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CHAPTER SEVENTEEN

Relating AND Acting: Learning, Embodiment AND Performance IN Virtual Worlds

MARK CHILDS AND ANNA CHILDS

THE RISE AND FALL (AND RISE?) OF VIRTUAL WORLDS

Virtual worlds have been with us since the mid-1980s, defined as ‘A synchronous and persistent network of people and computer programs (embodied as avatars and agents), facilitated by networked computers, which uses navigable 3D space to engage the user’ (Childs, 2013: vii; after Bell, 2008). Peak interest in virtual worlds occurred around 2011 when Second Life™ (SL), a virtual world developed by Linden Labs, had more than a million unique users a month. Interest in Second Life (SL) has declined, with monthly unique users now around half a million (Schultz, 2018). However, now in 2019, Linden Labs, amongst others, are capitalising on the increased affordability of virtual reality headsets to rekindle interest in navigable, networked immersive social worlds, with developments such as Linden Labs’ Project Sansar (Fink, 2017).

Although virtual worlds and virtual reality are different technologies (virtual reality places the viewer inside the environment through the use of a headset, whereas virtual worlds are typically experienced by viewing a monitor), there are enough similarities that it is timely to revisit much of what was learnt from virtual worlds. Concepts such as embodiment, presence and identity are relevant to the experience of both, and many of these concepts also relate directly to the experience of performance whether in the virtual or the physical world.

In this chapter, we will reflect on some of the activities we have undertaken as researchers and educators. Firstly, Anna recounts in detail a previously unpublished case study about inworld community performance; ‘inworld’ meaning within the virtual

environment, often used as an antonym to IRL, that is 'in real life'. After this, Mark summarises an inworld performance and two inworld activities used to teach performance and theatre studies that are previously published elsewhere. We then reflect on what these tell us about the experience of performance, and how this may benefit an understanding of how learning can be made more effective if virtual reality further expands its reach into educational practice.

CASE STUDY OF PERFORMANCE

The Open University in the UK (OU) was a pioneer in teaching and learning in virtual worlds, and registered its first island in SL in June 2006. By 2008, the OU's social presence was a large, thriving virtual community, modelled on Oldenburg's (1991) physical world concept of Third Place (Peachey, 2008, 2010).

In November 2008, a community member proposed and wrote the script for Cinderella, a pantomime to take place within the virtual world. Pantomimes are theatrical comedies particular to the UK that have been performed since the early eighteenth century. Based on traditional folk tales, they are usually performed at Christmas and incorporate slapstick, cross-dressing, mild sexual innuendo, in-jokes and topical references specific to the hosting community. Audience participation is a key constituent of the genre (O'Brien, 2004); and although this is ritualised to a large extent ('oh no it isn't') and does not alter the flow of the narrative, it enables the audience to have a presence within the performance, for example, performers' responses to the participation. This may reduce the feeling of psychological immersion (as the fourth wall is broken) but confers some (illusory) feeling of agency on the audience.

The adaptation of theatrical performance to a virtual world can be seen as simply a variation of the process of staging that takes place for any performance anywhere. One staging aspect specific to this environment and community was that dialogue was delivered

as text. Although voice communication is possible in SL, the OU community members nearly always used text. Some preferred it, while others had technical problems using voice in SL or had hearing difficulties. Newcomers using voice often found they had to switch to text to join a conversation.

Consequently, performing with voice would have been difficult for some, undesirable/uncomfortable for others and unfamiliar to most. This presented a challenge. Delivering dialogue as text was tricky, as even those who could touch type could not maintain the natural pace of a performance, and cast members initially coped by pasting their lines from an open text file next to the SL viewer. This in itself was not easy either, especially for users working on a laptop with a small screen.

Walking and talking simultaneously also presented challenges. The user controls an avatar's movement with a keyboard and a mouse, so when their fingers are busy copying and pasting dialogue, avatar movement and use of props is nearly impossible. Therefore, the first pantomime's stage directions were minimal. SL does allow the use of stored short character animations, but starting one would have interrupted the copy-paste rhythm, so the play was constructed such that they were not used during dialogue.

Not everything about performing inworld is harder than it would be in a traditional theatre. The timely changes of makeup and costume so challenging to a conventional actor are achieved with a couple of clicks in SL. The skill is an acquired one, but is easily learnt. SL's 'Group Chat' facility proved invaluable, as the cast could privately discuss cues and directions without being overheard by the audience and any user capable of text chat in SL already had the skills necessary for group chat. Also, the set and wings were designed so that they were transparent from backstage, making it easy for waiting performers to see what was going on onstage and in the audience—a neat advantage over the physical world.

