"Playing and Learning in Virtual Environments."

When Worlds Collide – Exploring the relationship between the actual, the dramatic and the virtual.

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Abstract

This paper presents research and illuminations for discussion from a study which explores the intuitive resonances between drama education, game play and rich immersive environments. In particular, it seeks to illuminate and clarify whether the affordances of virtual game worlds and those of dramatic worlds created through the structures and strategies of drama education can work together to inspire new world views.

In drama education, the concept of playing and learning is exploited through development of dramatic worlds where participants draw on their actual world knowledge to create unique experiences. Virtual environments temptingly offer a third world where playing to learn might be deepened.

This sub-study exploits a drama experience called ‘History’s Purchased Page’ which explores the mystery of who actually climbed Everest (an activity taken from O'Toole and Dunn, 2002, pp. 120-131). Within this experience the children take on the role of historians and game designers who are employed by a fictitious company to design interactive software that offers learning experiences around the conquering of Everest. A key learning outcome of this experience is that the participants start to problematise the nature of historical “truth” through active engagement in a dramatic world that uses web based media, images and recounts to support immersion in the event.

This feasibility stage of the study sought to understand what might happen if the “being there” of drama is combined with the “being there” of a persistent world. The research posed two key questions:

1. Would the experience be more engaging if the students were also given opportunities to enter a parallel persistent on-line world capable of generating rich visualisations of the Everest context and the chance to deepen their immersion via avatar presence and exploration opportunities – opportunities to not only “see” the Everest world but also “act” within it?

2. How does this immersion in the virtual world affect the children’s engagement in the dramatic world, especially with regard to the tensions that usually drive dramatic worlds - including the all important tension of metaxis [defined as the "the state of belonging completely and simultaneously to two different autonomous worlds" (Boal, 1995, p. 43)].

This paper will report on the initial findings of this project, focusing on dramatic tension and its relevance as a framework for understanding what happens when dramatic, virtual and actual worlds collide.
Preamble

This project comes out of some very enthusiastic and excited conversations where academics, researchers and designers are thrown together under a vague heading of ‘why don’t we explore the possibilities of multiplayer virtual and games environments for education?’

In the course of such discussions, the world design contingent find themselves working with drama educators whose artistic work falls within the genre of process drama. An immediate enthusiasm surrounding the notion of ‘other world’ exploitation develops and the common ground traversed in the interests of engagement, playfulness and learning become the focus of discussions. Our vocabularies resonate and soon we are excitedly envisioning environments where virtual worlds are used in the creation of dramatic worlds and dramatic ones enhance the possibilities of the virtual. The “Worlds Collide” project is born – emerging from intuitive connections that tempt with their apparent synchronicity.

This paper unpacks some of these temptations and opens discussion on the collision of worlds …

Introduction

Process drama functions with all the potentialities and limitations of the art form of drama. It offers a significant vehicle for prolonged and satisfying experimental encounters with the dramatic medium. While remaining apparently formless and undefined by a previous plan or script, it has a special capacity to lay bare the basic dramatic structures it shares with other kinds of theatre and that give it life (O’Neill, 1995 p.xix).

Game worlds are totally constructed environments. Everything there was put on the screen for some purpose -- shaping the game play or contributing to the mood and atmosphere or encouraging performance, playfulness, competition, or collaboration (Jenkins and Squire, 2002, p.102).

The field of drama includes a rich and diverse number of forms and styles. Some, like theatre, have been around since ancient times, while others, including process drama, are relative new comers. O’Neill (1995, p.xvi) describes this highly improvised form as one that generates, like theatre, a dramatic ‘elsewhere’ or dramatic world. However, unlike its more familiar relative, the texts generated by process drama are unpredictable in their outcome, are dependent upon the actions of the participants, are impossible to replicate and are produced for and by the participants with no external audience. This style of drama is usually facilitated by a leader, who skillfully manipulates the conventions and the elements of dramatic form, to create open-ended experiences for the participants – experiences driven by tension and designed for deep engagement (See also Bolton 1979, Bowell and Heap 2002, Morgan & Saxton 1987, Neelands and Goode 1990, O’Toole 1992, O’Toole and Dunn, 2003).

Similarly, engagement is one of the desirable outcomes of virtual environments. Technically, a computer (or video console) based virtual world is a representation of a virtual universe that players may interact with in order to achieve a goal or set of goals. The field of world design also includes a diverse range of forms from the single player bird’s eye views of pac man and complex worlds of Age of Empires to the rich multi-player environments of World of Warcraft. These worlds are also facilitated and designed in order to shape the gameplay or encourage
certain forms of interaction but the actual action itself is participant based with no external audience. This is what Murray (1997) calls "the active creation of belief".

