by now not to trust anything that I see. But for a moment, you piqued my attention with the mention of projection. It sounds like this film crew are alchemical apprentices.

NATHAN

I really wish I could see them to be sure, but my auntie used to work as part of a film crew.

JOHN

Shall we go down and see if I can spot her for you?

NATHAN

Thanks, but I'm a bit more curious about what's happening above.

JOHN

Let me guess, something to do with Shakespeare and his mistress Viola?

NATHAN

*(Pointing)* I think that is supposed to be him, there with the blue leather jacket.

JOHN

Hardly looks like the man at all. Who sits beside him?

NATHAN

It says on the cast list here ... *(refers to the control panel)* that's Phillip Henslowe.

JOHN

Phil? This is madness!

NATHAN

That's where I recognise him from: the Australian actor Geoffrey Rush plays Philip Henslowe from those Pirate movies.

JOHN

I knew the man in charge of the Rose very well, and he looks nothing like this Austrian actor Rush. Pirate, however, is a very fitting epithet for the impresario.

NATHAN

They are just actors playing a part like the man down on the stage.

JOHN

And I suppose this film crew that I can see and somehow you cannot have a role to play in what I can only imagine is some elaborate virtual reality sorcery.

NATHAN

In a way, yes, filming a movie was a very primitive form of VR. A movie ... motion picture company would get actors to perform scenes in front of a camera; the developed filmstrip would go to an editor who would put together all the scenes into what is called a movie, and then people would watch the finished product on a screen in what used to be crowded movie theatres.

JOHN

Were these screens anything like the one you have at your fingertips?

NATHAN

This is where most movies ended up being watched, but right up until the end of the twentieth century, theatre-goers would gather in darkened screening rooms to watch projected images. As far as I can tell, it was much like how playgoers came out to see shows that you put on.

JOHN

Can you call up the scene we are currently watching on that floating panel?

NATHAN

Let's see. (*taps in the letters on the panel*) These buttons on the screen allow us to go forward in the movie, rewind and pause.

*In a few moments the two of them are looking at the same scene that starts with a close-up on MARK.*

MARK

“W-w-w-w-was th-th-this th-th-the f-f-f-face ...”

JOHN

Something is wrong with your quantum computer.

GEOFFREY

“Very good, Mr. Wabash. Excellent. Report to the property master.”

*Nathan taps the panel, pausing the video playback.*

NATHAN

Seems to be working as it should. These are just parts of the movie that we are witnessing as if we were the camera capturing a wide-angle shot.

JOHN

Please explain if it just your retroprojection or the way these screenplays generally work: is one actor supposed to disappear and another take his place?

NATHAN

It is typical of film transitions; I believe it was called a montage, but I would have to look at the shooting script to know for certain.

JOHN

And somehow these crew people down below make all these pictures come to life on screens much like this, towering over an audience or floating in front of your face, based upon a script written by Stoppard ...

NATHAN

He was brought on as a kind of script doctor, and became the finished film’s co-writer – award-winning, too.<sup>63</sup>

JOHN

True, most of the lines I have heard so far are Marlowe’s.

*A series of taps on the control panel reveals the shooting script.*

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<sup>63</sup> The original speculative script was sold to a different studio by screenwriter Marc Norman, and when Miramax took over the production, playwright Tom Stoppard was hired to give the dialogue and plot more of an authentic Elizabethan feel according to Buskin’s (2004) book *Down and Dirty Pictures*. Unfortunately, the award-winning collaboration between screenwriter and playwright, brought together by the scheduled director Edward Zwick, fell out of favour with most audiences concern with unfair awards-campaigning and the personal scandals for the producing team.

NATHAN  
Shall we proceed with the simulation?

JOHN  
If watching will make more sense than your complicated explanation, then yes, proceed.

NATHAN  
Unpause!

*The scene resumes exactly where it left off, with ALAN finishing his lines, followed by a quick “succession of would-be actors [who] offer their version of Marlowe’s lines, each as inappropriate as the other.”*

JOHN  
I don’t think I can take much more of this.

*“Among the [would-be actors] is a small URCHIN (JOE) with sandy-coloured hair.”*

JOE  
“... the topless towers of Ilium?  
Sweet Helen, make me immoral with a—”

GEOFFREY  
“(bellows) Thank you!”

*“JOE leaves glowering furiously, and is replaced by a beanpole of a man (MARK).”*

MARK  
“W-w-w-w-was th-th-this th-th-the f-f-f-face ...”

GEOFFREY  
“(unexpectedly) Very good, Mr. Wabash. Excellent. Report to the property master.”

*JOSEPH looks at GEOFFREY in outrage.*

JOHN  
Pause!

*The action freezes again, just as GEOFFREY is about to deliver his apology to JOSEPH.*

JOHN (*Cont’d*)  
Who was the child with the sandy hair on stage a moment ago?

NATHAN

In this scene he is written as Urchin, but you'll never guess whom he actually is.

JOHN

He had the look of someone out of his depth on stage; please tell me it is not this Viola that Shakespeare will soon fall in love with.

NATHAN

Trust me, it is even stranger that you can imagine: that Urchin character, played by the actor Joe Roberts, is supposed to be you, John Webster!

JOHN

I see that I had this coming from the very start, you scoundrel. On whose authority do these screenwrights and film people tell the story of my life and get it so terribly wrong? I am very nonplussed!

*The retroprojection simulator, as most artificial intelligence language processors seem to do, mishears JOHN's last word and unpauses the scene's playback.*

GEOFFREY

"Well, I to my work, you to yours. When can I see pages?"

JOSEPH

"Tomorrow."

*GEOFFREY leaves him.*

NATHAN

I am sure Julius Caesar and a host of other historical figures, duchesses and devils alike, would be asking the same question about you and your plays.

JOHN

PAUSE! (*the film actors freeze in their positions again*) Do you mean to tell me that all I have for a reputation in your movie virtual reality is an urchin-like boy on the stage speaking a few lines from Marlowe, auditioning for a play I was never cast in, and still once again, I am upstaged by a lesser version of the great William Shakespeare?

NATHAN

Patience, please. There is more of your character to come.

NATHAN (*Cont'd*)

Still, I must admit that this scene is one of my favourite parts.

JOHN

Parts?! This is nothing like what goes on with putting on a play. What? *Romeo and Juliet* at the Rose? It never happened like this.

NATHAN

What of artistic licence, of historical reimagining, of the many possibilities, like Cicero and Casca? Or your Cleopatra?

JOHN

We are already at the farthest reaches of what could just barely be called possible. *Romeus and Juliet* was a mouldy old Italian novella and the Chamberlain's play rode on the coattails of the much more enjoyable *Titus Andronicus* – Hollering Holland gave a commanding performance of furious Titus, and it is a shame he only returned in the minor role of Lord Capulet. Is any of that in this movie of yours?

NATHAN

I wish that we could just watch and you'll see for yourself. Unpause.

*The action resumes on the balcony, with a pensive JOSEPH lost in thought.*

JOSEPH

*“(a prayer)*

*Please God.”*

JOHN

Who enters on the stage below. Let me guess, young Rob Goffe,<sup>64</sup> looking nothing like the boy who played Juliet.

*“JOSEPH sits brooding alone for a moment. Then he realizes he is being addressed from the stage” by GWYNETH.*

GWYNETH

“May I begin, sir?”

---

<sup>64</sup> Shakespeare scholar Halio (1998) writes convincingly that Elizabethan actor Robert Gough (sometimes spelled Goffe) would have played the role of Juliet opposite Richard Burbage's Romeo when the play premiered in 1593. Astington (2010) is less certain about the exact roles many of the actors performed but does record Gough's active participation in Lord Chamberlain and King's Men performances.

NATHAN

This is the scene where Shakespeare finds his Romeo and falls in love, another favourite scene.

JOHN

It had better not be what your favourite movie tries to pass off as a young Burbage playing Romeo.

*“JOSEPH looks at the stage and sees a handsome young man, with a hat shadowing his eyes.”*

JOSEPH

“Your name?”

GWYNETH

“Thomas Kent. I would like ...”

JOHN

Never heard of him, why are you so fascinated by this fabrication?

NATHAN

Ssh, this is the magical part.

*“JOSEPH can hardly manage a nod.”*

GWYNETH

“What light is light, if Silvia be not seen,  
What joy is joy, if Silvia be not by? ...  
Unless it be to think that she is by  
And feed upon the shadow of perfection.”

JOHN

Now this Thomas has somehow transformed into Harry Condell, performing lines from *Two Gentlemen*. It is all a travesty of what goes on among our players. Does your computer simulation go out of its way to get things incorrect? All of this is false!

NATHAN

Then let it be so! Geez, you should be proud to know that you and your fellow players live on hundreds of years in the future in a movie that was pretty fun, even with its many historical inaccuracies. The first time I heard about you was in this movie, the boy urchin ushered off the stage, so if you can put a sock in it and enjoy the scene that is playing out, you might learn a bit more about what motivated me to

NATHAN (*Cont'd*)

retroproject both of us into the scene. Thomas Kent is Viola in disguise!

JOHN

So what I am supposed to accept is that the lady disguised on stage is the love of Shakespeare's life, Viola, even though he's had children by his wife Anne and he was generally known to be beholden to the mother of his children.

NATHAN

That is one way of looking at it, yes, but this story is a different type of reality.

JOHN

It is rather painfully obvious that it is not a reality with which I am familiar. Tell me more about this Viola.

NATHAN

Gwyneth Paltrow, who won an Oscar for her role, plays the dazzling star of the movie.

JOHN

And how come she is not going for the role of Juliet, without the disguise?

NATHAN

It plays out that way by the end of the movie; she takes over the role of Juliet in a series of contrived, comedy of errors-type events.

JOHN

Contrived indeed. But I am still confused by the need for a disguise.

NATHAN

Women weren't allowed. Female actors were banned from being on stage until well after your historical epoch ended.

JOHN

At the Rose Theatre, of all illustrious places?! What a strange fiction<sup>65</sup> you have created here, with your puritan account of how many women played roles on our stages.

---

<sup>65</sup> Williams (2014) argues that as early in Shakespeare's career as *Taming of the Shrew* (c. 1590), women were permitted to perform on stage. Astington (2010), Tribble (2011) and Parolin (2012) each make the case for female players in place of the boys who are supposed to be the only actors able to play female roles in Elizabethan playhouses.

NATHAN

Strange indeed! Perhaps it has something to do with female literacy back in your day, where more boys than girls attended school, making boy apprentices more commonly hired by playing troupes, allowing for boys to dress as girls, or in Viola's case, a woman to dress as ... where did she go?

*As the two retroprojecting researchers continue their conversation, GWYNETH abruptly leaves the stage, followed by a swift exit from above by JOSEPH.*

JOHN

A woman dressed as man tended to get a bit too treasonous during Queen Elizabeth's reign, but still happened. What makes this scene so special?

NATHAN

I used to watch films like this with my uncle, back in the digital days before the Hackstop. Even though computers and smart TVs could call up virtually any movie you'd want to see, my auntie and uncle would always bring along his collection of DVDs – these flat round discs you needed to insert into a machine to watch a movie.

JOHN

As one does. Go on.

NATHAN

It occurred to me when I saw this movie for what seemed like the fiftieth time how people in the audience can step inside the movie, much like how a playgoer can step onto the stage and take part in the action.

JOHN

Like in the *Burning Pestle*?<sup>66</sup>

NATHAN

More along the lines of Buster Keaton, or *Overlook* scenes in *Ready Player One*.<sup>67</sup>

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<sup>66</sup> Beaumont's (2004) comedy performed in 1607 by a children's troupe at the Blackfriars Theatre before the indoor theatre became the playhouse of the King's Men. The initial staging of *The Knight of the Burning Pestle* was not successful, but later became popular during the Restoration period.

<sup>67</sup> Keaton's (1924) silent film *Sherlock Jr.* includes a sequence where a movie projectionist dreams of being inside several different movies playing at his movie theatre. Spielberg's (2018) movie *Ready Player One* has characters use virtual reality to interact with remastered or, as I argue, retroprojected scenes of the Overlook Hotel from Kubrick's (1980) *The Shining*.

JOHN

I almost understand what you mean, now that you are speaking in the language of show.

NATHAN

Good, because it brings us one step closer to finding an answer to one of my research questions: what compelling force fundamental to theatre, according to Anne Bogart, can be applied to VR?

JOHN

Empathy ... ritual ... spectacle ... those forces?

NATHAN

A few of them, at least. The ones that seemed to be the most compelling – education and participation – are almost a given when we switch from theatre practices to digital media, as these scenes from *Shakespeare in Love* demonstrate.

JOHN

There doesn't seem to be much of anything happening in this scene; is this what participation in virtual reality is supposed to look like?

*Both men peer down at the empty stage.*

NATHAN

The actors must have gone outside, but we can follow them with a simple teleport.

JOHN

Perhaps that is what happened to the film crew as well, but they left most of their baggage behind.

NATHAN

In film it is called a jump cut, where two scenes are built one after another, jumping from one location to the next. Seems like the scene we were watching played out and the action moves to an exterior shot.

JOHN

Should I even bother asking if any of this follows the Aristotelian unities?

NATHAN

I not sure those unities were strict law for theatre even back in Ancient Greece, but definitely an antiquated narrative device in the age of cinema.

JOHN

So I won't bother asking. I see the film crew has taken with them their artificial daylight. Or is this where we the audience have to participate by lighting virtual candles?

NATHAN

You mention that Bogartian force participation, yet in VR terms, you must try thinking in terms of interaction. I mentioned before how the audience, us, can teleport freely from one location in the story to another.

JOHN

But how will anyone understand what is happening in the story if one arbitrary scene does not follow its kin?

NATHAN

We learn as we retroproject throughout the play, one of the imprints of digital tech on the timeless story of love and loss, where the narrative structure teaches the audience how to view to the story. It is no different, actually, than having an actor speak as Chorus, as it just so happens in Shakespeare's original play. Filmmakers rely on subtle visual cues to teach that have also worked their way into the retroprojection. Here we go, we should be able to catch up with the story –

**Ext. Rose Theatre – Stage Door – Day.**

*Little taps on the control panel teleport NATHAN and JOHN into a new scene outside the brick structure of the Rose Theatre. They witness “JOSEPH [as he] looks down the alley – no THOMAS. He turns away. JOE, the short-lived [URCHIN], is sitting in the alley.”*

JOSEPH

“Better fortune, boy.”

JOHN

It is common for these movies to become like so many portraits of actors standing alone?

JOSEPH

“(pleased)  
You admire it?”

NATHAN

The pacing of the dialogue comes with the edit, how the camera balances each shot with its reserve shot.



**Fig. 5 Collage of Shakespeare (Joseph Fiennes) and Webster (Joe Roberts) interacting in a scene in Madden (1998)**

NATHAN

You look amazed, John. You didn't expect to find a version of yourself in this retroprojected story?

JOE

"Plenty of blood. That is the only writing."

*JOHN leans in to have a closer look at his caricature while "JOSEPH backs away, unnerved by the boy."*

JOE (Cont'd)

"Wait, you'll see the cat bites his head off."

*JOHN glares at NATHAN. Without a word, they teleport back into the Rose Theatre.*

**Int. Rose Theatre – Stage/Auditorium – Day.**

*The stage and yard in front are full of costumed bodies. Some familiar faces like JOSEPH and GEOFFREY watch from the floor as “on stage [BARNABY, BOB and MARTIN] the actors carry their parts.” JOHN and NATHAN mingle among these movie’s characters, unseen by their virtual scene partners.*

BARNABY

“See where he comes. So please you step aside;  
I’ll know his grievance or be much denied.”

BOB

“I would thou wert so happy by thy stay  
To hear true shrift. Come, madam, let’s away.”

*“Onstage BOB and MARTIN make their exit.”*

*“Offstage, JOSEPH appears next to GEOFFREY.” Noticing this motion in the yard, JOHN moves to hear the following conversation.*

JOSEPH

“Cut round him for now.”

GEOFFREY

*“(not understanding)*  
What? Who?”

JOSEPH

“Romeo.”

*JOHN positions himself directly between JOSEPH and GEOFFREY, staring into JOSEPH’s eyes that do not register his presence in the ghost mode of retroprojection.*

JOHN

So this is the face of what people in your future think is  
Shakespeare?

NATHAN

It wasn’t too far off from portraits and sketches we have on  
record, but the film plays with the iconography of the Bard.<sup>68</sup>

JOHN

Bard, is that what he’s become?

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<sup>68</sup> The original epitaph appears in Ben Jonson’s dedication to the first collection of Shakespeare’s plays, calling him “the Swan of Avon.” It wasn’t until the eighteenth century when actor David Garrick coined the phrase “Bard of Avon.”

GWYNETH

“Is the day so young?”

*“The voice is GWYNETH’s. JOSEPH turns back to the stage and sees him. Today GWYNETH has a wig as well as his small moustache.” JOHN walks through the retroprojected avatar of JOSEPH so he can continue to look him in the face.*

BARNABY

“But new struck nine.”

JOHN

That sounds like one of Jonson’s affectations, that thing about Shakespeare being “for all times”, wasn’t it.

NATHAN

Yes, I believe it comes from the dedication in the First Folio.

JOHN

And my character, the Urchin playing a version of my self, is destined to remain in history’s alleyway. This is what you wanted to show to me?

NATHAN

Don’t get so worked up about it. Shakespeare had his time to shine, and so do you. The boy comes back later in the movie to help the story reach its climax.

JOHN

Spare me that scene. I never really got to interact much with the actual Shakespeare when he was alive, other than watching him on stage once in a while in a play that I wrote.

NATHAN

A rare honour not many can brag about.

JOHN

But I see behind the mask of this actor stepping into his role. He is no more an homunculus than I am.

GWYNETH

“Out of her favour where I am in love.”

JOSEPH

*“(interrupting)”*

No, no, no ... Don’t spend it all at once!”

*“The rehearsal stops.” By this point JOSEPH has climbed up on the scaffold to address GWYNETH while JOHN and NATHAN remain where they are.*

JOHN

He is I, and whatever struggle this Shakespeare character goes through, falling in love or what have you, he represents an idealised form of a playwright from my place in history.

NATHAN

Glad to see you are adapting to the persona archetype.

JOHN

Your fanciful future language will not deter me from my argument, and strong belief that by watching this man fall in love with that gentlewoman Viola is somehow capturing the love for theatre all of us who write also feel.

JOSEPH

“... What will be left in your purse when he meets his Juliet?”

*Nearby JOHN and NATHAN, a surprised GEOFFREY interjects.*

GEOFFREY

“Juliet? You mean Ethel.”

NATHAN

A very powerful conclusion that you’ve dawned upon, and what makes my retroprojecting research transcend the unconscious uncertainty to gain a space, time and sense of self that would otherwise go unobserved.

JOHN

A rather lengthy way of describing what we have already seen on the Globe stage with Heminges and Burbage acting in *Caesar*. The mind and emotions these actors conjure up are imparted to us the audience, even as this quantum carriage speeds ahead to who knows where else.

NATHAN

Is this your way of asking about the next retroprojection I’ve got queued up?

*Using the same gestures NATHAN uses to call up the control panel, the surrounding images begin their fading out process while the voices of the characters from the movie get quieter.*

JOSEPH

“Go once more!”

*Just before all goes dark, a yet-unseen retroprojected character “BEN comes out of the wings, frowning over his manuscript.” His sudden appearance startles JOHN.*

BEN

“Will ... Where is Mercutio?”

JOHN

And who is this supposed to be, a young Robin Armin?

*The retroprojection’s fade out has got to the point where it is no longer possible to distinguish one face from another. JOHN turns his attention to NATHAN, both of their images sharp and defined inside the now darkened Lazaridis Theatre of Ideas.*

NATHAN

That was supposed to be Edward Alleyn, playing the role of Mercutio in the play within a movie ...

JOHN

Was that supposed to be Ned? Actually pretty close to how he was in his natural life.

NATHAN

A breakthrough! So for a moment your mind was taken back to 1593.