With some inworld and wider OU student community marketing, many visitors came and, more importantly, stayed for the whole pantomime. From the audience's point of view the performance was slick and flawless. However, reflections from the cast members show that their perspective was very different. The copy-and-paste technique, though an improvement on manual typing, was awkward and slow to execute. The resulting dialogue was (just about) rapid enough to seem natural, but the sustained effort required meant that it was all the actors could do to deliver their lines on cue. Behind the scenes the cast was under extreme pressure, with each member focused solely on the task of copying and pasting. The technical demands placed upon them removed them from the action and precluded a sense of immersion. The result was that many of the actors enjoyed the experience significantly less than the audience did, although they were elated at the successful conclusion of the show.

The aim in staging a pantomime was for an optimal entertainment experience, an authentic immersion for both cast and audience. In learning from this experience and planning for the next, it seemed that addressing risks to the audience's experience would also help reduce damage to the cast's and the immersion and flow for both would be enhanced. Simply put: reducing workload ought to increase pleasure.

However, pantomime is supposed to be fun. Were the whole performance automated, with programmed avatars on pre-set paths, the actors would surely not have fun. In fact, they would be redundant; they could effectively move their viewpoint to go and sit with the audience. Since pantomime is also about interaction, it follows that the magic would be lost—not least to those ex-actors who were aware they were watching automata rather than an amateur dramatics troupe. Clearly, too much automation could be counterproductive and adversely affect the immersion of the experience.

SL's built-in programming language would allow users to program objects and avatars to almost any degree; the question about automation was not 'Can we?' but 'How

much?’ During discussions with those who had acted in Cinderella, it became apparent that any means of making the delivery of dialogue easier and quicker would be welcome, short of actually taking the actors out of the loop entirely. In other words, they wanted it to be easy—allowing them to pay more attention to avatar control and simply enjoying the experience—but they also wanted to retain control.

A commonly used object within SL is a HUD or Heads-Up Display. This is an object that can be worn by an avatar; it does not appear to other users, but adds onscreen options to the viewer’s window, enabling the user to execute a scripted activity. Following extensive discussions about pros and cons, a Panto HUD was conceived in order to deliver lines of chat under the direct control of the user.

Experimental versions of the Panto HUD consisted of a panel of numbered buttons—visually identical for each actor, but delivering lines individually programmed for each. The work gave actors the same number of main steps as before (refer to script document, then use the HUD in the SL viewer to deliver the line) but only one click per line instead of separate copy and paste actions. However, any change to the pantomime script entailed recalling every actor’s Panto HUD for reprogramming. Later versions obviated this problem by using a separate inworld server object that contained the master script and passed lines to actors’ HUDs on cue. The final version was a single green button that would turn red and display a preview of the actor’s next line when it sensed that the line was due. Clicking the button would deliver the line into local (public) chat, whereupon the button would turn green again. The plan was that actors in the second pantomime could be freed from the pressure of copying and pasting lines but still be in control of delivering those lines.

The 2009 pantomime, Snow White, was a much smoother production than Cinderella. The Panto HUD allowed actors to retain control of their line delivery but freed them to widen the focus of their acting, so that avatars moved around on stage much more, and took greater

advantage of animations and props. Feedback from the audience, who had a higher level of participation in this panto, was excellent; and actors reported greater engagement with and, crucially, enjoyment of this event because the single most intense pressure (to copy and paste at the right moment) was removed.

OTHER CASE STUDIES

In May and June 2008 the SLShakespeare Company (since renamed the Metaverse Shakespeare Company) conducted a performance of Hamlet (Chafer & Childs, 2008: 95). This took place within a recreation of the Globe Theatre and consisted of only two scenes from the play. Each scene was 10 minutes long, and used voice and avatar animations in the performance.

As with the OU pantomimes, the ability to manipulate the avatar was considered a key element to the experience of being a performer. Specific actions were triggered by the performer so that a sense of being in control was maintained. For Joff Chafer, one of the performers within the play, it has many parallels with puppetry (Chafer & Childs, 2008: 100).

The animations were linked from objects placed on the performers' screens; clicking on the objects would then trigger the required animations. This was too obtrusive for the actors and resulted in 'a sense of being a technician (rather than going into) role' (Chafer & Childs, 2008: 101).