Multiplayer worlds – be they game or social – demand engagement in order to persist. A core design tenet of such worlds is that the architecture of the gameplay must allow and encourage engagement of the participants. They therefore need to provide scaffolded but open-ended experiences. Such worlds have been referred to as unpredictable texts.

This paper presents research and illuminations for discussion from a study designed to explore the possible connections between these two approaches to the construction of “other worlds” and specifically, to understand what might happen when the “being there” of drama is combined with the “being there” of a persistent world. The research posed two key questions:

1. Would an existing process drama experience be more engaging for the students involved if they were also given opportunities to enter a parallel persistent on-line world?
2. How would immersion in this virtual world affect the student's engagement in the dramatic one, especially with regard to the tensions that usually drive dramatic worlds - including the all important tension of metaxis [defined as the “state of belonging completely and simultaneously to two different autonomous worlds” (Boal, 1995, p.43)].

Developing Shared Understandings

In order to explore these questions, one of our tasks was to determine the resonances and dissonances between the discourses and vocabularies of these two fields. Significantly, when we set our worlds onto collision course, the analysis outlined below was not yet detailed and we had only our intuitive understandings of each other's work to entice us. Since then our shared understandings have grown, and with this, our sense of intrigue. The table below shows how some of the key attributes, the concepts and practices, of multiplayer worlds and process drama can be compared. As can be seen, the two ‘worlds’ share quite a lot of vocabulary, and have many identical or similar features, as well as some significant divergences, all of which need to taken into account in this project.

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<thead>
<tr>
<th>Multiplayer world design</th>
<th>Process drama world design</th>
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<td><strong>World</strong></td>
<td><strong>Fictional context/Dramatic World</strong> – Construction of this world can begin before entering (as in the virtual world), but it is also actively created and developed as participants engage in this world. Once developed, the illusion that the dramatic world is “real” must be sustained by the participants. The dramatic world is therefore very fragile, depending on the whole group's making and keeping an implicit contract of the willing suspension of disbelief.</td>
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<td>- the world is where the action happens, the stage set. Designers create worlds and construct spaces for the player to enact in. MW design is often based on the concept of geographies so that new areas can be added. World design is purposed to potential action; it should encourage the participant action.</td>
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<td><strong>Gamewright (?)</strong> - in a gameworld, this would actually be the team of architects, designers and programmers that construct the environment. The environment itself is the gamewright, from the game mechanics to the background story and the embedded</td>
<td><strong>Playwright</strong> – Within process drama this is the person (usually the teacher/leader) who is responsible for structuring the work prior to the action commencing, as well as making spontaneous interventions while it progresses (the teacher/leader and the participants). Sometimes these interventions are done from a position within the dramatic</td>
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### Narrative

The three-act structure of dramatic action in classic theatre (namely orientation [more usually termed exposition], complication and resolution of the fictional dramatic context) is indirectly relevant to structuring process drama, which involves the participants in creating the dramatic action. A different and broader definition of three phases is however useful to describe the involvement of the participants in creating and entering the dramatic context. **Enrolment, Experiential and Reflective Phases** - These three phases offer the participants in a process drama quite different experiences to those an audience member in a theatre might have. Unlike the orientation phase in either a theatre or gaming experience, for example, the enrolment phase in a process drama is one that requires the direct and active involvement of the participant to develop the character/role they will adopt for the remainder of the experience. The decisions made in this initial phase will therefore have significant implications for the remaining phases – especially the experiential one where the various tensions are introduced and experienced.

### Conventions

Conventions – building blocks of concept design. Conventions exploit player expectations and assist participation. So the conventions of an FPS game are that there will be an availability of large weapons and that each enemy can be beaten. Typical conventions focus on acquisition and progression within the game.

### Back-story

**Back-story** – see story. The back story provides the excuse for the game eg You play the part of a hardened criminal visiting Vice City.

### Pretext

**Pretext** – The pretext is the term given to the material that is used as the basis of the setting/situation/roles within the drama. (The term was coined by O'Neill, 1995, p. xv) This initial material can be deeply significant within the work or can be of only minor significance.

### B. Structural/narrative components

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<th>Plot</th>
<th>Structure</th>
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<td>after Aristotle’s poetics, the plot in a MW is the “arrangement of incidents”. However, unlike the causal sequence evidenced by a plot in other media forms, causality is dependent on player performance.</td>
<td>Process dramas are not plot driven, although the facilitator or leader of this kind of experience will use a range of conventions to loosely structure the experience for the participants. Some degree of control over the on-going direction of the spontaneously emerging text should however be in the hands of the participants – meaning that no two drama experiences can ever be the same.</td>
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<td>another problematic word. Usually provides the reason for the actions of the characters. If <em>Story = change due to conflict</em> then the story of a MW is the world environment and participants as a whole.</td>
<td>Narrative in drama is very different from narrative in a story book. Dramatic narrative works by exploring in depth a series of key moments from a story and explores them in terms of their symbolic meaning, the motivations of the characters involved and the dramatic tension they generate.</td>
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| Narrative | Narrative in game design. Two main schools: the games AS participatory narratives end of the spectrum holds that the player is a co-producer involved in the game narrative. The ludology school emphasizes this productive activity as gameplay – resisting traditional narrative form. |