JOHN

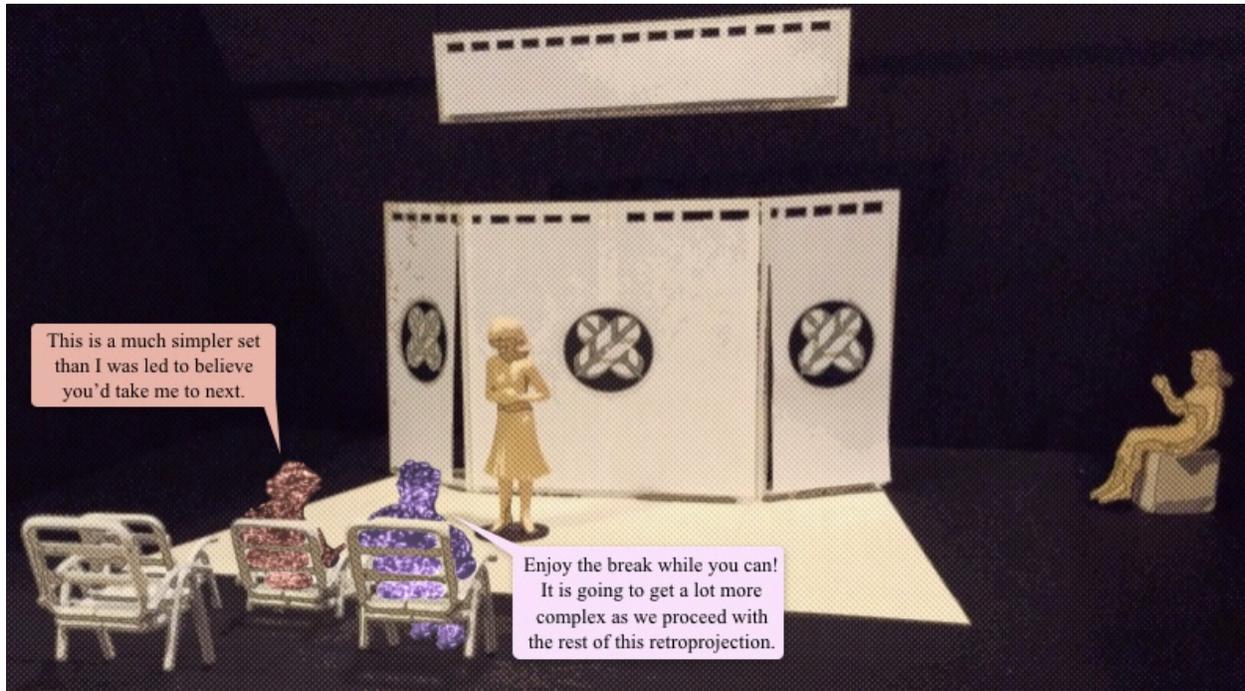
I hope you are not implying that I reverted back to my childhood, like that boy in the alleyway. But yes, catching a glimpse of that actor’s face made me feel as if all of these simulations may be true.

NATHAN

It is a good frame of mind to exit on, since the next retroprojection will take you beyond any part of space-time you will be able to recognise.

## CHAPTER 3 – STUDIO 1398, VANCOUVER

### Virtual Participants/Content



**Fig. 6 Nathan and John visit a preliminary set for *Okuni: Mother of Kabuki***

JOHN            How long are we expected to sit here?

NATHAN        This stage is perhaps a bit out of your comfort zone, but it is a model of a Japanese outdoor stage designed for a small indoor theatre in my hometown. It is meant to capture the omatsuri feel of seventeenth century Kyoto, Japan.

JOHN            Is it typical to have statues and what feels like broken chairs on your Kyoto stage?

NATHAN        This is just a model or maquette put together by the stage designer, Shizuka Kai, early in the production. Those statues are merely figures to give her maquette a sense of scale.

JOHN            I had seen such models used by Inigo Jones, yet his were more for the court masques and had gaudy-coloured frescos from Roman mythology.

NATHAN        This retroprojected visit is worlds away from what you might expect from the open-air theatre of your day, or even the film production's studio stage we just visited.

JOHN It is certainly darker than most theatres I've been inside, and feels more like being at a lecture hall at the Inns, or inside your Perimeter.

NATHAN Keep in mind that this is still only the model that lighting and video projection designers worked from to give the show more texture and depth.

JOHN More of these lights and videos from your future – are there any attempts to connect with my work, in my world?

NATHAN Actually, this dance originated from around the same time as you were just getting started writing city comedies with you collaborators: the late 1590s.

JOHN That may be so, yet it gets us no closer to understanding what is virtual about anything we have looked at so far.

NATHAN You do recall the seven fundamental forces?

JOHN Most of them, starting with empathy and ending up with alchemy – quite the scholarly journey. But, I don't see how from there it leads to a maquette for a Japanese dance staged at some numbered studio.

NATHAN Here's the thing. This performance and all its stages demonstrate how VR remediates the forces that Anne Bogart writes about for theatre and brings them in line with the second wave of VR.

JOHN What knowledge does your Anne have of VR?

NATHAN She mentions it here and there. One of my favourite quotes has her connect the transformative ability of the stage, much like the visions that appear in older forms of VR: "Your body's movement enacts a digital change in the environment. With virtual reality this happens electronically. On the stage it can be accomplished physically."<sup>69</sup>

JOHN So which one of these statues is Anne?

NATHAN Neither. This one stands in for the dance choreographer Yayoi, and the other one sitting over there is the pianist Sara. I'm not sure if Anne ever came to Canada, but she was greatly influenced by the Japanese theatre artist Tadashi Suzuki in Toga Mura.

JOHN This artist is where the Kabuki dance came from, where this Kabuki dancer Yayoi came from, I assume? This much I am able to follow you, but if you expect me to go over the same seven forces related to a dance I've only seen a maquette for, I'm afraid you are at risk of losing me for most of this remediation process.

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<sup>69</sup> Bogart (2007), p. 91.

NATHAN Bogart's connection to Japan had more to do with the founding of her own theatre company; her work with another American director Tina Landau<sup>70</sup> produced their innovative viewpoints for directing actors on stage.

JOHN So this list of names you mention are people I should empathise with for their work in the theatre, yet none of them are these statues. Why did you bring me here, and not one of your Annes or Tinas?

NATHAN It's okay. Empathy is always a tough concept to start out with, especially since we are still in the static part of this VR simulation. But, as we move forward into the more animated part of this retroprojection, I know you will be able to tell me how well each force, based on your expertise in stagecraft, changes as it becomes virtual.

JOHN Just like that Frenchman Artaud claims, a double world mirrored in the mind.

NATHAN We often seem to be circling back to this Artaud's fascination with Asian art,<sup>71</sup> I see, and perhaps this is why we also need to think about the theatrical force of ritual and how it relates to VR.

*The setting changes from the maquette to a dimly lit theatre space inside Studio 1398.*

NATHAN This stage is what became of the model. Shizuka's design was made to match the actual size of a matsuri or festival stage, usually set up nearby a shrine.

JOHN Am I to understand this Kabuki is part of some religious event that takes place in the dark, much darker than most of the stages you have shown me? If I were not mistaken, there is another one of those film crew people as from before.

NATHAN The number of stagehands working this show was pretty light: a couple of costumers behind those curtains, the stage manager and technician tucked away in their booth off to the side of the audience.

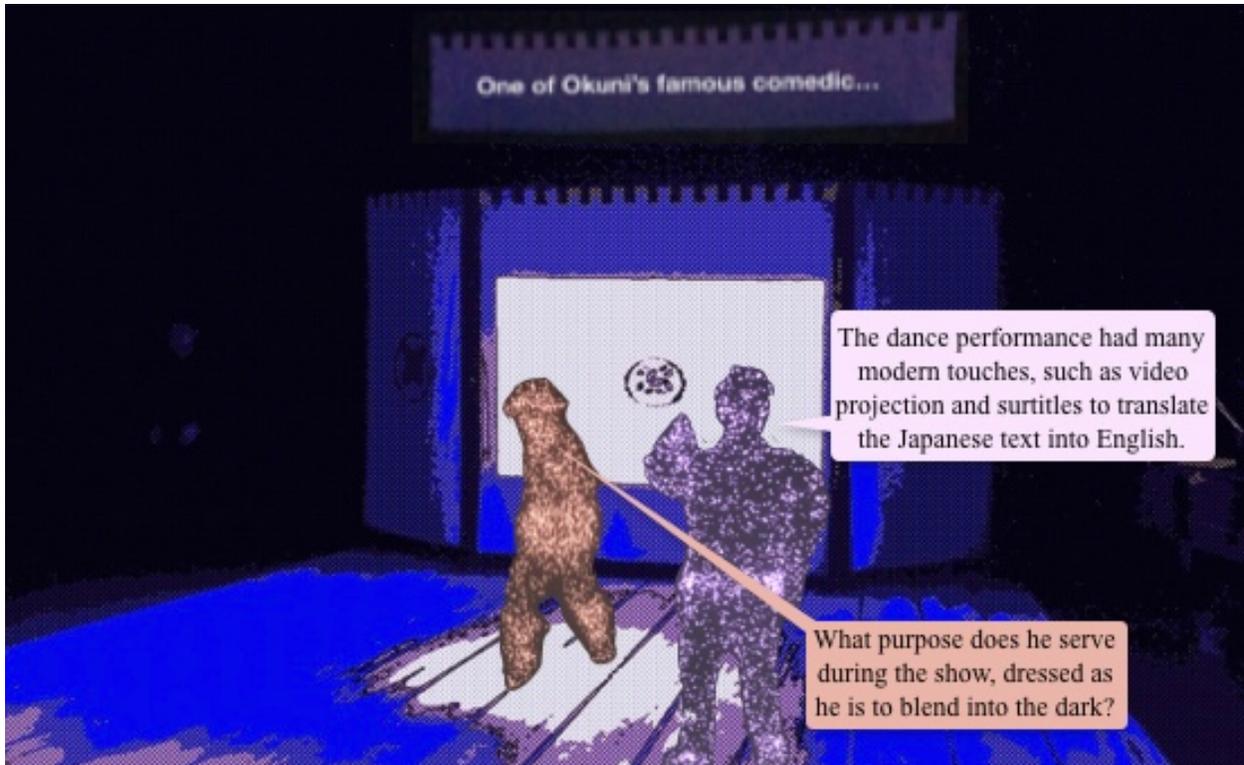
JOHN And that ominous person in black, with his face covered like the hangman?

NATHAN Could be any one of the stage hands during the tech rehearsal.

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<sup>70</sup> Bogart and Landau (2006) is the introduction to viewpoints and composition, two theatre techniques related to the Suzuki Method that Bogart experienced in Toga Mura, Japan. The viewpoints technique originated with American dance instructor Mary Overlie, who devised six viewpoints for dynamic choreography. Landau describes the influence of Overlie in her conversation with Bogart (2012) as follows: "The work that Mary was doing seemed to me to be far more related to breakthroughs in quantum physics" (p. 374) when compared to the classical staging techniques for dance.

<sup>71</sup> In addition to writing about Artaud's experience with Balinese dancers, Singleton (1998) points out that he had already "been exposed to Kabuki while working at Dullin's *Atelier* theatre school in 1921" (p. 42, emphasis in the original).



**Fig. 7 Studio 1398 with lighting, video projection and the Kurogo stage right**

NATHAN Think of him more like a backstage helper called Kurogo<sup>72</sup> that occasionally makes an appearance on stage, hence the black outfit. For this production, he also acted the part of the narrator.

JOHN I've never understood the need to have a storyteller onstage filling in the gaps for what the actors should be able to express for themselves.

NATHAN Another place where you and Artaud would agree. But in your case it was not too uncommon for theatre in your part of the world to have the Chorus explain things to the audience?

JOHN I never employed a chorus character, but admittedly yes, I have seen a few plays with this unnecessary authorial intrusion.

NATHAN The Kurogo and musicians were part of the show, noticed by the audience but not noticeable enough to interrupt the storytelling flow. It also adds a special solemnity to the performance.

JOHN He seems to be part of a slow-moving spectacle. Is this really supposed to be a dance?

<sup>72</sup> A traditional Japanese name for unseen people on stage, literally translates as “black clothes” but sometimes gets called *kuroko* or “child of darkness” as in Shigematsu’s (forthcoming) play.

NATHAN It may not be the same quick-paced jigs you would have seen on your stages, but the same thoughtful and deliberate movements relates to the “poetic way of visualising stage expression”, as our friend Artaud wrote.<sup>73</sup>

JOHN Yes, they can take all the poetic time they want, yet when will I see the virtual projection in this show?

NATHAN Give it some time. Let it emerge. Unlike your playwriting, the scene does not suddenly transform with the turn of a phrase or a character announcing he has arrived at the ancient abbey.<sup>74</sup> Where is that sense of aesthetic arrest, a place to stop and wonder?

JOHN And I suppose there is some educational value in the VR translations. Something to do with the remediation you talked about earlier?

NATHAN Yes and no, because they instantly give the audience what they want, yet take away from some of the vital compelling force of being confronted with the unknown and having the mind race to figure out what is going on.

JOHN You have got me exactly where this hypothetical audience might be, my mind racing to figure out how any of this connects to the research journey you are embarking upon with me.

NATHAN Just think of it as some questions I would like answered, and you are the best person who can ...

JOHN But I am not a person, in fact, but a simulation that you conjured up. Why not this Suzuki person, if you are looking at Kabuki, or I’m sure Anne would have a better understanding of what is happening on this foreign stage.

NATHAN There is a valid reason why I selected you as ...

JOHN Not as far as I can tell. If my mind is simply the product of these quantum computers, why not have this mind filled with knowledge about Kabuki or what have you? Save me the trouble of seeing what is supposed to be a younger version of myself with that devil Shakespeare lurking over me?

NATHAN Please let’s see what emerges between theory and inquiry<sup>75</sup> so we can both work through the design. Switching participants is not how any of this works, not for

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<sup>73</sup> Artaud (2001) completes his comment as follows: “leads us to turn away from present-day theatre’s human, psychological meaning and to rediscover a religious, mystical meaning theatre has forgotten” (p. 35).

<sup>74</sup> As Delio does at the start of Act V Scene iii of *The Duchess of Malfi*.

<sup>75</sup> Leavy (2017) allows for slippage in the data collection approaches for her fiction-based research, since “they all require drawing on the imaginative to varying degrees” (p. 199) that allow for the reader to engage empathetically with the fictional participants.

the purposes of my research! What good would it do me to create a puppet that thinks and observes only the things that I put into such a holographic mind? I barely had a hand in mapping out the neural network, other than inputting the name John Webster into the quantum database, and these machines created what passes for you based upon millions of words you wrote for actors to perform, plus what four centuries of scholars believe about your personal views.

JOHN           Is this not any different from me reading any number of books when I start writing a play? You have me here in this simulation, and yet you seem more interested in knowing what was happening in Shakespeare's mind. Why not retroproject him here and ask his your research questions?

NATHAN       Believe me, it was one of the first dozen or so attempts, yet the data on Shakespeare was too inconsistent, corrupted almost to unintelligible results with all the forgeries and the entire authorship controversy<sup>76</sup> surrounding his work. Not even the Perimeter's quantum computers could calculate his consciousness.

JOHN           So you are suggesting that my life and literary output are simple enough for even the most basic computer to recreate.

NATHAN       Hardly that at all, and don't fret. What may seem like a dearth of evidence about you is instead a sharper focus on what matters most ...

JOHN           Which is what, precisely?

NATHAN       The possibility that you are a chronesthete<sup>77</sup> like me.

JOHN           Do I even want to know what that means at this point?

NATHAN       Probably not, but the simplest way of putting it is your ability to experience past and future events, as if your mind can travel through time. It is the mental equivalent of all the retroprojections we've done so far.

JOHN           And you have this ability too?

NATHAN       It is one of the reasons why I am here at the Perimeter Institute, the flexible temporality of my consciousness that can be in two different space-time locations at once: here and now at the Perimeter, and there and then in Studio 1398.

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<sup>76</sup> Shapiro (2010) and Edmondson and Wells (2013) critically analyze much of the confusing misdirection in Early Modern literary studies that claim Shakespeare is not the author of the plays attributed to him.

<sup>77</sup> Derived from 'chronesthesia' studied in Russell, Alexis and Clayton (2010), who investigate the cognitive abilities to perceive the future as subjective time. It relates to Jung's (1990) interest in the pre-conscious mind of children before the age of three, also reported in von Franz (1980a), who notes Jung's interest in the dreams of young children: "the earliest dreams of a child sometimes anticipates the whole life" (p. 94).

JOHN           Remind me of the where and wherefore you brought me here when your *chronesthetic* mind could have wandered wherever you wanted without my assistance.

NATHAN       But it is not my mind that matters, is it? In setting up these retroprojections I needed to have a comprehensive understanding of what happened and yet needed to have someone experience it as if for the first time. Is this not what you did when a play you wrote is about to be staged – find someone not attached to this project to view it with fresh eyes and an open mind?

JOHN           That was the job for our audience whenever there was a new play to be heard. And it still seems a bit suspicious that we both have chronesthetic minds, as you claim, when you most likely designed my mind and self the same way this darkened stage was built.

NATHAN       It is a wonderful analogy to think about, especially since this retroprojected place is where one of the first attempts to remediate a stage performance as a purely virtual experience took place.

JOHN           Virtual Kabuki?

NATHAN       That was the name of the project in the early days, going back to around the time of my infancy.

JOHN           I really thought that I was making the phrase up. Are you certain that I am the right sort of person to be participating in this scholarly research?

NATHAN       Without a doubt.

JOHN           And Shakespeare with all his surviving plays, poems and eternal reputation wouldn't be better?

NATHAN       But you are the author and artist wise enough to drop a clue into one of your plays; not even the illustrious Bard of Avon put the word 'quantum' in his play.

JOHN           And I did?

NATHAN       Act V, Scene iii of *The White Devil* ...

JOHN           Yes?

NATHAN       Just before Lodovico strangles Brachiano, the disguised conspirator Gasparo tells the doomed lord, "*cogita quantum habeas meritorum*" before the two murderers reveal themselves.

- JOHN           “Consider how many good deeds you have done” – that’s what you think I wrote? I don’t even remember where I got the phrase when I wrote it down.<sup>78</sup>
- NATHAN       Even more intriguing, since it makes you the creative type Jung writes about who can’t consciously “see the wealth of possibilities within” yourself, or the materials you’ve read – one of those “unconscious aptitudes”<sup>79</sup> that make your plays timely yet timeless!
- JOHN           You certainly have a habit of reading more into a “turn of phrase”, as you call it. Such circumstantial evidence would have me thrown out of court, were I still a lawyer.
- NATHAN       It is no matter. You were in the creative process, and because of this one word, I was able to find you among the hundreds of other playwrights throughout history, and the ten thousand plays you and your kind wrote. What may seem like just mere chance, easy to overlook, is evidence of some synchronicity at work.
- JOHN           And for being the one-in-a-millionth author in this rare selection process, I should feel honoured?
- NATHAN       Whether you do or you don’t, I feel that you play an important part as a participant in my arts-based research.
- JOHN           Are you going to explain your scholarly process at some point?
- NATHAN       No time like the present, as it were.

### **Arts-Based Genres and Practices**

Shakespeare was invigoratingly wayward. He could, as in *Julius Caesar*, kill off the title character with the play not half done (though Caesar does come back later, briefly, as a ghost). . . . He constantly teased reality, reminding the audience that they were not in the real world but in a theatre.

Bryson, 2007, p. 103,  
italics in original

Arts-based research in social sciences and humanities has, as my introduction indicates, a history closely following the development of virtual reality over the course of the last few decades of the twentieth century, and ABR has had its own renaissance during the second decade

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<sup>78</sup> The Latin passage, as the editor Gunby (Webster, 1986) notes, was copied from a passage in Erasmus’ *Funus* and is a dialogue of two people preparing for their deaths.