Processing the movements of avatars, and all of the data about clothing, scenery, etc., requires a great deal of server processing power (see Childs, 2010: 8–10 for a full explanation). This produces delays—called 'lag'—which is made more difficult due to the lag duration varying as processing requirements change. In order to avoid a delay between one actor ending their speech and the next beginning theirs, the performers found that they had to begin their line before the end of the previous one. One means by which this could have been overcome would be to have synchronised all of the participants through the use of

an external cueing system, indicating when they should deliver their lines. This was rejected by the performers as it would have reduced control over their performance, particularly the element of responding to the other performers.

Two further examples of activities taking place at this time are taken from teaching performance and theatre studies at two higher education institutions.

The first of these was a project titled 'The Fools' Zanni', which took place with 12 undergraduate students over 10 hours of study in Middlesbrough College during 2009. This was designed to teach students about the commedia dell'arte, using motion capture of an Italian commedia dell'arte performer and medieval theatre resources that had been built in SL as part of the Theatron³ project (Duffy-McGhie, 2009: 36). Students were required to learn many of the aspects of commedia dell'arte and translate these into SL. This translation proved conceptually difficult, and students became frustrated trying to replicate physical world performance elements within SL. The process of understanding this re-staging required the students to take a step back and explore the social and cultural values of SL, both within the virtual world and the impact it had had on the physical world of 2009 (Duffy-McGhie, 2009: 38). This enabled them to redefine the purpose of SL for that new context, echoing the process of restaging for site-specific performances.

In interviews with the students (Childs, 2010: 138–153), two very different types of experience emerged. Although none had engaged with the communities within SL, some students had explored extensively, and engaged with some of the environments within the world, while others had rejected these as 'not their thing'. Whether the students found the learning activity satisfying and worthwhile tended to correlate with a form of affective connection, and not with previous experience with technology or gaming as might have been expected.

Reports of dissatisfaction related to statements such as ‘I have a computer at home but I only use it to do my college work and stuff like that’, game-playing being exclusively physical sports rather than e-sports, and the openness of the environment feeling disconcerting and alienating. The other factor that distinguished the two types of student experience was no blurring of their identities of self and their avatar. Those students who did not report a positive learning experience made comments such as ‘I just like acting and performing and doing that sort of stuff and being that character it just didn’t interest me at all’ and ‘I want to physically be doing it myself rather than watching a character do it on the screen’.

The second activity, conducted with 15 theatre studies students, was held at the University of Warwick (Kuksa and Childs, 2010). This differed from the Middlesbrough College scenario in two key aspects; one was that it was focusing on theatre design, rather than performance, the second was that it totalled only two hours, rather than 10. The session comprised a virtual field trip to theatres in SL.

Students were interviewed afterwards about their experience of the session. In reference to the platform itself, students were able to talk in a great deal of detail about the issues with staging performance within SL. They found using the chat and changing their avatars quite easy to master but struggled with navigating and manoeuvring within the space throughout the two hours, although they did manage to use gestures and animations.

Students were more limited in their ability to *interpret* the design of the stages. With the spaces, there was an anticipation that students might have an emotional response to their avatars standing on the stages; one is theatre in the round, which can feel exposing to a performer, the other is an enormous site, and an actor would likely feel reduced in stature by the scale. However, these insights into the emotional aspect of performing on these stages

was not forthcoming, even though more long-term users of the platform can experience these sensations.

The one exception was a student who had found a dancing animation, and her avatar could be seen dancing in each of the theatres visited. When questioned on this, however, her response—‘i like dancing ... because we’re on the stage .. it feels right ... How do I teleport back to rl (real life)?’—indicated that this was an attempt to experience the space as if her avatar was a physical body (Childs, 2010: 131–132).

THE VIRTUAL AS PERFORMANCE

One of the concepts that underpins much of the literature on virtual worlds is the idea of liminality; that they are spaces that stand apart from the normal world and in which roles, behaviours, rules and identifies are transformed, but require the investment of belief by the participants (Childs, 2014: 87–88). This suspension of disbelief is also required to fully engage with virtual spaces. One of the Warwick students stated that ‘I think with most people, there is a limit to how far they can abstract or imagine things, which would make it harder to accept what they consider an ‘imaginary’ space’ (Childs, 2010: 156) as an explanation for the limitations of this experience within SL. This would seem to be self-contradictory, given the context of his subject discipline, which is itself based on the premise that audiences can accept an imaginary space on the stage.

A contributory element to the suspension of disbelief is the sense of presence within the environment (Sas & O’Hare, 2003: 523–524). Lombard and Ditton (1997) conceptualise this in a variety of ways, but of these the most relevant for a discussion of performance are perceptual and psychological immersion.