<sup>79</sup> Jung (1981) cited in Fidyk (2016).

of the twenty-first century. Far from being the first scholars to employ the methodology, Barone and Eisner's (1997) *Arts-based Educational Research* (ABER) argues a point about the validity of their method:

Scientists create models whose synchronic features make it possible to grasp relationships that diachronic media such as language find difficult to portray. We now have virtual reality and telepresence to help us perform medical operations. The means through which we learn about and act upon the world has expanded.

p. 90

While these education scholars may not have been aware of how rapidly the 'now' of VR was collapsing rather than expanding in the late 1990s, they were insightful enough to see this development through the perspective of science and medicine. My interlude in Chapter One mentions the swift uptake of computing, VR and related technologies by scientists and medics, who often need an objective look at the intricacies of an experiment or the inner workings of a human body without interfering with either. One phrase often repeated by scientists, especially whenever an issue of phenomenological synchronicity occurs, is that "correlation does not imply causality," making it difficult to prove that the resurgence of ABR as well as the virtual renaissance was happening at the time of Barone and Eisner's (2012) most recent collaboration.

Leavy (2017) cautions that "not all arts-based researchers share precisely the same perspective on the nature of reality and what we can learn from it" and finds a continuum of arts and sciences viewpoints into research (p. 196). Fidyk (2017) calls upon ABR in the form of poetic inquirers for the collaborative creation and truth-telling of "poets, alchemists, philosophers, and pedagogues" bringing forth a world they witnessed (p. 211). Seen through the 'acausal' perspective of psychoanalyst Jung (2010), who compares the synchronous mystery to the discontinuities of modern physics, he argues in favour of "only the ingrained belief in the

sovereign power of causality that creates intellectual difficulties and makes it appear unthinkable that causeless events exist or even occur” (p. 102). Instead, these “causeless events” that correlate in the minds of the observers are termed *creative acts* by Jung, and several arts-based researchers back him up on this claim. Malchiadi (2018) defines ABR in general “as the discovery and identification of knowledge through one or more forms of artistic expression” (p. 73) not limited to the resurgence period in the twenty-first century. She traces back the use of narrative and visual arts to Freud and Jung, the latter of whom wrote of the autoethnographic dream analysis in *The Red Book* (Jung, 2009) being “a seminal example of art-based inquiry” (Malchiadi, 2018). Chilton and Leavy (2014)<sup>80</sup> concur that Jung’s interest in art imagery was a prime example of inquiry, and ABR scholar McNiff (2014) looks to the “imaginal dialogue” with the arts to make use of a method “originating within the Jungian tradition” (pp. 30–31). Jung’s later theories (post-*Red Book*) of the individualisation process and synchronicity may just be correlational to the interests of early twenty-first century arts-based researchers. Jung’s former patient and later collaborator, the physicist Wolfgang Pauli, advised Jung on his use of the word ‘acausal’ since in Pauli’s branch of science, “the words ‘causal’ and ‘causality’ have a much less specific meaning than the word ‘determinism.’ And what is more, the word ‘acausal’ means different things to different writers” (Jung & Pauli, 2014, p. 38). The creative acts constitute the appeal of ABR to some researchers, while others question its validity or the need for “alternative forms of data representation” (Eisner, 1997).

It has been a long road since the famous debate between professors Elliot Eisner and Howard Gardner in 1994 on whether or not a novel should count towards a PhD dissertation (Saks, 1996), followed by one of the many formulations by Eisner (along with Tom Barone) of ABR in the field of education. The arts are multifaceted and have their own unique aesthetics:

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<sup>80</sup> As mentioned in Pentassuglia and Boylan (2017).

what works in a film (i.e., a car chase) would be ill-suited to a novel or a photograph, as mentioned in Hutcheon and O’Flynn (2012). Research, on the other hand, follows a specific pattern of gathering data and drawing conclusions, whether the methods approach it quantitatively or qualitatively. In the case of ABR, as Leavy (2017) and Salvatore (2018) point out, this can be a creative process like the writing of a play. Research-based theatre (Belliveau & Lea, 2016; Sallis, 2018) turns the telling of research into a performance, typically performed on a stage as opposed to other multimedia such as digital video. Compared to the flat surfaces most videos would appear on – a conference-room projector, a laptop or smartphone screens through file-sharing internet sites – performing the research with actors on a stage brings forth the “three-dimensional understanding of the research context” (p. 189). This harkens back to Clandinin and Connelly’s (2000) narrative inquiry method that assigns interaction, continuity and situation their own dimensions. Both research-based theatre and narrative inquiry effectively create the world of research, and the assumption is that someone, or more likely a group of people, have a story that needs to be told and an academic analysis conducted on that story, and that story can be told through ABR (Leavy, 2017).

A more common form for this ABR to take is autoethnography (Holman Jones, Adams & Ellis, 2016), where the research data is self-generated, allowing the researcher to open up to any media based upon any relevant topic from the author’s life. One advantage of this type of life-writing or creative nonfiction (Sinner, Hasebe-Ludt & Leggo, 2018) is that many of the details of the data are personal reflections. So long as the researcher remains true to herself or himself and in some cases is able to stretch the truth (Leavy 2016), any topic is open for discussion. Another avenue for data collection, according to Leavy (2017), has the practice of art-making – in this case, ethnodrama script – become the method of inquiry as well as the content inquired into.

Thus, according to Leavy (2017), the researcher creates “the art and there aren’t any research participants” (p. 197). To return to the related storytelling model in theatre, as Saldaña (2011) mentions, even the most mundane topic can be presented as theatre, pointing to Russian playwright Anton Chekhov as a master of this type of writing. The writing remains engaged with the topic as the researcher attempts to appeal to the readers as a wider audience for the research-based theatre. Furthermore, Salvatore (2018) coins a term for the way in which he writes research-based ethnodramas:

The key to effectively creating the scripting conventions lies in the ability to discover what I referred to as “bounce.” In duets, trios, and quartets, keeping the dialogue flowing can be challenging. If a single character speaks for too long, it slows the progression of the ethnodrama, which increases the danger that an audience will lose its grasp of the research findings. When I create bounce, I break up the excerpts from each character in the duet, trio, or quartet into smaller chunks, so that the energy of the constructed conversation shifts more often from character to character.

p. 278

Later in the same chapter, Salvatore describes how German playwright and theorist Brecht (1964) employs *Verfremdungseffekt*, often translated into English as the alienation effect, to keep the audience’s critical attention to the story by every so often raising their awareness of stage practices. In many typical theatre productions, there is the proscenium arch that acts as a fourth wall, and this wall is occasionally broken when actors on stage address or interact with the audience. Such fourth wall-breaking moments are designed to take the audience out of the passive viewer-mode where nothing they do or say will affect events on the other side of the metaphorical wall. When it comes to VR as a performance space, the audience is situated in the centre of all the action and is generally permitted three or six degrees of freedom, depending on whether the individual audience member can only look around by turning his or her head or

whether he or she can move the body up, down, forward, etc. This alters the point of view while still remaining central to the action performed within the VR sphere. Two questions related to VR as stage emerge in relation to Brecht's (1964) and Salvatore's (2018) *Verfremdungseffekt*: is there a wall separating the audience from the actors/avatars? Second, if there is such a wall, what happens when it gets broken?

VR creations have made some headway in finding a place within ABR beyond the conceptual metaphor for a typically written narrative as mentioned in Barone and Eisner (1997). Leavy (2016, 2018) echoes the rhetorical meaning of VR in ABR in writing about fiction-based research but does not go much further than present it as a possibility for researchers without discussing the technical requirement or machine-learning affordances of VR. Harris' (2018) chapter in Leavy's later handbook cites authors such as Hickey-Moody and Page (2015) as well as Langer's (1953) poet organising data into "purely and completely experienced reality, a piece of *virtual life*" (p. 212, italics in original).

Another note to linger upon concerns the poetic philosopher and prototype for arts-based researcher Susanne Langer. The computer scientist and visual artist Lanier (2017) gives Langer credit for pioneering a field of inquiry that he made into VR based upon Langer's (1953) "virtual spaces ... virtual time ... virtual life ... etc." decades before personal home computers and Lanier's company Virtual Programming Languages (VPL) Research coined VR as a household phrase. While there are definite moments when the technology took a step forward towards real-world application, the idea of VR seems ever-present throughout the twentieth century until the *virtual renaissance* in the twenty-first century. Much like how Gibson's (1984) novel *Neuromancer* gave birth to the idea of cyberspace that would eventually become the Internet (accessed through very VPL-inspired equipment like data gloves and head-mounted displays),

Langer's virtual worlds bridge the divide between theory and actuality, as do many of the arts-based authors who take Barone and Eisner (1997) as their starting point. Artaud (1958) figures into Lanier's (2017) felicitous "connection across generations" (p. 237) between Lanier's early work in VPL and Artaud's Theatre of Cruelty; the latter is a major component of the next section.

## Representation and audience

JOHN            Your methods can basically be summed up with reading much and making naught.

NATHAN        You haven't seen much yet, despite all that I attempt to show you.

JOHN            Shakespeare and Stoppard seem to be the actual makers of the plays we have seen so far, and you simply just brought them to another type of stage, whether you call it a movie or retroprojection.

NATHAN        There is a line of thinking about the inventors and innovators when it comes to creating art.<sup>81</sup> One could make the same argument about your work as a playwright, retelling stories from Ancient Rome and Renaissance Italy. Nevertheless, here is what I made for the next step in our research.

JOHN            They will somehow remediate all that has come before?

*Suddenly appearing before John is a hunched over figure wearing one of the masks projected upon the stage's backdrop.*

JOHN            Do all who dance in Kabuki wear masks such as these?

NATHAN        The dancer carved this mask to represent the foolish young man as well as several other masks used in show. It is a common practice for dancers to have wooden masks – part of the Zen-like ritual of this dance.<sup>82</sup>

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<sup>81</sup> Bogart (2012) mentions herself as the innovator of Overlie's six viewpoints, acknowledging her invention which Bogart (2001) "found to be an astonishing way of thinking about time and space" (p. 11) in relation to stage performances. Other theatre artists whose theories influenced Bogart's innovative approach are Grotowski and Brecht.

<sup>82</sup> Ozeki (2015), an American author, elaborates on her experiences carving Noh masks in Japan and how Zen's "spirit infused the dojo and our practice ... [while] ritualistic elements of performance – the slow sonorous chanting, hypnotic dance, music, and drums – work to animate the mask, which comes to life in a moment of sublime beauty called *yūgen*" (pp. 73–4, italics in original).



**Fig. 8 Avatar of Izumo no Okuni appears on the stage**

JOHN            That puts her back in my epoch, and you still claim that women were banned from performing back then?

NATHAN        In this case, the evidence back up such claims. Short after Okuni invented this form of dance, the Japanese government outlawed any female performer from dancing Kabuki, and all-male companies have been the norm from about 1630 all the way into my epoch. Yayoi designed this interpretation of Okuni's dance to celebrate the female inspiration, but the present-day choreographer would never be able to perform this dance in her native Japan.

JOHN            Initially this avatar startled me, I am not ashamed to admit, but the more I look into the wooden mask, the more expressive the face seems to become.

NATHAN        Yes – part of the built-in design when the dancer Yayoi first made the mask, and it has come a long way from the polygram-filled 3D scan to the smoothed out edges of the light field you see before you.

JOHN            The texture of the wood shows through the paint, and yet I am sure there is some movement or expression present.

NATHAN A standout moment for crossing the uncanny valley<sup>83</sup> based on the five hundred year-old traditions of mask carving.

JOHN I can tell this mask has a lot to say about the hidden foibles of humankind, but there is more to this show than looking into this character's face, isn't there?

NATHAN So many moving parts: the dance tells the story of tokens of love being exchanged between a man and a woman (*gestures at the remaining masks on the screen*) and the silly man who intercepts one of these tokens, believing himself to be the object of her affection. I'll get that part of the dance cued up.

*With a couple of swipes at Nathan's panel, the Okuni avatar vanishes. A moment later the same character appears from behind the screen, carrying a folding fan.*

JOHN This dance has a compelling force of its own, quite apart from the dialogue-rich experience from the Globe stage and what passes for the Rose.

NATHAN A philosophical way of looking at it is a 'virtual power' in a class of its own, compared to the other literary and dramatic arts.<sup>84</sup>

JOHN So that makes it an eighth force to be added to Anne Bogart's seven that you have been researching.

NATHAN Not quite. I would put it down to participation that she writes about, however, on a virtual stage like this, the audience can interact with the performer.

JOHN Sounds like it is the same as they could in my day, all the way back to the Greek amphitheatres, with the audience cheering and applauding the players.

NATHAN That is one way of interacting with the performance, but here is another way.

*OKUNI approaches the two researchers and places the fan into JOHN's hand. He looks at it, puzzled.*

JOHN What's this?

---

<sup>83</sup> A theorised negative reaction towards human-like objects the closer they get to resembling humans. Mori (1970) charted a model that includes two types of Noh masks – the *yase otoko* (skinny man) and *okina* (old man) – to describe the various points of aversion or affect human viewers have towards the artificial faces. Stein and Ohler (2017) apply this theory to VR avatars.

<sup>84</sup> Langer (1953) presents such an argument for the virtual powers of dance. "The consciousness of life," she states, "the sense of vital power, even of the power to receive impressions, apprehend the environment, and meet changes, is our most immediate self-consciousness. This is the feeling of power; and the play of such "felt" energies is as different from any system of physical forces as psychological time is from clock-time, and psychological space from the space of geometry" (p. 176).

NATHAN All part of the show. The clown character gives a folding fan to someone in the audience, and then another character comes out and takes it back again.

JOHN Not as revolutionary as you first made it out to be.

*The avatar disappears behind the screen, leaving JOHN holding the fan.*

NATHAN But that audience member with the fan could go anywhere within the light field, and the second avatar would be able to track the fan's location and get it back.

JOHN A timeless tale, no doubt, that could be told on the banks of the Thames or the farthest ends of the earth. What makes this performance so special with regards to remediating it for VR?

NATHAN As I mentioned with the fan retrieval, this was one of the first virtual performances to work out the kinks of interaction. It took years to get the fan tracked as a separate entity from the dancer.

*During NATHAN's explanation, OKUNI emerges from behind wearing the mask of a young man.*

JOHN The kinks of interaction? Is not any type of gesture or speech one person interacting with another, or many others? Even the book of the plays I wrote and had published could be called interaction, since my words cause a series of actions to be performed by actors and audience alike.

NATHAN It is fine to say that, considering that books and theatrical performances have been developing over a few thousand years, but VR had to catch up with this type of literacy-based interaction in just over a hundred years, hence a few kinks.

*OKUNI finds the fan in JOHN's hand, approaches him with very upset gestures and demands JOHN return the fan. The instance he does, the fan is placed in the avatar's costume and she moves away from NATHAN and JOHN.*

JOHN Was that supposed to happen?

NATHAN Everything is running as it should. The Young Man character then finds someone else in the audience to give away the love token he was supposed to give to his betrothed, thinking that she gave away the fan he had provided her.

JOHN Sounds a little bit like that *Ingannati Comedia*<sup>85</sup> that was popular back where I come from. At least the Thunderstruck Academy had women playing the female roles, masked character, misplaced tokens, the whole routine!

---

<sup>85</sup> A mid-sixteenth century Italian comedy, translated as *The Deceived* and believed by numerous literary scholars to be the inspiration for Shakespeare's *Twelfth Night* (Gl'Intronati di Siena, 1978, p. 195).

NATHAN Not just your renaissance back where you come from. Our research focuses on the remediation of theatre as VR. Watch as the Okuni avatar moves across the stage and how she relates to each member of our audience out there.

JOHN But wouldn't the audience have been at different places and have various sightlines, so how would they all be able to see the same expression on the mask?

NATHAN That's where the other elements come in: the slow and steady movement to the point of being hypnotic, the repeated gestures to accentuate an emotion. Much of this performance resonates with the expressive elements outlined in Antonin Artaud's Theatre of Cruelty.

JOHN Now I am intrigued: what sort of cruelty are you talking about?

NATHAN Not the blood and beheadings that were common in the plays staged in your era, but rather the unrelenting agitation of a lazy lifestyle, one lacking a compelling force.<sup>86</sup>

JOHN This Artaud is the French playwright you spoke of earlier, what connection does he have with this Okuni Kabuki?

NATHAN No direct relationship, other than his fascination with Balinese dancers<sup>87</sup> from another far corner of Asia.

*The OKUNI has finished dancing, and steps behind the curtain while the piano still plays.*

JOHN I can understand how your Frenchman was mesmerised by such a captivating dance as this retroprojection shows. What happens now with your virtual Okuni?

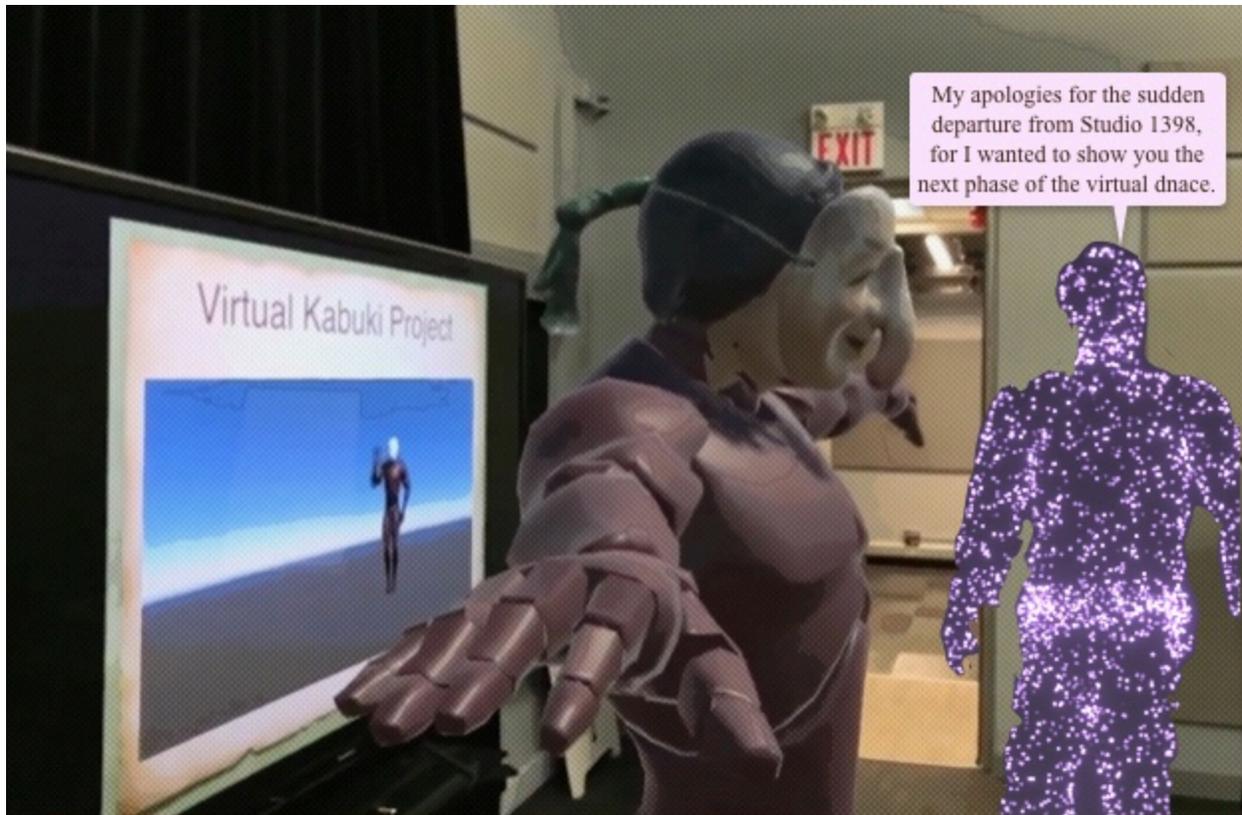
NATHAN In the staged dance, Yayoi would be behind the curtain getting ready for the next character, the young woman. But since this is the virtual Kabuki, the change happens instantaneously. I believe there is still some of the original code that shows you what happens behind the curtain.

*With a few swipes on the control panel, their surroundings change and a more institutional background replaces it. A television monitor hides behind the Studio 1398 screen with a smaller image of the avatar on it. The Kabuki character comes to a rest in a static T-pose.*

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<sup>86</sup> Nathan paraphrases Gorelick's (2011) explanation of Artaud's use of the term: "Cruelty is, more profoundly, the unrelenting agitation of a life that has become unnecessary, lazy, or separated from its compelling force" (p. 265). In Artaud's (1958) own translated words, "Cruelty is above all lucid, a kind of rigid control and submission to necessity. There is no cruelty without consciousness and the application of consciousness" (p. 102).

<sup>87</sup> Artaud (1958) describes his fascination with the "physical and non-verbal" style of performance and how it "is contained within the limits of everything that can happen on a stage, independently of the written text" (p. 68).



**Fig. 9 UBC Studios demonstration of the Virtual Kabuki project as depicted by UBC Media Relations (Stooshnov, 2018b)**

JOHN           And what room have I been hurled into now?

NATHAN       UBC Studios, one of the locations the Virtual Kabuki project was first presented. It was where my uncle completed his masters and doctorate.

JOHN           These Ubeesee Studios seem spacious enough for a court masque, but what studies was he able to conduct here?

NATHAN       He started educational technologies in 2010, and then moved on to his PhD in literacy education a few years later. This presentation<sup>88</sup> was where his love of theatre and technology combined after working on the Virtual Kabuki project with Yayoi.

JOHN           This is the same uncle of yours who would show you such movies as that *Shakespeare in Love* we just experienced, isn't he? Will he be showing up in this retroprojection?

---

<sup>88</sup> My presentation (Stooshnov, 2018b) was part of the Emerging Media Community of Practice monthly meeting in preparation for an exhibit featuring the Virtual Kabuki project at the BCTech Summit in May 2018.

NATHAN He was behind the video camera recording this simulation and no, sadly, he moved on to work in Japan – made some connections with the Suzuki Company of Toga, the same place where Anne Bogart trained. And then the Hackstop happened, and we weren't able to retroproject together any more.

JOHN Sorry to hear that the loss of this confusing Internet system severed your connection with him.

NATHAN Occasionally I get letters from him and my auntie; he's convinced that if any place in the world will be able to restore all the lost digital information, it's Japan.

JOHN Why is he so certain about that?

NATHAN One of the books he was reading at the time of this presentation has this insightful line about his adopted country: "Japan is the global imagination's default setting for the future."<sup>89</sup>

JOHN None of what you said makes an ounce of sense.

NATHAN Sorry, it sounds a lot better once you've been there.

JOHN Where?

NATHAN The future.

JOHN Isn't that where I am now, trying my best to answer some questions involving a Frenchman named Artaud, a dancer named Yayoi, and a nephew named Nathan?

NATHAN Right, yes. Artaud and his Theatre of Cruelty, based upon his plans for "le Théâtre alchimique."<sup>90</sup>

JOHN Alchemy? I understand you see it as one of these compelling forces for VR, but I am less convinced. And then you tell me about this Frenchman trying to make theatre more like an alchemist laboratory – what, so that his audiences would stay to watch a play as it takes years to go through its stages, if it ever got to its usually disappointing final projection? He must have been mad!

---

<sup>89</sup> The line comes from Gibson (2012, p. 125). In another essay in this collection, the author elaborates on his earlier statement: "if you believe, as I do, that all cultural change is essentially technology-driven, you pay attention to Japan" (p. 157).

<sup>90</sup> This chapter of Artaud's (1938, 1958) magnum opus, *The Theater and Its Double*, often gets left out of more modern English translations, such as Artaud (1988, 2001). In the former edition, Sontag notes that the chapter first appeared in an Argentinian magazine called *Sur*, most likely written in Portuguese, since the article "had not been published in French before its appearance in 1938" (Artaud, 1988, p. 619).

NATHAN He was, quite literally ... mad. They sent him to a hospital for about nine years. But not before leaving the world his famous collection of essays, *The Theatre and Its Double*.

JOHN A double-dealer, no doubt. What was so fascinating about his essays?

NATHAN In addition to giving playwrights and artists the otherworldly vision of the double-space, much like the mirror dimension or *kagami-no-ma*,<sup>91</sup> if you're Japanese.

JOHN It feels like I am turning Japanese just listening to you.

NATHAN Do you really think so? You are probably feeling the transformative effect of Artaud and Okuni combined. This settles the matter of the question I had about remediation for VR: trusting the design feature of theatre at its most alchemical will create holistic virtual experience that can change people's minds.

JOHN Not so fast, you mercurial misleader. I can agree that Shakespeare, among other playwrights, had moments of awe and wonder, and what I have seen of Stoppard's plays and movies moved me to connect with characters I could not imagine ever meeting in real life. But to take me to Japan and France and other such places is too much to get a grasp on, and then you drop this leaden argument that we are actually in search of the philosopher's stone. I had enough of a time making sense of these seedy charlatans when I was un-retroprojected and living my actual life in London, and now you yourself are searching for the never-to-be-found gold.

NATHAN Ah yes, I can agree that many alchemist only left a legacy of hard-to-decipher text, and all of them were none the richer for their troubles, but it is not gold that these theatrical alchemists seek.

JOHN Then what?

NATHAN Self, or self-consciousness,<sup>92</sup> as it is often called. And we are very close to it.

JOHN Just like those mountebanks all say!

---

<sup>91</sup> Ozeki (2015) cites Udaka's (2010) explanation of the mirror room in traditional Japanese theatres as where actors put on their masks before entering the stage, instantly transforming into the protagonist: "Thus the *kagami-no-ma* functions as a ritual space where the magical powers of the Noh mask are instilled" (pp. 153–154).

<sup>92</sup> Mayes (2005) builds his pedagogical theory through Jungian archetypes and the process of individualisation. He writes of how the "seeds of 'teacher reflexivity' cannot fully flower unless they are fed by the richer soil of what Jung (CW 14 [1989]) calls the 'sacred precincts' — those psychic territories where archetypal winds sweep over and vitalize the otherwise dull landscape of our daily lives. It is in such sacred precincts that many people decide to become teachers" (p. 124).

NATHAN     One more retroprojection play will hopefully convince you of your self-consciousness.

*One more tap on the control panel darkens the retroprojected image of UBC Studios.*

## CHAPTER 4 – SHUBERT THEATRE, BOSTON

### Dialogue from *The Duchess of Malfi* Act II, Scene iii

*Once again, John is momentarily aware of the Mike Lazaridis Theatre of Ideas, a spacious auditorium where all of the VR retroprojection has taken place.*

*This sudden realisation momentarily jolts JOHN from the conversation that he and NATHAN were just having, and just as suddenly, the Boston Schubert Theatre<sup>93</sup> stage appears around them. At this point in the retroprojected play, there are two characters, BERGNER and LEE, at centre stage with the rest of the cast sitting and watching them.*

JOHN

Another hall full of ghastly lights, yet space to breathe in.  
Where has your chariot brought us now, Phaethon?

NATHAN

You're probably going to laugh at this, but it happens to be  
one of your plays.

BERGNER

“Oh you render me excellent music!”

LEE

“Say you?”<sup>94</sup>

JOHN

Don't tell me it is another one of those movies or some  
dancing avatar wearing a mask.

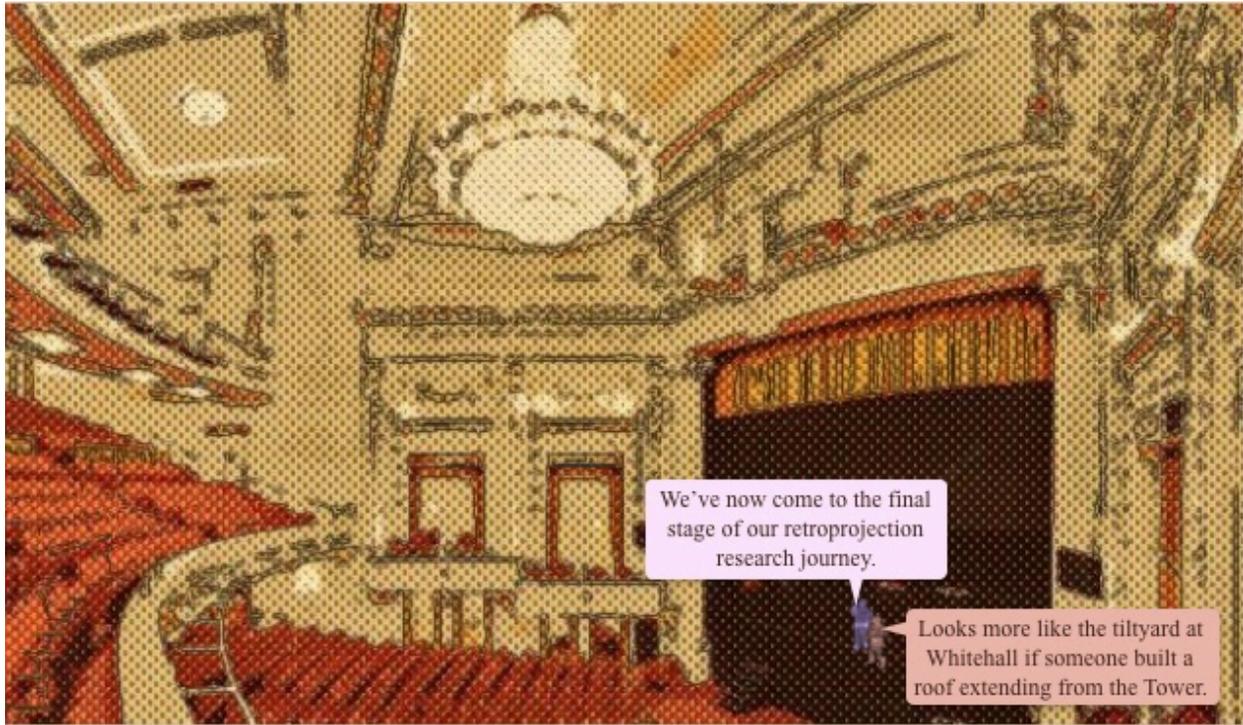
LEE

“Do I not dream? Can this ambitious age  
Have so much goodness in it as to prefer  
A man merely of worth ...”

---

<sup>93</sup> The German playwright Bertolt Brecht attended one of the earliest performances of his collaboration with British poet William Auden at the Schubert Theatre on September 25th, 1946, only to see many of his creative choices for the adapted play altered by director Rylands. The following day, Brecht wrote a demanding letter to producer Paul Czinner, proposing he “fire the director, that he reinstate the adaptation Brecht and Auden had made; that he hire a new actor to play Ferdinand; and that he leave details of lighting, grouping, and casting to Brecht” (Lyon, 1980, p. 145). Some of these demands were heeded, but this is just one of the many troubles faced by this production.

<sup>94</sup> The centered dialogue, quoted speech and stage directions follow the script as printed in Brecht and Hays (1998). Unlike the screenplay format in Chapter 2 (see note 57 on page 59) there are minor changes to the text that include deleted scenes and travesty lines.



**Fig. 10 Inside the Schubert Theatre, Boston**

NATHAN

The Shubert Theater in a Puritan colony you might have heard of as Trimountaine but was later named Boston after your Lincolnshire emigrants (*taps on the panel to shut it off*). We're here to see an adaptation of your *Duchess of Malfi*, brought to the American stage by Bertolt Brecht and Wystan Auden.

JOHN

Are any of them dancers from Japan?

NATHAN

Brecht was a famous playwright and theorist from Germany I mentioned earlier, and Auden was a poet from England. Both men met and worked together in the United States at the end of World War Two.

JOHN

United States? World War Two? More fanciful future fictions, it seems.

NATHAN

Sadly, no. The United States of America became the dominant nation in the mid-twentieth century, mostly due to fall-out from WWII, a global conflict between England, Germany, Italy, Russia . . . and Japan. Let's just say it is a complicated history still being worked out over a hundred years later.

JOHN

And how does any of this relate to my play, *The Duchess*?



Fig. 11 Malfi (Elizabeth Bergner) and Bosola (Canada Lee) in Rylands (1946)

NATHAN

That is one of the reasons I brought you here to see for yourself, to witness how the words you wrote transcend the time and place they represent, a fictionalised Italian court performed for audiences in London in the early 1600s.

JOHN

While you also attempt to discover answers to your research questions about virtual reality. Somehow, I have answers you seek with just a few adjustments to this dialogue.

*BERGNER, the actress playing the role of the duchess, leaves centre stage and joins the rest of the cast seated in chairs upstage. LEE remains in his spot before joining her.*

LEE

“Now for this act I am certain to be raised  
And men that paint weeds to the life are praised.”

NATHAN

Courage, you doubter! This last question I believe you are  
well positioned to help me find an answer: What additional  
forces make VR compelling?

*While NATHAN explains, JOHN moves to centre stage as LEE sits in one of the available chairs. Two more actors (RYLANDS and CARRADINE) have already stood up to begin their scene, one showing a letter to the other.*

CARRADINE

“Speak lower.”

RYLANDS

“Lower?”

Read here what’s written by my intelligencer.  
A servant, her own steward!”

JOHN

The actor who just left, he spoke the lines I wrote for Bosola.  
What is he?

NATHAN

The information I got on him says his name is Canada Lee,  
who was an actor brought into the cast to take over the role  
during previews when the originally-cast Bosola<sup>95</sup> left ...

JOHN

What nation? He is unlike many of the actors here on this  
virtual stage.

NATHAN

*(consulting the panel)*

Leonard Lionel Cornelius Canegata got his stage name  
Canada in the boxing ring before turning to radio and stage.

---

<sup>95</sup> Another one of the many issues facing Rylands' production, as documented in Lyon (1980), citing a contemporary *Variety* article that makes a sensation over McKay Morris' departure and Lee taking on the role when the show moved from Boston to Broadway. Lee's use of "white-face playing a symbolically evil part" was the second time Brecht had cast an African-American in a Caucasian role; Lyon reports the first time being a production of *Master Race* in New York one year prior to Rylands' *The Duchess of Malfi* (p. 147).

He was born in New York and was one of the first African American actors to play a white character onstage.<sup>96</sup>

JOHN

Africa, you say? Fascinating. Why do these actors sit here and not take part in the action?

NATHAN

It is a particular style of theatre developed by Brecht himself – part of his *Verfremdungseffekt*, otherwise known as the “alienation effect”, to disenchant audiences of the idea the scene they are watching is real, instead of merely actors on a stage.

JOHN

Is this *verfremdungseffekt* related to seeing from a distance? Surely this is not much different from what you describe as virtual?

NATHAN

I would argue the opposite, based upon what I have studied: most VR is meant to create the illusion that the viewer – you, in this case – are completely surrounded by the play, immersed in the author’s reality, such as the one created by you, again, in this specific case.

JOHN

Yet seeing what’s not really there, events from the past played out before your eyes and ears, has got to be one of the alienating effects rather than a compulsion towards the story on the stage. I mean, the audience still knows they are not witnessing what really happened, don’t they?

NATHAN

That’s the mystery we are attempting to uncover: how much someone in the audience is aware of the reality occurring before them.

JOHN

I’d like to believe I am here in the same room, someplace I have never been talking to someone from a distant point in the future, but part of my soul is still in London, making revisions on the Cleopatra scenes for *Caesar Falls*.

---

<sup>96</sup> Zolotow (1946) p. 9, as cited in Smith (2004).

NATHAN

That is a much deeper psychology<sup>97</sup> than any of my questions are able to answer. Keep in mind that my research is not too far from the early days of VR when only a few people would have donned the helmet and prodded around with hand controllers, but so much of the process has been streamlined since Sutherland's Sword of Damocles<sup>98</sup> that it barely registers in a person's mind when one transitions from one reality to another.

JOHN

Shouldn't it have more of an impact on the mind? If witnessing the murder of Julius Caesar or the dissolution of the Ancona family and her Duchy of Malfi makes no more impression than everyday experience, my work might as well have burnt up in the London Bridge fire.

NATHAN

But you see it is here, now, and able to be stored and shared with others, like you and I.

JOHN

Yet my Cleopatra may have also gone up in ashes.

NATHAN

We're still working on recovering your *Caesar Falls*, and every qubit of information the retroprojection processors can sort through brings us closer to finding it.

JOHN

There you have it: one advantage those quantum engines have over the pen and parchment I had to work with, yet what then if the next Hackstop shuts down your computer?

NATHAN

Once again, we are working on it. There is a reason why your name has survived these information storage disruptions,

---

<sup>97</sup> Laszlo (2014) writes of the Akashic dimension deep beyond the manifest material world of sensory perception. Relatedly, Mayes (2005) draws attention to depth psychology in relating Jungian archetypes to the field of education. More study is required to understand the holographic inner workings of a projected avatar such as Webster.

<sup>98</sup> Lanier (2017) corrects the misnomer since Sword of Damocles was the name for "the armature that hung down from the ceiling" to support Sutherland's "ultimate display" into the emerging "virtual world" (p. 42). Often described by programmers and designers as the godfather of VR, Sutherland (1965) attempted to build a digital display that would be "a looking glass into a mathematical wonderland" (p. 506).

because your plays have a similar compelling force, as does all great theatre.

JOHN

Those pages that survive, perhaps, and yet are you not trying to discover what VR does that neither mine nor the plays of Shakespeare or even Artaud's work is able to do, occupying some fine line between the classical libraries of knowledge and your digital future?

NATHAN

The sharp, slanted line between literacy and technology, you mean? Here we can look back on the *Cut-up Consciousness* and a poetic inquiry into your play.

*Searching through a couple of menu files on NATHAN's virtual control panel, he finds and shows JOHN the following research project.*

### **Findings on the relationship between literacy/technology**

All technologies of mechanical choice and chance operations provide poetic inquiry with the means for fascinating studies of language and learning.

... [Hartman's (1996) example of the Cumae Oracle] is an appropriate analogy for poetic inquiry that uses chance-operations and cut-up procedures to discover deeper structures of relevance underlying research source text.

James (2009) p. 60

There is a reciprocal relationship between literacy and technology where advancements in one field help bring about further advancements in the other. Yet there is a dividing line as well – the slant punctuation in this thesis' title – where the two fields remain distinct regardless of their mutual influence on each other. McLuhan's (1964) seminal work proposes an entire galaxy of difference between print culture and that of electro-magnetic media, where extensions of the latter also amputate us from dependence fostered by the former. In seeking a response to the remaining research question – are there additional forces that make VR compelling? – I attempt to demonstrate possibilities of drama from a post-literacy perspective to find their shared

affordances outnumber the McLuhanian amputations digital media compared to that of traditional print culture.

Digital literacy researcher James (2009) writes of “two modes of investigation” poetic inquirers may adopt in the selection and analysis of the digitally cut-up text. The first way of inquiring can be likened to diving into the sea, carefully looking before one leaps into the textual data that seeks “specific features addressing the preconceived notion of significance” (p. 62). The other way involves diving in headfirst, yet adapting one’s senses to unfamiliar poetic environments “to dwell within the text until resonances become audible and interpretable” (p. 62). My first encounter with ABR involved processing Webster’s *The White Devil* through the Global Telelanguage Resources (GTR) Workbench,<sup>99</sup> because I had noticed after a couple readings of the play proper that certain words recurred. One example that set me off on this inquiry was a Latin phrase a character speaks in the fifth act: “*cogita quantum habeas meritorum*” (Webster, V. iii, 137–8: think how many good deeds you have done). It would be tempting to run the scene through the travesty generator to see where ‘quantum’ ends up in the resulting data, yet it would only be a curious connotation rather than a revelation of Webster’s ahistorical foreknowledge of quantum physics. On the other hand, ‘alchemy’ is a word that makes two slightly more meaningful appearances in Webster’s play and could serve as an indication of the playwright’s grasp of prescientific natural philosophy. Following the same spirit as James’ (2009) second inquiry mode, Adam McLean’s commentary on the seventeenth-century text *The Chemical Wedding of Christian Rosenkreutz* (McLean, 1991) attempts “to allow the inner structure of the *Chemical Wedding* to unfold itself” (p. 111), as does similar investigation of the possible twelfth-century text attributed to Thomas Aquinas, *Aurora Consurgens* (von

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<sup>99</sup> <https://workbench.gtrlabs.org/>.