Perceptual immersion is the degree to which the senses of a participant are engaged. For audiences of a play this is more limited than, e.g. a film, in that the image on the stage occupies a smaller proportion of the field of view and parts of the performance may be

obscured. However, the experience is still *psychologically* immersive; the audience member is caught up in the narrative and the actors' ability. Familiarity with the form of theatre also contributes to the degree of psychological immersion, and hence the willingness of the viewer to suspend their disbelief.

All these factors have their corollary in the experience of virtual worlds. Virtual worlds can lack feelings of immersion for many users at first. For example, the number of onscreen objects can obscure the image of the world around the participant. The difficulties with manoeuvring and navigating can also mitigate against feeling part of the world, as can lag and the potential to become stuck in inanimate objects. The graphics can appear drab and basic for users who are regular players of video games.

However, as can be seen from the experiences of the typical students in the Fools' Zanni project, a longer time spent inworld can overcome many of these barriers. The perceptual immersion may not change, but the longer time increases the sense of psychological immersion.

Virtual reality, evidently, has greater perceptual immersion than an image on the screen, as the headset covers the complete field of vision and this field changes in response to any movements of the head. However, the lesson from virtual worlds—that users' engagement will increase when they are offered opportunities for psychological immersion and given sufficient time to become familiar with the new world they are experiencing—seems entirely relevant, and certainly provides a baseline for new work in the context.

Not only is space transformed within the virtual world, but bodies are too. For the actors in Anna's pantomimes and in the SL Shakespeare Company, it was important to identify the optimum level of embodiment in order for them to feel as much as possible that they were actively performing. Determining this optimum level for an authentic experience required finding the balance between autonomy, so that they had control over their avatar and

it remained 'them', and automation, so that they could systematise the elements of the performance that interrupted their sense of flow.

This is, in effect, an exploration of the question Lee asks in his foreword, that of 'thinking about the minimum level that actors require to have a meaningful embodied experience in terms of performing (as opposed to learning) when the body is subjected/restricted to virtual/digital presence'. To perform can involve having a technology execute a sequence of moves, but the initial trigger for that sequence must be the performer. The answer to the problem posed by Lee appears to be that there must be potential for the performance to fail, and for that failure to be the fault of a performer, in order for actors to have a meaningful online experience.

Two descriptors of performance that also offer insight into the experience of virtual worlds are the distinction between kinesics and proxemics. Kinesics is an analysis of how information is communicated through conventionalised vocabularies of gestures/postures (Farnell, 1999: 351), evidenced in virtual worlds by the automated animations that control avatars. Proxemics is a similar communicating system but is an interpretation of relative positions between people (Farnell, 1999: 351).

The students in the Warwick case study learnt to use the animations before they learnt to manoeuvre, and some were observed to still have difficulty manoeuvring their avatars at the end of their session. VR may overcome this disparity, with a more effective sense of spatial relationships, but the lesson from performance in virtual worlds is that enhancing one aspect of embodiment does not necessarily enhance all aspects.

What *does* enhance embodiment, in almost all circumstances, is practice. The additional time spent inworld by the Middlesbrough students contributed greatly to their sense of it being an actual space for them to explore. This is about familiarity with operating

the technology so that it becomes automatic and hence unobtrusive and more immediate, but it is also an acculturation within the social aspects of the virtual world.

The degree of embodiment within the virtual world has its parallel in performance studies in the concept of metaxis. Within the literature of virtual worlds, the word 'metaxis' is used to describe feelings when operating avatars (Thomas, 2007). It is 'the state of belonging completely and simultaneously to two different, autonomous worlds: the image of reality and the reality of the image' (Boal, 1995; cited in Linds, 2006: 115). Within performance studies, metaxis also describes the double-sense of the relationship between actors, and between the characters they play, and how these are transformed through the rehearsal process (Linds, 2006: 114), with the boundaries of the liminal space changing over time as well as space. This exactly describes the blurring of self across the two worlds reported by the majority of the Middlesbrough students and how their experiences and rehearsal of different selves and relationships enabled to transform their experience; the language of performance becomes a way to articulate the experience of an online self.

For some people, however, this dual engagement is absent, as time spent in the virtual world does not automatically lead to embodiment. For a minority of the students in the Middlesbrough case study, the world was still an alienating environment despite the length of time spent exploring it, an experience sometimes referred to as epistemic failure (Floridi, 2005).

For example, in his provocation (provocation five), Campbell states that because performers in *I Hereby Consent* were viewed solely as virtual objects, this gave the participants moral lassitude to interact with them to an extent they would not have felt comfortable doing in the physical world. This is very likely to hold true for participants for whom the virtual is a novel experience, but for those who have spent longer within the

environment (and who can develop this experience of embodiment), the distinction is lessened, and activities can begin to feel transgressive again.