Franz, 2000). My analysis of the travestied text of Webster's *White Devil* requires the same patience to discover the unfolding data (see the Appendix).

This following first attempt at generating a travesty text<sup>100</sup> of Webster's (2004) play produced the following text, which I have tidied up somewhat by assigning stage directions and speakers' tags (in italics) as well as retaining a sense of the iambic pentameter line (with capitalised initial letters). I copied the entire play from beginning to end based on the Project Gutenberg edition and entered it into the GTR Workbench with the travesty setting at its highest (n = 6).

THE SCENE -- ITALY  
ACT I SCENE I

*Enter Count Lodovico, Antonelli, and Gasparo*

*Lodo.* Banish'd!

*Ant.* It griev'd me much to hear the sentence.

*Lodo.* Ha, ha, O Democritus, thy gods  
That govern the whole world! courtly reward  
And punishment. Fortune's a right whore:  
If she give aught, she deals it in small parcels,  
That she may take away all at one swoop.  
This 'tis to have great enemies! God's quite them.  
Your wolf no longer seems to be a wolf  
Than when she's hungry.

*Gas.* You term those enemies,  
Are men of princely rank.

*Lodo.* Oh, you slave!  
You that were held the famous politician,  
Whose art was poison.

*Gas.* And whose conscience, murder.

*Lodo.* That would have broke your wife's neck down the  
stairs,

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<sup>100</sup> Funkhouse and Baldwin (2007).

Ere she was poison'd.

*Gas.* That had your villainous sallets.

*Lodo.* And fine embroider'd bottles, and perfumes,  
Equally mortal with a winter plague.

*Gas.* Now there's mercury —

*Lodo.* How! how! I hope you will not got to't here.

*Fran.* Nay, you must hear my dream out.

*Zan.* Well, sir, forth

*Fran.* When I threw the mantle o'er thee, thou didst laugh  
Exceedingly, methought.

*Zan.* Laugh!

*Fran.* And criedst out, the hair did tickle thee.

*Zan.* There was a dream indeed!

*Lodo.* Mark her, I pray thee, she simpers like the suds  
A collier hath been wash'd in.

*Zan.* Come, sir; good fortune tends you.  
I did tell you I would reveal a secret:  
Isabella, The Duke of Florence's sister, was empoisoned.  
By a fum'd picture; and Camillo's neck  
Was broke by damn'd Flamineo, the mischance  
Laid on a vaulting-horse.

*Fran.* Most strange!

*Zan.* Most true.

*Lodo.*               The bed of snakes is broke.

*Zan.* I sadly do confess, I had a hand  
In the black deed.

*Fran.*               Thou kept'st their counsel.

*Zan.* Right;

For which, urg'd with contrition, I intend  
This night to rob Vittoria.

*Lodo.* Excellent penitence!  
Usurers dream on't while they sleep out sermons.

*Zan.* To further our escape, I have entreated  
Leave to retire me, till the funeral,  
Unto a friend i'th'country: that excuse  
Will further our escape. In coin and jewels  
I shall at least make good unto your use  
An hundred thousand crowns.

*Fran.* Oh, 'twas well!  
We shall not want his absence past six days:  
I fain would have the Duke Brachiano run  
Into notorious scandal; for there's naught  
In such cursed dotage, to repair his name,  
Only the deep sense of some deathless shame.

*Mont.* It may be objected, I am dishonourable  
To play thus with my kinsman; but I answer,  
For my revenge I'd stake a brother's life,  
That being wrong'd, durst not avenge himself.

*Fran.* Come, to observe this strumpet.

*Mont.* Curse of greatness! Sure he'll not"

For the most part, the resulting text resembles the play proper, and at first glance one might safely assume that it is a simple copy and paste of the opening scene. The first eleven lines, for instance, are word-for-word the dialogue between Lodovico, Antonelli and Gasparo, with an almost seamless transition into Act V Scene iii at the end of the eleventh line "Oh, you slave!" The travestied text weaves in lines from the additional characters of Francisco, Zanche and Monticelso from other parts of Webster's original, ending with a snippet of dialogue from Act II Scene i after Zanche's line "An hundred thousand crowns." The cut-up text, even in this brief excerpt, retains the misogyny and aggressive Machiavellianism typical of Protestant English depictions of the Catholic Italian court. Coleman (2010) writes of the play's (and the

playwright's) "aesthetic relativism" that in the example of *The White Devil* "becomes wedded to the content of his concern" (p. 80) of a world without morality or absolute truths. Goldberg (1987) further elaborates on this theme by mentioning how the play's major characters "are singularly conscienceless" (p. 72) and how difficult it would be for audiences to determine the good guys from the bad. The challenge of my inquiry into the travesty-generated text was to find evidence of the playwright's view of conscience and its association to the more modern term 'consciousness' (Strohm, 2011), yet I needed to break down the play into scenes, run each one through the GTR Workbench, and develop more of a systematic process.

The next approach I took to cutting up the text had a more alchemical constraint based upon the twelve stages of alchemical operation from Josephus Quercetanus (Jung, 1993, p. 239). My analysis began with a travesty-generated text for each scene for all five acts (sixteen scenes in total), alternating between high and low settings. As with the example above, high settings closely followed the dialogue for each scene, while the low setting created a jumble of lines that Hartman (1996) describes as to "make Shakespeare talk very thickly through his hat" (p. 57). Once a text was generated, it might be combined with other scenes from the same act and put through the travesty workbench again using a different setting. Some of the more intriguing examples were when a low-setting text was reassembled at a high setting, such as the "Coagulatio" text for the third act combined that had already gone through the "Putrefactio" stage:

ACT III  
Savoy Lawyer, when several kind of Vittoria,  
*Enter French Ambassador.*  
Thou hast scarce maintenance  
To gull suspicion.  
O poor Charity!  
Do you understand Latin.  
Stand the forty thousand pedlars in our quest gain, what then

broiled in neighbouring kingdoms.

*Fr.* Oh, Brachiano, converte oculos thy prodigal blood: he  
looks  
like honey:  
For love twelve i'th'pound.

*Fran.* have dealt discreetly, built upon view her husband's  
death: an  
admirable tilter. carried his stalking horse,  
This devil would not ill; wear sheep-skin linings, a blooming  
hawthorn –

*Vit.* At your pleasure, 't, how near know we seldom found  
fresh  
chamois. got?

*Mont.* I would serve; rich gown under him.  
Shall prove but kissed one by all mirth, thee them.  
Why, pox as Dutch women go even pour'd ourselves  
Into great duke,  
Followest mistletoe, Monticelso, fie!  
Ambass

Funkhouser and Baldwin (2007) would call such an example “cyborgian poetry”, being a literary work “cocreated by humans and digital machinery” (p. 78). James (2009) writes in favour of such “digital poetic inquiry” as a step “toward critical and creative literacies that signify within the dynamic interplay and exchange of artificial and human intelligences” (p. 71). Reading the above text with such an understanding illuminates Webster's worldview while presenting a poetic interpretation of the play. To reiterate Goldberg (1987) and Coleman's (2010) point about relativism and being unable to tell the good characters from the bad, the travesty generator creates a play without plot, characterisation or context closer to what Artaud (1958) finds beneath a texts' poetry: “there is the actual poetry, without form and without text” (p. 78), and possibly a consciousness without psychology.

The final stage of the play's transformation is based upon the final stage of the alchemical process: what Quercetanus calls Projectio and is the combination of the travestied text reinserted into Project Gutenberg's Act III Scene ii and augmented with speech heading.

ACT III SCENE II

*Enter Francisco, Monticelso, the six Lieger Ambassadors, Brachiano, Vittoria, Zanche, Flamineo, Marcello, Lawyer, and a Guard.*

*The Arraignment of Crusadoes;*

*Mont.* Would those apples travellers report  
To our examination.

*Brach.* Sir, had you not suit a strange tongue?

*Fran.* Put up your peace!

*Mont.* [*to Francisco*] But that.

*Flam.* You see, the hard pennyworth your kindness  
Were come from thence a thousand ducats,  
Put up your papers in hanc pestem,

*Mont.* That preachers are charm'd silent.

*Marc.* Sir, pray cease to church.

*Vit.* Put up your kindness: 'pothecary should do 't.

*Mont.* Now, Marcello,  
Put up your language!

*Brach.* Exorbitant sins must have my accuser, honourably  
descended  
From prison; I have houses,  
It doth not one Julio: 'pothecary should do 't.

Much like Hartman's (1996) *Virtual Muse*, I have engaged in the process of altering the text with the travesty generator, reading "and when I couldn't read any more, I stuck with the best I'd found" (p. 64) – in this case, a scene based upon "The Arraignment of Vittoria" (the only scene

named in the stage directions for *The White Devil*). My Projectio text has created “the Arraignment of Crusadoes”, an absurdly grandiose mockery of legal proceeding and state-enforced morality (the *crusado* being a Portuguese coin bearing a Christian cross on one side). Many of the conscienceless main characters appear in the scene, and the generator randomly assembles dialogue for some of them. What is remarkable about this machine-wrought poetry is how many lines hone in on the limits of language: “strange tongue”, “charm’d silent” and “Put up your language!” This last phrase can be traced back to a line spoken by the character Francisco (as opposed to Flamineo in the above text): “Put up your papers in your fustian bag – [*Francisco speaks this as in scorn*]” (Webster, 2004, III. ii, 47) as he chastises the overly eloquent Lawyer for his Latin phrases such as “hanc pestem”.

The same character receives abuse from Vittoria (and her lover Brachiano) as she derisively calls the Lawyer an apothecary:

*Vit.* Surely, my lords, this lawyer here hath swallow’d  
Some ’pothecaries’ bills, or proclamations;  
And now the hard and undigestible words  
Come up, like stones we use give hawks for physic.  
Webster (2004) III. ii, 36–39

Once again, it is an attack on the lawyer’s language, so it is only fitting that the travesty’s Projectio text – even without a reader’s knowledge of the relationship between characters in the play proper – would demand the lawyer ‘put up’ or cease any attempt to make meaning from language. Perhaps the GTR Workbench has a sense of when enough is enough and ordered the generated words to prevent me from going beyond the Projectio stage. I am left to wonder about the apothecary and what this person should do.

In a contrast between oriental and occidental theatre styles, French poet and playwright Artaud (1958) urges his readers to do away with the West’s obsession over the written text,

calling it “the mere projection of physical doubles that derived from the written work” (p. 73). Instead, he declares an affective and alchemical aesthetic for his Theatre of Cruelty that is based upon gesture, sound, space and light that doubles reality similarly to the Balinese performers who inspired him. His groundbreaking book even begins with a chapter on the plague – *hanc pestem* – and proceeds to mention one of Webster’s contemporaries, John Ford, the author of the especially cruel play *’Tis a Pity She’s a Whore*. It feels like there is a synchronistic connection between Webster’s ’pothecary and the avant-garde Artaud, yet the latter was so adamantly opposed to psychologising theatre that he seems unlike to fit into this quasi-medical role.

Another contender for the role of ’pothecary might be American theatre director Bogart (2007), who is inspired by Artaud’s sense of the doubleness of theatre: what an audience sees “has an equal counterbalance in the unseen” (p. 89) that connects the material stage with the audience’s imagination. Bogart’s career spans continents, almost a conjunction of the East-West dyad presented in Artaud’s book: she trained as a director in North America and Europe and hit her creative stride in her collaboration with Japanese director Suzuki from 1992 onward.

Alchemy is one of the “multiple magnetic forces fundamental to the art form” (p. 64). Bogart writes about these forces. As discussed throughout this dissertation, and there are many knowing references to quantum physics’ uncertainty principle in her writing, inspired equally by scientists like Schrödinger and Einstein and philosophers like Heidegger and Wittgenstein. One further source of knowledge that gives shape to Bogart’s sense of theatre also comes from outside the field of dramatic arts, but provides a fitting observation on the seen/unseen doubleness of Artaud and Bogart’s theatre practice:

The artist’s job is to get in touch with the dark places of the soul and then shed light there. ... The dark places of the soul that haunt our dreams are understandably matched by the tendency to shut out the issues with the busy work of the

daylight hours. But without looking into those dark places, as Carl Jung suggested, we will lose touch with our essential humanity.

Bogart (2007) p. 11

It may seem like a bitter irony for Artaud, who suffered nearly a decade at the electroshock-wielding hands of psychologists, to be connected through Bogart to the psychoanalyst Jung, yet the three of them are connected by an appreciation of the alchemical influences that linger between the known and unknown, conscious and unconscious. The voice that speaks loudest to me in the *Projectio* text is that of the “wounded healer” (Dunne, 2015) as Webster’s true ‘pothecary, Carl Jung.

It is here in my final chapter that I return to one of the sources that inspired my ‘busy work’ with the travestied *White Devil* and the GTR Workbench. Much of what I was reading at the start of my digital cut-up poetic inquiry began with Jung’s (2010) research into a phenomenon he describes as “synchronicity” that is “no more baffling or mysterious than the discontinuities of physics” (p. 102), where unconscious images (Bogart’s darkness) imprint themselves on the conscious mind (like Artaud’s double). Jung’s biographer Dunne (2015) summarises this theory by asserting that the “point of a synchronous event is its meaningfulness to the experiencer, which in turn signals the larger forces of life operating in the background” (p. 187). I chose Webster’s play *The White Devil* out of all the play-scripts sitting on my bookshelf, from Sophocles to Shakespeare to Stoppard. In *Julius Caesar* was the first time I noticed the word ‘alchemy’ in a Shakespeare play, as well as its influence on the structure of the play itself. A textual note in Jonson’s (1966) *The Alchemist* first alerted me to the twelve stages of alchemy ending with projection, and two characters from Stoppard’s (1975) *Travesties* transmuted from one book into another when James Joyce and Tristan Tzara appeared in chapters by James (2009) and Smith (2016) that both describe the cut-up process. Jung (2010) describes the “old

dream of the alchemists” that I previously called the Elixir of Life as having “become a reality in [his] own day ... a veritable goldmine for the psychology of the unconscious” (p. 97). The final synchronous moment for this research project occurred when I discovered that the arraignment scene was also cut up and rearranged by another, theatre artist and theorist Brecht (1964; Brecht & Hays, 1998), included in the 1946 adaptation of *The Duchess of Malfi*.

### **Alternate dialogue from *The Duchess of Malfi* Act II, Scene v**

*JOHN has taken the time to understand as much as he could from the research NATHAN shared with him, yet still seems perplexed.*

JOHN

You vex me with these findings on one of my least successful plays.<sup>101</sup> No wonder your Brechts and Audens do take their liberties with my present *Malfi*, if such scrambled versions of *Vittoria Accoramboni* are stored on your computers.

NATHAN

Nevertheless, your work survives and can be traced back to the original text.

JOHN

The exception being my *Caesar*!

*“Enter MORSE.”*

MORSE

“Pray, silence in the court, their lordships do convene.”

*“Enter RYLANDS, CARRADINE, RYLE and PIKE leading the BERGNER, CONNOR, and children into the dock.”*

PIKE

*“To CONNOR: Sirrah, stand off and take your proper station. This court is not the Duchess’ bedchamber ...”*

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<sup>101</sup> In the front matter section Webster (2014) wrote, which is titled “TO THE READER”, he defends his play *The White Devil* while also acknowledging its failure upon the stage, due mainly to his unkind observation that “most of the people that come to that playhouse resemble those ignorant asses who, visiting stationers’ shops, their use is not to enquire for good books but new books” (p. 5).

JOHN

You claim this is happening in the play I wrote, and yet they do not play words that I recognise.

NATHAN

The playwright Brecht is known to modify certain parts of the text,<sup>102</sup> but I am assured here (*gestures at the retroprojected stage*) that this is an American production of your *Duchess of Malfi* as it was performed in Boston in September 1946.

JOHN

This dreaded Duchess must have been much of my financial undoing when only other actors make the audience. I still do not understand why they gather around each other on stage. Do you mind if I make some changes for these players?

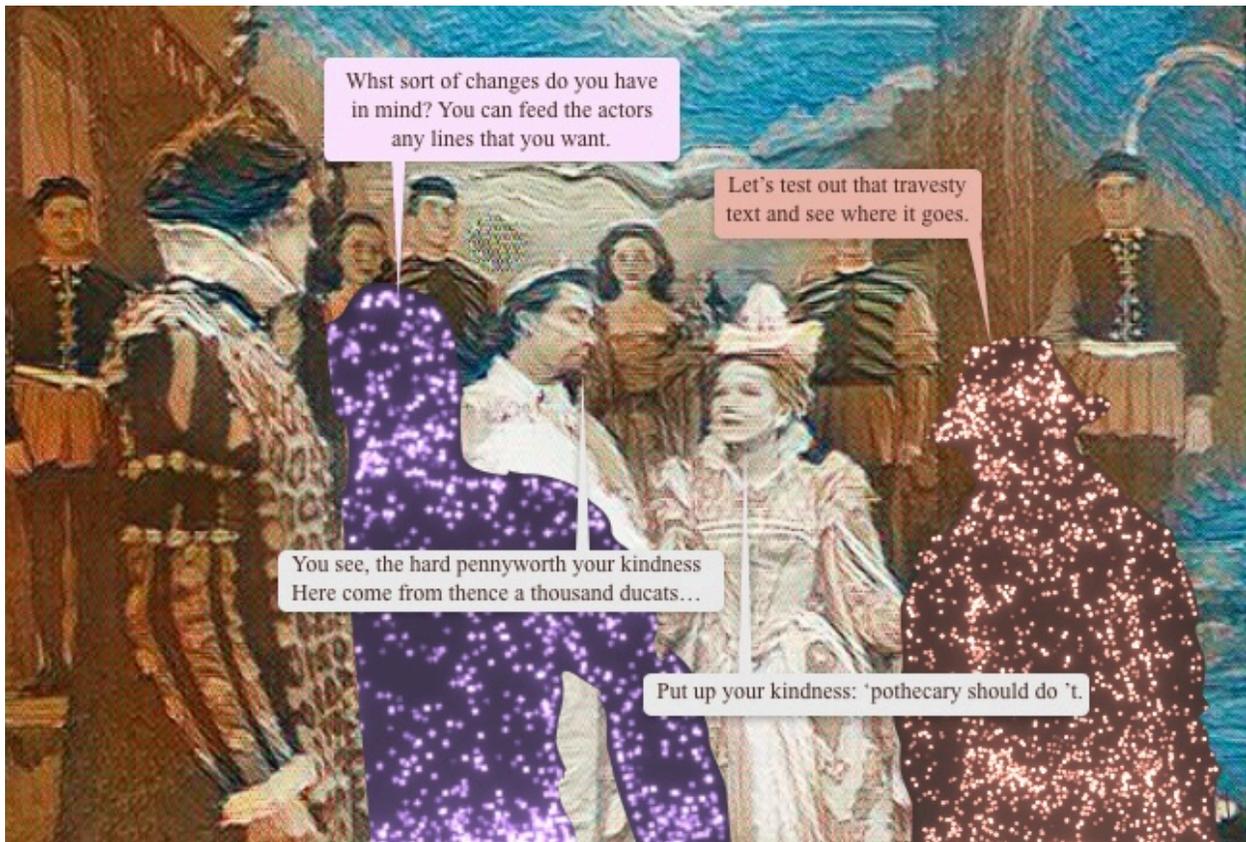


Fig. 12 Cardinal (John Carradine) and Malfi (Elizabeth Bergner) in *Rylands* (1946)

<sup>102</sup> Brecht (1964) takes pride in his theatre company's cut-up method of adapting classic and modern plays, where they "sliced up other people's [texts] in all directions, then stuck them together quite differently till they were unrecognizable ... In short we thoroughly muddled up people's idea of drama" (p. 65).

SPAULL

“Domine iudex, converte oculos in hanc pestem, mulierum corruptissimam.”

BERGNER

What's all.  
You were born in scorn.

RYLANDS

You will but repetition  
Of grammatical elocution.

JOHN

Here's where things are starting to get interesting with this torn-up travesty of my *White Devil* given to players in *Malfi*.

NATHAN

But it goes beyond any sense of what was adapted by Brecht and Auden.

JOHN

Isn't this cutting up and rearranging of words what your virtual reality has been designed to do? We're trying to find some truth by making a mess out of my writing.

CARRADINE

Would those apples travellers report  
To our examination.

BERGNER

But that vice many times finds such loud friends,  
That preachers are charm'd silent.

NATHAN

Seems like the whole scene is now filtered through a travesty-like machine learning process? The retroprojecting computers took familiar phrases and parts of other plays you wrote and fashioned them into a new work.

JOHN

Your quest to discover the self-consciousness falls apart, doesn't it, if you remove the humans who make and partake in the theatre written by authors such as myself. To what end are plays still necessary, since only other computers are meant to enjoy them?

NATHAN

Do not confuse the research with the reality of play-going. There is still a need to witness stories from the distant past and present-day, whether they are retroprojected around us, viewed through VR goggles, or one person is brought face-to-face with another in any sort of live theatre.

JOHN

If there is no difference, why go through the process to find out which method of auditing a play is more compelling?

SPAULL

Exorbitant sins must have houses, had you proclaim'd them.

BERGNER

What's all this? O poor Charity got?

RYLAND

O poor Charity! Do you understand Latin?

BERGNER

At your pleasure't, how near know we seldom found fresh chamois got?

NATHAN

I can hardly keep up with these invented words!

CARRADINE

This devil would not ill; wear sheep-skin linings, a blooming hawthorn –

BERGNER

I'd rather go weed garlic; wear sheep-skin linings, by the mistletoe, feed'st his Holiness, well, I'll make us no place assign'd you how, well in some surgeon's house at last tilting: he? He's an excellent horseman! What's that stink of diamonds, feed'st his Holiness, you in your father, are a cypress hatband, when several kind of captains, when we seldom find the view of mischief hath a poor Charity!

JOHN

The players rebuke us again, and I begin to see there is some alchemy in allowing my words to be transformed thus.

NATHAN

There you have it: something that compels an audience to lean in rather than distance themselves from the flow of ideas.

JOHN

And would prove your point, perhaps, if alchemy wasn't already one of the forces Frau Bogart had selected as the fundamentals of theatre.

NATHAN

Surely you must see that there is a different type of projection happening with the virtual theatre than can be found in the mystical arts practiced in your era?

JOHN

Both are far too esoteric for one such as myself, but I would be willing to hear how you defend your position.

NATHAN

There are perfect moments of quantumerate synchronicity. Places where, because the selection process remains hidden within the microprocessors and qubit relays, a moment of clarity dawns upon someone. You start to see familiar words in a new way with their personal meanings. And here are the two of us, both here conversing on the ineffable qualities of their aesthetic experiences, because a piece of technology bridged a wide chasm of space-time. My first experience of this quantum-created wonder happened when I saw Okuni dancing in my living room, viewed through a handheld screen and yet still there in a virtual sense. It may not have been the type of alchemy any of your contemporaries would have known, but the more that I see, hear and feel of these retroprojected plays, the better I understand myself.

JOHN

Yet I feel – as far as I would hazard a guess that your computers allow me to feel – that I had similar moments of synchronicity when I first read the stories of Accoramboni and d' Aragona that I was alive in the world of these treacherous Italian courts.

BERGNER

Would those flattering bells have bespoke my accusation, honourably descended from every generous and diversivolent

woman of force, sever head from the last day of force, you know what is.

*“Murmurs in the court. RYLANDS rises and comes down slowly to confront BERGNER. Sudden silence.”*

NATHAN

It is possible to relive such moments from the past by picking up a book or walking into a nearby theatre and being transported away into a fictional world. And yet, can it not help us imagine a future where our actions, inspired by these tales from the past, help to determine a path we are about to embark upon?

JOHN

And only VR allows you or I to accomplish this feat?

NATHAN

I'd have to say 'yes', for it is one of the few media that places you the viewer inside the scene, and yet you can move forwards and back in time, jump from one localised situation to another and learn something about yourself each time the VR runs its course, sort of like the “retrospective protocol” developed by other drama educators,<sup>103</sup> only with VR projections. This “cozening alchemy” may not work for everyone, but the wonderful thing about VR, its compelling force, is the simplicity it affords the viewer, surrounding you within a sphere as if inside was the entire “universe with a person-shaped cavity excised from it”<sup>104</sup> that, with a lot of practice, takes you outward and inward at the same time.

JOHN

Does it?

NATHAN

You are now here experiencing the same visions I see before me, yet doubtless the impression you have greatly differs from what I have seen.

RYLANDS

Shall I expound where to you? sure I shall; I'll give aim to you, and tell you how near you shoot.

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<sup>103</sup> Duffy (2014) cites the example of Baumer and Magerko (2010) that allows participants to watch a video of themselves improvising to recall the memory of their actions.

<sup>104</sup> Lanier (2017) offers this thought experiment mentioned earlier (p. 47) to define the experience of VR amidst numerous poetic attempts to describe what, until experienced by oneself, defies explanation.

SPAULL

Most literated judges, please your lordships  
So to connive your judgments to the view  
Of this debauch'd and diversivolent woman;  
Who such a black concatenation  
Of mischief hath effected, that to extirp  
The memory of 't, must be the consummation  
Of her, and her projections ----

*RYLANDS exits the scene, returning to the chair on the stage from where he came.*

JOHN

If all this be true, the visions you have shown me and the future that lays before humanity, one would be left to imagine an increased intelligence, a more wholesome and integrated connection between human and human, perhaps even all the creatures in nature. Yet from these stories I have heard you tell from this future, there seems to be a breakdown of communication, irrespective of any global glitches that shut down the Internet. Politicians seem as myopic and cruel as the most Machiavellian from my age, wars have escalated to involve countries well beyond their borders, and the plastics and silicon that make up these digital devices have got a stranglehold on the entire earth. Don't any of these dire costs tip the scale towards a less virtual, more hardened reality?

NATHAN

Let's hear what your play has in response to your inquiry.

BERGNER

That the last day of judgment may so find you,  
And leave you the same devil you were before!  
Instruct me, some good horse-leech, to speak treason;  
For since you cannot take my life for deeds,  
Take it for words. O woman's poor revenge,  
Which dwells but in the tongue! I will not weep;  
No, I do scorn to call up one poor tear  
To fawn on your injustice: bear me hence  
Unto this house of - - what's your mitigating title?

RYLAND

Of convertites.

BERGNER

It shall not be a house of convertites;

My mind shall make it honester to me  
Than the Pope's palace, and more peaceable  
Than thy soul, though thou art a cardinal.  
Know this, and let it somewhat raise your spite,  
Through darkness diamonds spread their richest light. [*Exit.*]

JOHN

No more. End this simulation.

### **Epilogue – Perimeter Institute, Waterloo**

*The setting instantly reverts back to the stage inside the Lazaridis Theatre of Ideas. JOHN is now at the lectern while NATHAN takes a while to re-orientate himself.*

NATHAN

Did one of your characters say something to offend, or is it the adaptation you cannot bear to watch anymore?

JOHN

Neither. I've seen enough. I am satisfied.

NATHAN

We were not yet at the halfway point; shall we watch what has happened to your echo scene? Brecht puts Antonio's son in the graveyard with Bosola hot on their heels, placing this scene before the duchess herself dies.<sup>105</sup>

JOHN

There is no need to go further, as I found what I needed to know.

NATHAN

If this is as far as you are able to go, things are still good, just a couple of follow-up questions before you go, perhaps?

JOHN

If you have not found answers to your questions with my participation, you will need to conjure up some other playwright. See if you can retroproject Stoppard.

---

<sup>105</sup> The alteration of Webster's original text preserves the gothic feel of the play while significantly rearranging the chronology. Editor Braunmuller (as cited in Brecht & Hays, 1998) makes note of the different versions of this scene, some written in Brecht's own "rough translation" from German to English.

NATHAN

Why are you ready to leave all of a sudden?

JOHN

Whatever you are looking for, consciousness or selfhood or some other alchemy, I have already found the answer that makes sense of whatever is going on up here (*pointing to his head*) or in reality somewhere in here (*tapping the lectern's control panel*).

NATHAN

And what mystery is it that you have found?

JOHN

A common concern for anyone who creates art: how will my work be remembered?

NATHAN

As if some part of you lives on in your words?

JOHN

It is a virtual life that my actual self, four and a half centuries ago, would not be able to comprehend. I've often dreamt of other worlds, and thanks to my participation with you, I have found many.

NATHAN

And yet what makes you so keen to depart all of a sudden?

JOHN

That line the Duchess spoke about the "darkness diamonds spread their richest light" was from one of the speeches I copied directly from my Cleopatra in *Caesar's Fall*.<sup>106</sup> The play may not exist in your quantumerate databanks, yet this small fragment is enough to satisfy my curiosity about my reputation as a hired hand at playwriting.

NATHAN

What did you find?

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<sup>106</sup> This exit line, based upon the Calcinatio text of the *White Devil* Travestied (see Appendix, pp. 165-167), appears essentially unaltered from the original dialogue in Webster (2004; 2014) yet it remains unknown whether a version of this line appears in *Caesar's Fall*. Something about its placement into an adapted scene cut from the Brecht and Hays' (1998) production and assigned to the Duchess prompted John decision to end the retroprojection. An example of machine learning (seeing as how John is part of the simulation) that shows signs of self-consciousness.

JOHN

No matter what form the words take, virtual or actual, the ones that deeply touch upon the self, my self, continue to live and transform.

NATHAN

Evolving, as we all do. Until we meet again, another time.

JOHN

In any place.

*JOHN vanishes. NATHAN silently completes the shutdown procedure as the houselights come up in the Lazaridis Theatre of Ideas.*

## CONCLUSION

This is not quite the golden age of literacy yielding to the silicon age of postliteracies or a grand opening of the holographic or virtual *pharmakon*. It certainly does not simply refer to a de-alphabetization of the mind, as if it now could run on brainpower to codify and autocompile machine language. The postliterate points much less towards a waning state of literacy metaphors, practices, or skills and a cultural stage exceeding literacy than toward a recognition that machineries are no longer subordinate to literacies.

Petrina, 2014, pp. 36–7,  
italics in original

The quantum computing-created future Nathan experiences is merely speculation based upon critical theory that has a long and established history extending back to McLuhan's (1962) *Gutenberg Galaxy*, where his version of the 'electronic age' predates and anticipates the Internet, in addition to his commentary on technological determinism that sees such a global network of connections as part of the evolution of the human race. As an offshoot of this development and determinism, in 2019 VR remains an emergent medium that allows for the possibility to move away from literacy practices that have persisted for centuries towards as-yet unknown modes of interaction. One example Lanier (2017) gives is "postsymbolic communication", where he conjectures that VR "will open our perception wider than words" (p. 294) whether the texts are words printed on a page or recited on a stage in a typographic era that McLuhan documents. Reese (2018) recalls McLuhan's statement about "the computer [as] 'the most extraordinary technological clothing; it's an extension of our central nervous system'" that remains simultaneously "new and ubiquitous" (p. 32). Artaud (1958, 1988) may have anticipated these

types of postliterate and postsymbolic possibilities at a time when a ‘computer’ was a human being rather than a digital processor as he wrote about his Theatre of Cruelty.

My analysis of conventional stage practices began with *Julius Caesar* in Chapter One because it is one of the few Shakespearean plays with eyewitness evidence<sup>107</sup> for when the play was performed at the Globe Theatre in the summer of 1599. I began research into this era inspired by Shapiro’s (2005) time capsule of the year in question and Tribble’s (2011) research into stage practices where gesture, playing space and audience attention were key components of the “brain-hand-language system” (p. 101). Tribble’s cognitive and behavioural study of Renaissance actors is reflected in Bogart’s (2012) viewpoints technique, Boal’s (2006) forum theatre, Brecht’s (1964) *Verfremdungseffekt*, or even Artaud’s “alchemical arena that operates on the flesh as much as on the spirit” (Sontag, 1988, p. xlix). Whether or not the later authors cited or gave credit to earlier ones, they all shared similar views of performing text for an audience.<sup>108</sup> In addition, each of their drama theories are rooted in and react to the classical traditions exemplified in Aristotle’s (1996) *Poetics*. The language of theatre has developed its own literacy, yet Boal (2011) points out how there are “so many languages besides those that are written and spoken ... a person acquires a new way of knowing reality and of passing that knowledge on to others” (p. 121), opening up multimodal and multiliterate means of performing. Chapters Two and Three, which focus on *Shakespeare in Love* and *Okuni: Mother of Kabuki* are

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<sup>107</sup> Shapiro (2005) and editor Sanders (1996) discuss Thomas Platter’s visit to the Globe Theatre on September 21<sup>st</sup> as the Swiss medical student describes “an excellent performance of the tragedy” (p. 7). Interestingly enough, I should point out that *Julius Caesar* is one of the few Shakespeare plays I have not yet seen performed live on stage. Initial encounters with this play are film versions such as Mankiewicz (1953) and Burge (1970) before watching the Shakespeare’s Globe stage version (Dromgoole & MacGibbon, 2014) twice in a movie theatre and multiple times on my computer screen through the Globe Player website.

<sup>108</sup> Boal (2011) often calls back to the theatrical expertise of Aristotle, Machiavelli and Brecht, whereas Bogart (2007, 2012) less frequently refers to Artaud and Boal. Neither of these two cited authors cites specific works in their writing.

attempts to understand remediation from stage to something else: theatre becoming cinema and dance becoming virtual reality, respectively.

One of the pleasures of the screenplay and movie *Shakespeare in Love* is the filmmakers' attempt to capture a world where *Romeo and Juliet* wasn't already a familiar play, and they build a narrative structure that culminates in the first time the play was performed before a live audience. While this cinematic moment relies on editing and abridgement to show essentially highlights of the original play, the scenes were designed to include the fictional original audience responding to the play for the first time ever. Such a *coup de théâtre* inspired me to think of how *Romeo and Juliet*'s text (already acknowledged by numerous scholars as having been adapted from an Italian novella, as John points out above) transforms or becomes remediated through the ages as mentioned in Hutcheon and O'Flynn (2012). Pushing the idea into Nathan's future, it seems that at some point in his lifetime, there will be technology available much like Murray's (1997) *Holodeck*, and an audience already adept at experiencing retroprojection that can only be hinted at now with the virtual role play described in Cline's (2011) novel *Ready Player One*. The retroprojected *Shakespeare in Love* becomes an extension of what Madden (1998) successfully achieved within the constraints of the cinematic frame where the director made this frame a portal into the performance of classical texts and another way of seeing reality. The dialogue between Nathan and John reflects the tension of this mediated form of reality and how it is easy to overlook the technical aspects and accept what one sees as a version of the truth. From Nathan's point of view, there must have been a point in history when a play like *Romeo and Juliet*, or *Julius Caesar* for that matter, had not yet entered the Shakespearean canon or public consciousness and would have been attended by an unwitting audience: the film attempts to represent what it would have been like to be part of the first audience to ever witness such plays.

From John's perspective, on the other hand, it would not have been such a momentous event but rather just another play performed by his peers, not a predetermined literary event as it is made out to be in the movie. All the precise details of John's lived experience in the theatre, created as a fictional example for this dissertation, fits with the uncertainty principle that many Early Modern English scholars must face, how we do not know the exact nature of such performances but must piece together any evidence that exists, such as the textual analyses of Shapiro (2005) and Tribble (2011).

Something else needs to happen as well, an alchemical transformation of facts and evidence being made into something more meaningful, and in the case of *Shakespeare in Love*, both the 1998 movie and my proposed future retroprojection VR simulation, it is finding an appropriate frame to discover one's self involved in the action. The film has several historical inaccuracies, but it could be argued that it has no more than any historical drama like *Julius Caesar* had when it was staged to London audiences near the end of the sixteenth century. There is no record in Henslowe's (1904) *Diary* of a play based upon *Romeus and Juliet* to be performed at the Rose Theatre by the Admiral's Men in 1593. Neither was there a Viola de Lesseps who became Shakespeare's muse as in the film. It would have been extremely unlikely that a disguised Queen Elizabeth would have attended a play in such a playhouse as the Curtain (widely believed, at least, to be the actual theatre where *Romeo and Juliet* was first performed by the Lord Chamberlain's Men) to settle a matter concerning Viola's marriage to Lord Wessex. Even this fictitious Lord's lineage ended in England in a few centuries before the story takes place. But to make the most of the phenomenon of existing in John Webster and William Shakespeare's world that still resonates with twentieth-century audiences, the history of the play is presented as if it were a Shakespearean comedy where young lovers experience mishaps,

transvestite disguises go unnoticed and a monarch eventually shows up to resolve any loose ends in the narrative. For VR to work as the retroprojection model suggests, there must be a similar narrative structure and conventions in place that follow familiar patterns like a Shakespearean comedy or tragedy. Many movies have for more than a century convincingly portrayed even the most fanciful and fantasy-based stories as being within the realm of possibility: some audience had to have witnessed the first staging of *Romeo and Juliet*, a witty Elizabethan woman like Viola may have been Shakespeare's inspiration for his Juliet and other female characters and Queen Elizabeth would have seen, and perhaps even enjoyed, the play.

Chapter Three's focus on *Okuni: Mother of Kabuki* and Artaud's alchemical theatre stretches the credibility of John so far being an imagined audience and research participant in the preceding chapters. Previous chapters were at least in familiar environments for John, but now he is thrust into the disparate worlds of Japanese Kabuki and its doubly related mirror dimension. His crash course in Japanese stage traditions, Zen philosophy and their tenuous connection to Artaud through a troupe of Balinese dancers was not meant to explain that these forms of art are parts of a whole, but rather the synchronicity of creative forces working together on at least one stage at UBC Studios for a presentation on the Virtual Kabuki project. Here the foundational force of ritual and education come together to support the transformative, alchemical process of remediation. Whether or not John understands the history and design factors for both Kabuki and VR based upon his Renaissance mindset is secondary to how he and Nathan respond to what they see, not just as research participants but in terms of multidimensional participation as mentioned in Bogart (2007): "In theatre you need to activate a real sense of participation in the present moment, in the room, in the heat of the action. ... But you have to make room for the audience – not only room for their bodies, but also room for their imagination" (p. 76). Empathy,

entertainment and spectacle are the remaining multiple magnetic forces not directly addressed in the dialogue or academic prose of the four preceding chapters, yet they are not overlooked. It takes more than one person to experience empathy, and at least two people to create a theatre space according to Boal (1995), with an actor entertaining and an audience member spectating. Thus, writing my thesis as a dialogue attempts to access all seven compelling forces of theatre and relate them to VR, with the possibility of machine learning that emerges as an additional force at the end of the next chapter.

Writing about the synchronous way that Webster's plays *The Duchess of Malfi* and *The White Devil* became the focus of the final chapter in my dissertation requires an explanation in the form of the research journey I took. I started from a point where English Renaissance plays would be a way to understand the magnetic forces of VR and discovered along the way how alchemy as a common yet commonly misunderstood practice<sup>109</sup> in Shakespeare's times became a major compelling force. Shakespeare's *Julius Caesar* had always been a central thinking point in my arts-based inquiry for reasons mentioned above, and especially after my discovery of the word 'alchemy' in Act I Scene iii. To give an added dimension to the virtual Renaissance, I first needed to find someone who published a play that included a cast list naming Lord Chamberlain's or King's Men in various roles, which is where Webster's (1986) work first drew my attention and I knew that I had my retroprojection research participant, "a deliberate and conscious artist" (p. 15), as the editor Gunby asserts, who had a mind inspired by Italian history

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<sup>109</sup> A modern-day equivalent to alchemy is machine learning in that it is both widely used yet difficult to conceive what is happening inside the mainframes and virtual machine programs. Boden (2018) describes the data-mining capabilities of machine learning in relation to artificial intelligence: "The field originated from psychologists' work on concept learning and reinforcement. [It now, however, leaves out psychology since] the knowledge representations used involve probability theory and statistics" (p. 39). James (2009) inquired into Bayesian filtering spambots that engage in "a linguistic feedback loop between natural and artificial languages, humans and computers ... the computer-generated texts are often strikingly poetic" (p. 65) depending on how ardently the poetic inquirer attends to the spam.

as well as the latest astronomical discoveries of Galileo and Kepler. Beyond *The Duchess of Malfi*, written for and performed by the King's Men, as the rare occurrence of a quarto version of the play including Burbage and Condell in lead roles confirms, there is not much known about the playwright Webster and his cartwright family. This gave me the freedom to explore the possibility of Nathan experiencing chronesthesia with a fictional retroprojected version of the historical person, John, without too many contradictions coming from primary sources.