One finding from using virtual worlds in education is that there is a strong resistance from students in taking part in virtual worlds (Childs and Peachey, 2013) partly due to this failure to experience embodiment; educators adopting virtual reality as a platform will benefit from bearing this in mind. When developing performance, or even forming social relationships between students within a virtual environment, many students express the same opinion as did Campbell's participants—that others are just pixels on the screen—partly due to this lack of embodiment, but also due to the lack of social connection with others. However, for others their avatar *is* them, and their avatar's experiences are felt to be very real to them. The consequence of these different approaches is that behaviour that is inconsequential to some participants will be transgressive for others. Managing the collision of these conflicting ontologies becomes part of the role of the educator in these environments. Simply making participants and learners aware that not everyone experiences the reality in the same way can be enough to make people aware that for some interactions can feel transgressive, because it is not 'just a game'.

Another discovery is that learners' perception of learning in virtual worlds correlates strongly with embodiment; with the exception of only the most highly motivated students, those who feel embodied within virtual worlds will want to learn in them, those who don't, won't (Childs, 2010: 188–189). For the students in the Middlesbrough case study, this feeling of being *in* a world was tied closely to them having some strong emotional experience there. Evans, Muijs and Tomlinson identify the affective domain as a key element of effective teaching (2015: 23), and this affective domain appears to be even more crucial to learning in virtual worlds, as it is linked so closely with simply feeling like you are there.

In both the performances and the theatre studies seminars discussed here, the ability of the actors and students to feel embodied was key to the experience of being on the stage or ready to learn. Where the ability to engage belief in the world is not a given, strategies to enhance this process are crucial, and this too will be an essential element of working with similar educational experiences in VR. Amongst the various strategies to enhance embodiment, that of performance is one of the strongest. This was exemplified by the behaviour of the student operating the avatar that repeatedly danced on the various stages in SL. It was a natural response to the sensation of being on a stage and displayed the willingness of the learner to inhabit that space as a lived fully embodied experience.

The issue of embodiment also informs the practice of virtual worlds as an artistic experience. The connection reported by the actors to each other (as other actors or as artefacts), to the heads-up displays that enable them to perform (as a tool or even as an extended body) and to the stage (both as an artefact within the virtual world and the virtual world itself) has parallels in Nicolas Bourriaud's use of relational aesthetics in his analysis of the consumption of art (Pasek, 2015). Relational aesthetics sees art not as an artefact to be individually consumed, but as the basis of interpersonal exchanges; the art redefined these exchanges, the exchanges redefine the art.

The virtual performances described here not only provide an opportunity to test questions such as 'what is performance', they also enable the researcher to investigate the limits of this relational aesthetic. Artistic expression exists not only in the creation of the sets, in writing and interpretation of the plays, and (if they are recorded) in the use of camera positions, it also exists at the most basic in the creation of the avatars (as a form of body art). However, the degree to which these can be seen through the lens of relational aesthetics depends on the extent to which one views the bodies within virtual worlds to actually *be* bodies. For example, Anne Balsamo writing about VR in 1996 saw in it a '*conceptual denial*

of the body ... through the *material* repression of the physical body' (Balsamo, 1996 cited in Pasek, 2015). However, the experiences of the actors and students described above demonstrate that engagement in virtual worlds *in no way* constitutes a conceptual denial of the body. Rather, it is a *reconceptualising* of the body—as an avatar. Balsamo's privileging of corporeality also sits at the centre of Bourriard's failure to fully understand his own thesis. As Pasek states (2015) 'Bourriard's 'law of relocation' claims that technology is most effectively addressed as a perceptual condition against which art must articulate counter relations rather than as an instrument through which art can materialize or aestheticize anew'. As most people experience embodied interactions through the medium of virtual worlds, and this relational aesthetic is consequently very much in place, Bourriard's position on the opposition of art and technology is evidently wrong.

These spaces can form a test-bed for relational aesthetics, however, as a minority of the participants experience a degree of epistemic failure within the spaces, and this appears to deny them this opportunity to experience relational affinity, to artefacts within the space as well as to other avatars. Their personal reports are that the spaces fail to engage them emotionally, and this is linked to an absence of this sense of embodiment. Bourriard's relational aesthetic as a determinant for fully experiencing art is, we would argue, strongly evidenced by these two quite divergent observations; art requires embodied shared relationships in order to be fully appreciated. Whether technology supports this relational aesthetic or denies it, depends on the individual, but it is fully capable of doing either.

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