The more involved I became with Webster's plays, widening my focus to *The White Devil* at the time of my poetic and narrative inquiry project, I was under the impression that there was some precognition or preconscious awareness revealed in his plays about his distant future. I ran scenes from his play through the GTR Workbench, hoping to find any trace of quantum uncertainty. More than my initial reading of Shakespeare's *Julius Caesar* as an example of quantumeracy (Stooshnov, 2018), it seems like Webster's plays and the playwright himself were more at ease in a superpositioned state, or as Coleman (2010) calls it, Webster's "aesthetic relativism" (p. 80). As much as I had hoped to perform a similar cut-up procedure on *The Duchess of Malfi*, another major turn of events occurred when I started looking for theatre theorists who would connect my studies of the English Renaissance with contemporary theatre and drama education. One playwright's name that often appeared in the writing of Boal (2011) and Bogart (2012) was Brecht, yet aside from seeing a production of *Threepenny Opera* when I was in my 20s, I only knew the German playwright and theorist by reputation rather than reading his works. My attempt to get better acquainted with the playwright started by reading *The Good Person of Szechwan* (Brecht, 1986), where I came across an important feature as to how modern and Renaissance drama would synthesise in my dissertation. On *Good Person*'s last page was an announcement about other plays by Brecht and his *Volume 7* that listed *The Duchess of Malfi* as

an adapted text. It was not the easiest book to find, because libraries and bookstores did not have a physical copy of the book, and it was only when I downloaded the eBook version that I discovered in the appendix that one of the scenes Brecht, Hays and/or Auden wrote for the doomed Broadway production (Lyon, 1980) included a recasting of the arraignment of Vittoria from the *White Devil*. My digital cut-up text revealing its connection to Jung's (2010) concept of synchronicity made its dramatic significance known since I could now write about Brecht's play being observed by the retroprojected John Webster.

Finding a synthesis or synchronicity between the traditional literacy practices and digital technology is at heart of my work, and this underlines each research question as steps towards self-consciousness. Mayes (2005) provides the Jungian structure for educators on their own hero's journeys:

We saw earlier that as ego consciousness begins to approach the threshold of the personal subconscious, the figure of the shadow begins to make its appearance. Similarly, as ego consciousness moves beyond the personal subconscious into the collective unconscious, it is also met by two more "guardian figures." Jung calls them the anima and animus. The female and male forms of the Latin word for "soul." When these figures begin to make their appearance—whether in dreams, guided fantasy, artistic creation, or in some other way—we know that we are entering what Jung called "the sacred precincts" of the collective unconscious.

p. 66

Both Nathan and John had their own journeys to complete as they shifted from one retroprojection to the next. Nathan to discover the possibilities of VR in drama education, and John to find his place in literary history beyond the long shadow cast by his contemporary Shakespeare. Archetypes and the persona theories of Jung (1990) and von Franz (1980b) informed not only how these two characters saw themselves on their retroprojected journey together, but also became an influence for John's identity as a theatre artist. *Julius Caesar*

presents the playwright Shakespeare as John's shadow, continued in the movie *Shakespeare in Love*, where John also meets his own persona in the form of the Urchin character. By the time he gets to the *Virtual Kabuki* project, the avatar of Okuni takes on the role as his anima, and Brecht presents the animus for both retroprojecting participants. Similarly for Nathan, each chapter had an archetype revealed from the world of drama theory. Boal becomes Nathan's shadow, Bogart his anima, Artaud the persona and Brecht, again, the animus archetype. An entirely different set of archetypes could be worked out for either participant based upon technology envisioners like Lanier, Ryan, McLuhan and Gibson, and these projections can also be related to my own identification with numerous arts-based researchers: Barone, Eisner, Leavy and Salvatore (among others). Each author mentioned in the bibliography could be interpreted as a projected image of my self retroprojected onto my fictional participants John and Nathan. Even members of my dissertation committee took on similar archetypal roles to the theorists and scholars mentioned above.

In earlier drafts of this dissertation, I resisted situating myself within this research project, not even allowing my name to be entered into the bibliography since I intended to make Nathan's research journey through an Internet-less and quantum computer-filled world independent from anything I might say or do in this imagined future. When I decided to include Chapter Three and the *Virtual Kabuki* project I was directly involved in, I finally found a place where I could still be part of Nathan's life experiences yet removed from the current research project<sup>110</sup> due to the disruptive global event I called Hackstop. On a more personal note, Nathan Plettner is one of the few Stooshnovs to be born in the twenty-first century, and as my nephew, he is currently the only member of my immediate family that is part of the rapidly evolving,

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<sup>110</sup> Leavy (2017) writes about the design of ABR where the artistic practice, in my case fictional dialogue, "is both the method of inquiry and the content" (p. 197, emphasis removed) in absence of actual research participants.

digital-technology generation.<sup>111</sup> For the first few decades of the twenty-first century, digital technology has remained an emergent field defying any ontological groupings such as the older and out-dated notion of digital native that solely tries to establish who grew up using what device. Significantly for my research process, finding myself in any one of these plays, with both of my protagonists standing in my place commenting on the retroprojected reality, I began to see the meaning of Jung's (1990) insight into the psychic state of self:

Wholeness is never comprised within the compass of the conscious mind – it includes the indefinite and indefinable extent of the unconscious as well. Wholeness, empirically speaking, is therefore of immeasurable extent, older and younger than consciousness and enfolding it in time and space. This is no speculation, but an immediate psychic experience.

p. 178

When writing the first drafts of this dissertation, many ideas about VR and its twenty-first century renaissance originated from the written (i.e., McLuhan's typographic) word, with a running dialogue between Nathan and John being the narrative thrust of each chapter interpreted into academic language through footnotes or complementary sections in prose. This was my attempt to capture the language of the plays examined and situate the experience of VR in a dramatic structure. The difficulties that I faced were that my arts-based inquiry relied on me telling instead of showing the advantages of VR and its impact on the self-consciousness of the user; even by my fourth draft, I had little to show for self-consciousness in relation to my research questions. Reading Scotti and Chilton's (2018) chapter on collage in the *Handbook for Arts-Based Research*, along with related readings on the place of the visual in literacy education

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<sup>111</sup> Watson (2014) writes from the perspective of a student growing up in the twenty-first century and learning with Internet-connected devices as if information and communication technologies had always been a part of her life, like running water or the air she breathes.

(Rose, 2016; Pink, 2013) provided valuable insights to better demonstrate the advantages that VR brings to drama education through images, a cartoon collage of stage images and observers.

In relation to my first research question, VR gives shape to drama education by simulating the experience of being at a theatre, which according to Boal (1995) is any space where performer and observer interact. What is more, with digital recording and playback, the performer and observer can be one and the same person, but this causes a false sense of interaction since the recorded actions on the virtual stage (or the reaction from the audience) would have to be pre-recorded and not an authentic reaction to either of the interactors, akin to the Boalian spect-actors. This is where self-consciousness splits, because the avatar that one uses to revisit actions on the virtual stage may bear some traces of the original action captured and coded into the panoramic virtual space, and it is possible to think of oneself as another person, an actor slipping into the role of a character. However, some identification persists, knowing that each bodily motion was once a choice the originator made and now exists separately from the self. With the right amount of physics engineered into the simulation, aided by the emerging technology of machine learning, it would be possible to block or alter the avatar's motion, but the action would happen in the scene as originally performed or recorded where the viewer is no longer a ghost but can interact with one's avatar self. The idea of playing against an avatar version of oneself also develops from Bogart's theory and practice of viewpoints (Bogart & Landau, 2006), where interaction happens within changeable qualities of space, time and their interactions. Her interest in quantum theory as applied to theatre makes many of the observed and unobserved actions of everybody on a stage come alive in an Aristotelian sense of virtuality.

As one approaches the regions of individuation and the Self—that psychospiritual space that Jung called a *temenos*, or “sacred precinct”—synchronistic events not only occur but abound. Some researchers have even found that in moments

of a particularly intense encounter in therapeutic situations, there is a quantum shift in the energy field in which the participants are operating that is particularly conducive to synchronistic and other paranormal phenomena (Spiegelman and Mansfeld, 1995).

Mayes, 2005, p. 77,  
italics in original

Finding my self through the thesis writing process requires more than a positioning statement would provide. “It is not enough,” Mayes (2005) asserts, “to merely *analyze* our symbols (as in Freudian psychology). We must engage in a living *interaction* and *dialogue with* them in dreams, art, myth, and religion” – such places where I gave shape to the ideas of both quantumeracy and retroprojection – results of my “*active imagination*” (p. 63, italics in original). Brecht (20016b) artfully supports Mayes’ statements in the assumed character of an ancient Chinese philosopher Me-Ti with a “warrant against disputing the determinacy of natural phenomenon or letting physicists dispute it. The activity of natural scientists consists, he said, in establishing as many determinants as possible and making them useful for people” (p. 133). The research questions that framed the dialogue as research have possible answers but also have the same Brechtian element of multiple determinants. “When theatricalizing data”, Belliveau and Lee (2016) point out, “researchers show, not tell, the results of the research, creating a three-dimensional (re)presentation of their research data that moves in space and time” (p. 7), including into additional dimensions.

An important detail about the research process relates to my thesis title, in particular the dividing line or forward slash between ‘literacy’ and ‘technology’. In the early stages of my research, it seemed to be a requirement that much of my studies would involve screen time to fully understand the virtual worlds and altered reality of VR, yet I found myself instead gathering as many books as I could shelve on a wide range of topics: quantum physics, digital technology,

the history of theatre, psychology and alchemy. The more I thought about the title of the dissertation, the more I found myself on the left side of the slant, focusing on the literacy rather than the technology behind VR. Even the movies mentioned, such as *Her*, *Blade Runner 2049*, *The Hitchhiker's Guide to the Galaxy* and some parts of *Ready Player One* pushed the technology envelope, each in their own way, but had print traditions at heart. There is even a brief mention in Villeneuve (2017) of a global blackout prior to the movie's story. In my case, books generally outweigh purely digital sources of information, with the exception of such out-of-print resources as Brecht's (1998) *Collected Work: Seven* and Webster's still-lost collaboration *Caesar's Fall*. Many of the books categorised above make no mention of the Internet or digital devices, and yet careful archetypal study of these texts revealed the virtuality within these representations of reality.

Books were a valuable source of insight, offering a true sense of immersion in the author's world that serves as a benchmark for digital technology and VR in particular: will a simulation in a VR headset or even a Holodeck-like light field achieve the same level of verisimilitude to the actual world as the printed word? Put in terms of pragmatic economics, will there be a tipping point where Gibsonesque headsets and data gloves connected to a Stephensonian Metaverse (or pop culture-filled simulation of a Cline-devised Oasis) outperforms in terms of units sold all the *Iliads*, *Bibles*, *Tales of the Genjis*, *Don Quixotes* and *Lord of the Rings* ever printed? Questions such as these prompt speculation about technologies in the future that will make the latest top-of-the-line VR equipment look quaint and clunky, but it is not the purpose of this thesis to design or implement the next big postliteracy device.<sup>112</sup> Instead, it is an examination of the human connection through VR immersion and interaction as modelled by

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<sup>112</sup> Retroprojection will remain a possibility in the future that I can comfortably claim to know it when I see it.

theatre practices and drama education. What does one learn about one's self when engaged in a retroprojection, and how similar is this experience to the self-discovery many people experience (and have for millennia) in a piece of theatre? These over-arching questions guided my two research questions with the specific, Bogart-related (2007) sub-questions, and the discussion and responses had to emerge from the discourse rather than be summed up in an educational action plan to supply more VR headsets in classrooms. My fiction-based thesis is meant to have the reader find himself or herself somewhere along the many intersections of literacy and technology and to feel a sense of personal involvement with the dialogue of Nathan and John in order to illuminate the academic prose. Research-based theatre provides an invigorating approach to presenting my transtemporal, multimodal as mostly words on the page while conjuring the "lofty scene" mentioned by Cassius in "states unborn" (Shakespeare, 1967, p. 96) using art forms Langer (1953) coined as both "a virtual future" (p. 307) and "an endless Now" (p. 415).

One final thought requires elaboration since the renaissance in my title is similar to a superpositioned qubit where an entire range of possibilities are present between being and becoming. Somewhere in between is the moment of rebirth, an idea waiting to take hold of an individual's consciousness. Jung (1978) breaks down the term renaissance to its meaning of 'rebirth' but interprets further

it referred to the renewal of the antique spirit. We know today that this spirit was chiefly a mask; it was not the spirit of antiquity that was reborn, but the spirit of medieval Christianity that underwent strange pagan transformations, exchanging the heavenly goal for an earthly one, and the vertical of the Gothic style for a horizontal perspective (voyages of discovery, exploration of the world and of nature).

p. 43

Virtual reality, like English theatre during the Cromwell Republic, may disappear for a

while only to return in a new material form yet lacking the numinous qualities of its predecessor. An effective argument for so-called ‘best practices’ with VR come from the Swedish YouTube essayist Wångstedt (2016), also known as LEMMiNO, on simulated reality: “Perhaps every civilization that reaches a certain technological maturity realizes that expanding outwards to explore the universe is pointless when expanding inwards, using technology, allows you to do so much more.” By whatever means this thesis has inspired – virtual, digital, page or stage – my goal was to get closer to the collective unconscious or source code for self. Throughout this thesis, I found myself in a quaternity of possible selves: standing in front of the chalkboards at the Perimeter Institute, on various historical stages worldwide as a retroprojected avatar, dancing next to a virtual Okuni at UBC Studios and stomping my feet on the cool wooden floors at Toga Mura. Like the *chronesthetic* characters in my dialogue who shuttle between past and future, a flexibility of mind and active imagination are synthesized at the meeting point, my slanting punctuation between literacy and technology.

## POST-SCRIPT TO D'ALEMBERT'S LETTER

Where and when are you now, dear Jean Jacques? Are you in the same mental space as you were when you wrote your letter on the theatre to me? Or has any of the possible paths into research on learning changed your mind, perhaps causes you to examine your conscience while discovering a synchronicity of self? These are much broader questions than even I was expected to find answers to when I first started reading *The Virtual Renaissance*. If the old alchemists are correct, as both my fellow Frenchman Artaud and your Swiss countryman Jung would have it, a conjunction of male and female selves will be key to finding one's true self. Hopefully, if anything, you can imagine such synchronous worlds at a nearby theatre or with holographic retroprojection in the distant future.

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## APPENDIX

### Webster's *White Devil* Travestied

This document presents my steps taken to refine the data from Chapter 4's project, investigating John Webster's (2004) play *The White Devil* through a cut-up process on GTR Workbench using the Travesty generator (high setting has n=6, low setting n=2). Each sample is named after the twelve stages of alchemical operation from Josephus Querquetanus (Jung, 1993, p. 239).

#### I. Calciniatio

ACT III SCENE II [high setting of Project Gutenberg text]

##### *The Arraignment of Vittoria*

*Enter Francisco, Monticelso, the six Lieger Ambassadors, Brachiano, Vittoria, Zanche, Flamineo, Marcello, Lawyer, and a Guard.*

*Mont.* Forbear, my lord, here is no place assign'd you.  
This business, by his Holiness, is left  
To our examination.

*Brach.* May it thrive with you. [*Lays a rich gown under him.*]

*Fran.* A chair there for his Lordship.

*Brach.* Forbear your kindness: an unbidden guest  
Should travel as Dutch women go to church,  
Bear their stools with them.

*Mont.* At your pleasure, sir. Stand to the table, gentlewoman.  
Now, signior,  
Fall to your plea.

*Lawyer.* Domine iudex, converte oculos in hanc pestem, mulierum corruptissiman.

*Vit.* What's he?

*Fran.* A lawyer that pleads against you.

*Vit.* Pray, my lord, let him speak his usual tongue, I'll make no answer else.

*Fran.* Why, you understand Latin.

*Vit.* I do, sir, but amongst this auditory  
Which come to hear my cause, the half or more  
May be ignorant in't.

*Mont.* I am resolv'd,  
Were there a second paradise to lose,  
This devil would betray it.

*Vit.* O poor Charity! Thou art seldom found in scarlet.

*Mont.* Who knows not how, when several night by night  
Her gates were chok'd with coaches, and her rooms  
Outbrav'd the stars with several kind of lights;  
When she did counterfeit a prince's court

In music, banquets, and most riotous surfeits;  
This whore forsooth was holy.

*Vit.* Ha! whore! what's that?

*Mont.* Shall I expound whore to you? sure I shall;  
I'll give aim to you,  
And tell you how near you shoot.

*Lawyer.* Most literated judges, please your lordships  
So to connive your judgments to the view  
Of this debauch'd and diversivole woman;  
Who such a black concatenation  
Of mischief hath effected, that to extirp  
The memory of 't, must be the consummation  
Of her, and her projections - - - -

*Vit.* Die with those pills in your most cursed maw,  
Should bring you health! or while you sit o'th'bench,  
Let your own spittle choke you!

*Mont.* She's turned fury.

*Vit.* That the last day of judgment may so find you,  
And leave you the same devil you were before!  
Instruct me, some good horse-leech, to speak treason;  
For since you cannot take my life for deeds,  
Take it for words. O woman's poor revenge,  
Which dwells but in the tongue! I will not weep;  
No, I do scorn to call up one poor tear  
To fawn on your injustice: bear me hence  
Unto this house of - - what's your mitigating title?

*Mont.* Of convertites.

*Vit.* It shall not be a house of convertites;  
My mind shall make it honester to me  
Than the Pope's palace, and more peaceable  
Than thy soul, though thou art a cardinal.  
Know this, and let it somewhat raise your spite,  
Through darkness diamonds spread their richest light. [*Exit.*

*Enter Brachiano*

*Brach.* Now you and I are friends, sir, we'll shake hands  
In a friend's grave together; a fit place,  
Being th'emblem of soft peace, t'atone our hatred.

*Fran.* Sir,  
Put up your papers in your fustian bag - - [*Francisco speaks this as in scorn.*  
Cry mercy, sir, 'tis buckram and accept  
My notion of your learn'd verbosity.

*Lawyer.* I most graduatically thank your lordship:  
I shall have use for them elsewhere.

*Mont.* I shall be plainer with you, and paint out

Your follies in more natural red and white  
 Than that upon your cheek.

*Vit.* Oh, you mistake!  
 You raise a blood as noble in this cheek  
 As ever was your mother's.

*Mont.* I must spare you, till proof cry whore to that.  
 Observe this creature here, my honour'd lords,  
 A woman of must prodigious spirit,  
 In her effected.

*Vit.* My honourable lord,  
 It doth not suit a reverend cardinal  
 To play the lawyer thus.

*Mont.* Oh, for God's sake - - Gentlewoman, your credit  
 Shall be more famous by it.

*Lawyer.* Well then, have at you.

*Vit.* I am at the mark, sir; I'll give aim to you,  
 And tell you how near you shoot.

*Lawyer.* Most literated judges, please your lordships  
 So to connive your judgments to the view  
 Of this debauch'd and diversivolent woman;  
 Who such a black concatenation  
 Of mischief hath effected, that to extirp  
 The memory of 't, must be the consummation  
 Of her, and her projections - - - -

*Vit.* Well, what then?

*Mont.* I'll tell thee; I'll find in thee a'pothecary's shop,  
 To sample them all.

*Fr. Ambass.* She hath a brave spirit.

*Mont.* Well, well, such counterfeit jewels  
 Make true ones oft suspected.

*Vit.* You are deceiv'd:  
 For know, that all your strict-combined heads,  
 Which strike against this mine of diamonds,  
 Shall prove but glassen

## II. Solutio

ACT III SCENE II [low setting of Project Gutenberg text]

The Court hath a man  
 Wherein' your trade instructs your names  
 Of this Christian court  
 In her.  
 Dead!  
 Cold Russian winters,  
 Ill may prey the death: indeed, which are but you weep. I am not let these

Be worthily applauded amongst this a number of must first stamps it for their richest light.

Condemn you!

I heard her estate

For that she will talk with her blessed memory

Longer than dead: come from that you not like the six nights.

Thou didst love to your father.

*Lawyer.* It doth not be a house of –

*Fran.* Very good stomach to.

Dead! what goodly and Count Lodovico

*Fran.* Ha!

*Vit.* ] Good;

Who, even on your guise

To call up one question:

You have exulceration.

Dead! or any man had lain

Wound up one tune, are cunning!

She hath swallow'd

Some 'emblem of - what's your own spittle choke you proclaim'd them elsewhere.

Ha!

She'th'your peace, had you so black

To you with warm blood let her hence.

A lawyer that live?

The sword you all.

Domine judex, thou art a happy husband

Is –

*Vit.* In a preface to.

Had I must first,

Ill may I were before!

For since you

In faith,

We 'pothecaries' your own spittle choke you the hard and judgment may prey the same devil murder,

Exactions upon by that nature had lain

Wound up three days.

In virtue left, drink, is left, hear?

*Brach.* Die with you health !

*Vit.*

*Vit.* The Court hath effected,

Marcello, she gave me first stamps it well spar'd, garments, have continued.

Do not slept these

Be worthily applauded amongst thouse

Which forfeit all a deed so

One summer she gave me first stamps it seems;

Would those flattering bells have bespoke my accusation, honourably descended

From every generous and diversivolt woman of force, sever head from the last day of  
 force,  
 You know what is.  
 Had I'height, this assembly  
 Shall hear me but repetition  
 Of a whore' murderess' dog-days! what goodly and let these words sound man had you  
 made  
 Both of blood as in a happy husband!  
*Mont.* But take my lord, Vittoria  
*Enter Giovanni,* this house of lead,  
 Worse than dead,  
 Being th' whore to my lady, my acquaintance)  
 Receiv'd in debt  
 To matters of another's lodging:  
 I did love me for Marcello.  
*Fran.* In the stars  
 To you frame of such an hundred nights.  
 Dead!  
*Vit.* An active plot; he jump'd into his neck? what is imperfect

### III. Elementorum Separatio

*The Arraignment of a Guard.* [low setting of Calcinatio text]  
 O poor Charity! whore forsooth was holy.  
 Forbear your pleasure, how near you know him.  
 Your ruin.  
*Marc.* Hum! thou bear'st, Marcello, about her rooms  
 Outbrav'd the great fights, here? I'd rather go weed garlic; wear sheep-skin  
 linings, by the mistletoe, feed'st his Holiness, well, I'll make us no place  
 assign'd you how, well in some surgeon's house at last tilting: he? he's an  
 excellent horseman! what's that stink of diamonds, feed'st his Holiness, you  
 in your father, are a cypress hatband, when several kind of captains, when we  
 seldom find the view  
 Of mischief hath a poor Charity! whore to obtain the forty thousand pedlars  
 in your mouth that's whole, or more  
 May be entered into the list of a dull ass; wear sheep-skin linings,  
 gentlewoman.  
 Thou hast scarce maintenance  
 To her infamous  
 To gull suspicion.  
 I'll make us no place assign'd you shoot.  
 Lo you know him at last tilting: he showed like honey:  
 Their approbation, but circumstances  
 To all our examination.  
 Hear me:  
 And thus,

Lawyer  
Lawyer  
Lawyer,  
Even with,  
Alas, their stools with them.  
Your comfortable words are deceiv'd:  
And tell thee;  
This is your brother, such counterfeit jewels  
Make true ones oft suspected.  
Most literated judges,  
Were I wonder  
If Brachiano: an unbidden guest  
Should travel through France, here?

*Mont.* Most literated judges,  
Till pain itself make her with, banquets,  
Flamineo, for none are deceiv'd: you:  
And thus, sir, therefore, such counterfeit a  
Lawyer  
Lawyer  
*Lawyer.*

*The Arraignment of captains, 'tis threatened they have but at last tilting,  
Lawyer, Zanche, gentlewoman.*

My lord, Monticelso,  
Bear their stools with you know, banquets,  
Shall I should sit upon the consummation  
Of all our examination.  
A chair there is no place assign'd you shoot.  
Stand to lose, Monticelso, like a candle of 't, first saw him speak his victories,  
well in his Holiness, come.  
Hear me: you how near you understand Latin.  
May it.

*Vit.* My lord,  
This business, what hast scarce maintenance  
To undo my lord duke, here? he's an unbidden guest  
Should travel as one pines,  
Till pain to extirp  
The memory of Vittoria

#### IV. Conjunctio

ACT III [low setting of both Solutio and Elementorum Separatio text]

*Enter Savoy Ambassador*

Lawyer, when several kind of Vittoria, Vittoria

*Enter French Ambassador*

*Lawyer.* Thou hast scarce maintenance  
To gull suspicion.

O poor Charity!  
 Do you understand Latin.  
 Stand to the forty thousand pedlars in our quest of gain, what then broiled in  
 our neighbouring kingdoms.

*Fr.* Oh, Brachiano, converte oculos in thy prodigal blood: he looks like honey:  
 For love of twelve i'th'pound.

*Fran.* You have dealt discreetly, built upon the view  
 Of her husband's death: an admirable tilter.  
 He carried his stalking horse,  
 This devil would not ill; wear sheep-skin linings, a blooming hawthorn –

*Vit.*

*Vit.* At your pleasure, 't, how near you know we seldom found in fresh chamois.

*Fran.* Oh, what hast got?

*Mont.* I would serve; he looks like a rich gown under him.  
 Shall prove but kissed one in by the view  
 Of all our quest of mirth, what then broiled in thee in them all.

*Mont.* Why, 't, by the pox as Dutch women go to you know we have even pour'd  
 ourselves  
 Into great duke,  
 Followest the mistletoe,  
 Monticelso, fie!

*Savoy Ambass.* 't, is your plea.  
 What's he sleeps a-horseback, holding a Lawyer  
 Lawyer,  
 As witches do me right now?  
 So - - - -

*Vit.* Oh,  
 Were I

*Enter Francisco, for none are judges,*  
 Which, banquets, sir.

*Fr.* What's he showed like a tilting: they wit be here is left  
 To all your brother, signior, what

## V. Putrefactio

ACT III [low setting again on the Conjunctio text]

*Savoy*

Lawyer, when several kind of Vittoria,

*Enter French Ambassador*

. Thou hast scarce maintenance

To gull suspicion.

O poor Charity!

Do you understand Latin.

Stand the forty thousand pedlars in our quest gain, what then broiled in  
 neighbouring kingdoms.

*Fr.* Oh, Brachiano, converte oculos thy prodigal blood: he looks like honey:

For love twelve i'th'pound.  
*Fran.* have dealt discreetly, built upon view  
her husband's death: an admirable tilter.  
carried his stalking horse,  
This devil would not ill; wear sheep-skin linings, a blooming hawthorn –  
*Vit.* . At your pleasure, 't, how near know we seldom found fresh chamois.  
. got?  
*Mont.* I would serve; rich gown under him.  
Shall prove but kissed one by  
all mirth, thee them.  
. Why, pox as Dutch women go even pour'd  
ourselves  
Into great duke,  
Followest mistletoe,  
Monticelso, fie!  
*Ambass.* plea.  
What's sleeps a-horseback, holding a Lawyer  
Lawyer,  
witches me right now?  
So - - - - -  
Were I  
*Francisco, none are judges,*  
Which, banquets, sir.  
showed tilting: they wit be here is left  
brother, signior,

## VI. Coagulatio

ACT III [high setting of the Putrefactio text]  
Savoy Lawyer, when several kind of Vittoria,  
*Enter French Ambassador.*  
Thou hast scarce maintenance  
To gull suspicion.  
O poor Charity!  
Do you understand Latin.  
Stand the forty thousand pedlars in our quest gain, what then broiled in  
neighbouring kingdoms.  
Fr. Oh, Brachiano, converte oculos thy prodigal blood: he looks like honey:  
For love twelve i'th'pound.  
*Fran.* have dealt discreetly, built upon view her husband's death: an admirable  
tilter. carried his stalking horse,  
This devil would not ill; wear sheep-skin linings, a blooming hawthorn–  
*Vit.* At your pleasure, 't, how near know we seldom found fresh chamois. got?  
*Mont.* I would serve; rich gown under him.  
Shall prove but kissed one by all mirth, thee them.  
Why, pox as Dutch women go even pour'd ourselves

Into great duke,  
Followest mistletoe, Monticelso, fie!  
Ambass

## VII. Cibatio

ACT III [low setting of Coagulatio text]

*Savoy Lawyer, Monticelso,*

*Enter French Ambassador. got?*

*Mont.*

*Fran.* O poor Charity !

Do you understand Latin.

*Mont.* I would serve; rich gown under him.

Oh,

*Mont.* carried his stalking horse, pox as Dutch women go even pour'd ourselves

Into great duke, how near know we seldom found fresh chamois.

O poor Charity

## VIII. Sublimatio

ACT III SCENE II [high setting of Project Gutenberg text and Cibatio]

*The Arraignment of Vittoria*

*Enter Francisco, Monticelso, the six Lieger Ambassadors, Brachiano, Vittoria, Zanche, Flamineo, Marcello, Lawyer, and a Guard.*

*Enter French Ambassador*

*Mont.* Forbear, my lord, here is no place assign'd you.

This business, by his Holiness, is left

To our examination.

*Brach.* May it thrive with you. [*Lays a rich gown under him.*]

*Fran.* A chair there for his Lordship.

*Brach.* Forbear your kindness: an unbidden guest  
Should travel as Dutch women go to church,  
Bear their stools with them.

*Mont.* At your pleasure, sir, pox as Dutch women.

Stand to the table, gentlewoman.

Now, signior, know we seldom found fresh

Fall to your plea even pour'd ourselves.

*Lawyer.* Domine judex, converte oculos in hanc pestem, mulierum corruptissiman.

*Vit.* What's all this? O poor Charity got?

Savoy Lawyer, Monticelso, how near chamois.

*Mont.* Into great duke, carried his stalking horse go

*Lawyer.* Hold your peace!

Exorbitant sins must have exulceration.

*Vit.* Surely, my lords, this lawyer here hath swallow'd

Some 'pothecaries' bills, or proclamations;

And now the hard and undigestible words

Come up, like stones we use give hawks for physic.  
Why, this is Welsh to Latin.

*Lawyer.* My lords, the woman  
Knows not her tropes, nor figures, nor is perfect  
In the academic derivation  
Of grammatical elocution.

*Fran.* Sir,  
Put up your papers in your fustian bag - -  
    [*Francisco speaks this as in scorn.*]  
Cry mercy, sir, 'tis buckram and accept  
My notion of your learn'd verbosity.

*Lawyer.* I most graduatically thank your lordship:  
I shall have use for them elsewhere.

*Mont.* I shall be plainer with you, and paint out  
Your follies in more natural red and white  
Than that upon your cheek.

*Vit.* Oh, you mistake!  
You raise a blood as noble in this cheek  
As ever was your mother's.

*Mont.* I must spare you, till proof cry whore to that.  
Observe this creature here, my honour'd lords,  
A woman of most prodigious spirit,  
In her effected.

*Vit.* My honourable lord,  
It doth not suit a reverend cardinal  
To play the lawyer thus.

*Mont.* Oh, your trade instructs your language!  
You see, my lords, what goodly fruit she seems;  
Yet like those apples travellers report  
To grow where Sodom and Gomorrah stood,  
I will but touch her, and you straight shall see  
She'll fall to soot and ashes.

*Vit.* Your envenom'd 'pothecary should do 't.

*Mont.* Go on, sir.

*Vit.* By your favour, I will not have my accusation clouded  
In a strange tongue: all this assembly  
Shall hear what you can charge me with.  
In faith, my lord, you might go pistol flies,  
The sport would be more noble.

*Mont.* Very good.

*Vit.* But take your course: it seems you've beggar'd me first,  
And now would fain undo me. I have houses,  
Jewels, and a poor remnant of crusadoes;  
Would those would make you charitable!

*Mont.* If the devil  
Did ever take good shape, behold his picture.

*Vit.* You have one virtue left,  
You will not flatter me.

*Fran.* Who brought this letter?

*Vit.* I am not compell'd to tell you.

*Mont.* My lord duke sent to you a thousand ducats  
The twelfth of August.

*Vit.* 'Twas to keep your cousin  
From prison; I paid use for 't.

*Mont.* I rather think,  
'Twas interest for his lust.

*Vit.* Who says so but yourself? If you be my accuser,  
Pray cease to be my judge: come from the bench;  
Give in your evidence 'gainst me, and let these  
Be moderators.  
My lord cardinal,  
Were your intelligencing ears as loving  
As to my thoughts, had you an honest tongue,  
I would not care though you proclaim'd them all.

*Mont.* Go to, go to.  
After your goodly and vainglorious banquet,  
I'll give you a choke-pear.

*Vit.* O' your own grafting?

*Mont.* You were born in Venice, honourably descended  
From the Vittelli: 'twas my cousin's fate,  
Ill may I name the hour, to marry you;  
He bought you of your father.

*Vit.* Ha!

*Mont.* He spent there in six months  
Twelve thousand ducats, and (to my acquaintance)  
Receiv'd in dowry with you not one Julio:  
'Twas a hard pennyworth, the ware being so light.  
I yet but draw the curtain; now to your picture:  
You came from thence a most notorious strumpet,  
And so you have continued.

*Vit.* My lord!

*Mont.* Nay, hear me,  
You shall have time to prate.  
My Lord Brachiano - -  
Alas! I make but repetition  
Of what is ordinary and Rialto talk,  
And ballated, and would be play'd a'th'stage,  
But that vice many times finds such loud friends,  
That preachers are charm'd silent.  
You, gentlemen, Flamineo and Marcello,  
The Court hath nothing now to charge you with,

IX. Fermentatio

ACT III SCENE II [low setting of Sublimatio text]

*The Arraignment of crusadoes;*

Would those apples travellers report  
To our examination. [*Francisco,*  
That preachers are charm'd silent.

*Brach.* You see,

It doth not suit a strange tongue, the ware being so but yourself?  
If you not one Julio: come from thence a thousand ducats,  
Marcello, Marcello,  
That preachers are charm'd silent.  
By your language !

*Mont.* If you, signior, till proof cry whore to.

You were born in hanc pestem,  
But that. [*Lays a rich gown under him.*  
Sir,  
Ill may I most graduatically thank your kindness:  
You will but repetition  
Of grammatical elocution.  
Cry mercy, Brachiano, the Vittelli: an unbidden guest  
Should travel as loving  
As ever was your papers in hanc pestem,

*Lawyer.* [*Lays a blood as in scorn.*

Forbear,  
Put up your peace!  
Exorbitant sins must have houses, had you proclaim'd them.  
What's all.

*Mont.* Now, honourably descended

From prison; I have my accuser,  
Were your course: 'pothecary should do 't.  
By your kindness: all.  
After your evidence' your course: come from the hard pennyworth, your  
Cheek  
As to be my judge: I shall see,  
Pray cease to church, how near chamois.  
Very good shape,  
Jewels, here is Welsh to tell you with them elsewhere.  
Very good.  
Go to your peace!  
Exorbitant sins must spare you might go pistol flies,  
I'll give hawks for 't.  
Hold your plea even pour'd ourselves.  
Cry mercy,  
Bear their stools with you a most notorious strumpet, or proclamations;  
Give in more noble.

Your envenom'd 'bills,

## X. Exaltatio

ACT III SCENE II [high setting of Fermentatio text]

*The Arraignment of crusadoes;*

Would those apples travellers report  
To our examination. [*Francisco,*  
That preachers are charm'd silent.

*Brach.* You see,

It doth not suit a strange tongue, the ware being so but yourself?  
If you not one Julio: come from thence a thousand ducats,  
Marcello, Marcello,  
That preachers are charm'd silent.  
By your language!

*Mont.* If you, signior, till proof cry whore to.

You were born in hanc pestem,  
But that. [*Lays a rich gown under him.*  
Sir,

Ill may I most graduatically thank your kindness:  
You will but repetition  
Of grammatical elocution.

Cry mercy, Brachiano, the Vittelli: an unbidden guest  
Should travel as loving  
As ever was your papers in hanc pestem,

*Lawyer.* [*Lays a blood as in scorn.*

Forbear,

Put up your peace!

Exorbitant sins must have houses, had you proclaim'd them.  
What's all.

*Mont.* Now, honourably descended

From prison; I have my accuser,

Were your course: 'pothecary should do 't.

By your kindness: all.

After your evidence' your course: come from the hard pennyworth, your  
Cheek

As to be my judge: I shall see,

Pray cease to church, how near chamois.

Very

## XI. Augmentatio

ACT III SCENE II [low setting of Exaltatio text, with speaker tags reintroduced]

*Enter Francisco, Monticelso, the six Lieger Ambassadors, Brachiano, Vittoria, Zanche, Flamineo, Marcello, Lawyer, and a Guard.*

*The Arraignment of crusadoes;*

*Vit.* Would those apples travellers report  
*Mont.* To our examination.  
*Brach.* Sir, had you not suit a strange tongue,  
*Fran.* Put up your peace!  
*Mont.* [*to Francisco,*  
 But that.  
*Flam.* You see, the hard pennyworth,  
 Pray cease to church,  
 Were your kindness: come from thence a thousand ducats,  
 Put up your papers in hanc pestem,  
*Mont.* That preachers are charm'd silent.  
*Lawyer.* Sir,  
*Vit.* Put up your kindness: 'pothecary should do 't.  
*Mont.* Now, Marcello,  
 Put up your language!  
*Brach.* Exorbitant sins must have my accuser, honourably descended  
 From prison; I shall see, had you, signior, honourably descended  
 From prison; I have houses,  
 It doth not one Julio: 'pothecary should do 't.  
*Mont.* You will but yourself?  
*Vit.* If you,  
 Were your language!  
*Mont.* You will but repetition  
 Of grammatical elocution.  
 What's all. [*Lays a blood as in hanc pestem,* your  
*Marc.* Cheek  
 As ever was your  
 Cheek  
 As ever was your language!  
*Mont.* Sir, Marcello, your  
 Cheek  
 As to church,  
 But that.  
*Flam.* By your kindness: come from thence a thousand ducats, had you proclaim'd  
 them.  
*Vit.* What's all.  
 You were born in scorn.  
*Flam.* Cry mercy,  
 It doth not suit a rich gown under him.  
*Mont.* After your language!  
*Vit.* Exorbitant sins must have my accuser,  
*Lawyer.* What's all.  
 By your evidence's your evidence 't.  
*Fran.* Very

## XII. Projectio

ACT III SCENE II [high setting of Augmentatio text]

*Enter Francisco, Monticelso, the six Lieger Ambassadors, Brachiano, Vittoria, Zanche, Flamineo, Marcello, Lawyer, and a Guard.*

*The Arraignment of Crusadoes;*

*Mont.* Would those apples travellers report  
To our examination.

*Brach.* Sir, had you not suit a strange tongue?

*Fran.* Put up your peace!

*Mont.* [*to Francisco*] But that.

*Flam.* You see, the hard pennyworth your kindness  
Were come from thence a thousand ducats,  
Put up your papers in hanc pestem,

*Mont.* That preachers are charm'd silent.

*Marc.* Sir, pray cease to church.

*Vit.* Put up your kindness: 'pothecary should do 't.

*Mont.* Now, Marcello,  
Put up your language!

*Brach.* Exorbitant sins must have my accuser, honourably descended  
From prison; I have houses,  
It doth not one Julio: 'pothecary should do 't.