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<td>– These are the strategies manipulated by the facilitator to develop a process drama experience (Neelands and Goode, 1990, p.4). Some of these strategies are used within the enrolment phase to build belief/engagement, whilst others are more applicable within the experiential or reflective phases. Conventions are the building blocks of process drama.</td>
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Environmental storytelling – typically ‘let the environment fit the crime’.
Environmental storytelling is where the world design contributes to the player action. It involves the creation of purposed environments that provide clues to the player actions: dark doors to be explored, twisty little passages, evident pathways and in social MW signage and help notices.

Setting - In theatre, the environment would be the set, but in process drama, it is the setting for the drama that is important. This setting however, is only partially created by physical objects, being mainly generated through the visualizations of the participants. These visualizations are supported by a range of belief building strategies that might include shared mapping, the creation of significant objects the use of symbolic physical props, or even via pre-drama research including access to on-line materials.

C. Motivational/emotional drivers

Immersion - the state of being involved in the game. It may refer to close emotional identification with the avatar, and/or narrow focus on the in-game reality and/or actively trying to cut out meta-game information and view things from the Point-of-View of your character (adapted from Kim 2004). Immersion is also enabled by detailed graphic design and audio.

Absorption – the state of being involved in the dramatic action. This consists of a continuum between empathy (the personal identification with the character and the dramatic situation) and distance. Distance in drama terms is the gap between the participants and the roles/characters they are playing, and the degree to which participants can view the situation and their roles from outside the action.

Tension – tension in game worlds is constructed by attention to design of gameplay or ludology. In social MW, tension is more often of a typical social nature.

Dramatic tension – often simply resides in challenge of gameplay: “Am I going to overcome this?” (Adams, 2004). Also an aspect of the environment such as the noire lighting of Doom 3.

Tension – Dramatic tension is what drives the dramatic action in process drama as in all drama. (Haseman & O'Toole, 1988, p. 17). There are a number of sources of tension, with the first being specific to process drama, where the participants are also the characters: tension of the characters’ tasks.; other key tensions include mystery, surprise, relationships or the fifth tension – metaxis between the real and fictional worlds of the participants. Getting the balance right is of key importance. Too much tension of relationships, for example, and the dramatic world collapses into outright conflict - a state that cannot be sustained for extended periods of time. Tension of the task must also be balanced (as in game play) for if the task for the characters is too difficult (or indeed to easily resolved), the illusion of the dramatic world as “real” will be lost – participants will simply drop out of role in frustration.

Point of View [POV] – a typical graphic MW will offer choice between the first person POV and the third person POV. The first person POV removes the fourth wall and places the player within the world. The third person POV allows the player to manipulate the actor / puppet within the world.

Dramatic distance in process drama is controlled through framing the dramatic action and the characters’ positions in relationship to the centre of the fictional context. (Carroll & Cameron, 2005, pp.6-7)

Role attributes

Role – typically used as an operative term in descriptions: e.g. the player's role in this game is to find the treasure. Role is more likely to be used to indicate triad of personas within a MW. The triad consists of the computer role, the player role and the designer role.

Contextual roles – In a process drama the participants take roles in the context of performance as actor, playwright, director – often simultaneously and spontaneously; this creates a dramatic (fictional) context in which they take the roles of characters with purposes, goals and tasks.

Avatar – in MW the avatar is usually distinct from the actor or puppet controlled by the player. [I don't understand what you mean The avatar is a cipher, "an empty vessel waiting to be filled and given purpose by the player" (Klug, 2002)

Character/role – is also distinct from the actor/participant. The character/role, like the avatar is spontaneously given purpose, status and attitude by the improviser. Like the avatar, the adoption of a character/role creates a “mask” for the participant – giving them the opportunity to be other.
Role-playing – usually role-playing games - often shortened to RPG. Role Playing denotes a game-play format with its roots in pen and paper games like dungeons and dragons. Role-playing games tend to offer a narrative structure based on the hero's quest. Players are sometimes given choices of character and potential to develop character strengths as they work through the levels of the game world. Role-playing games are often limited to top down POV or third person POV.

Simulation – This is similar to a form of role-that is a distant relative of process drama the semi scripted approach, where there are predetermined roles, situations and outcomes - usually referred to as a simulation. Process drama, by contrast, is characterized by a much higher degree of participant flexibility, decision-making on the structure and narrative as well as character and a drive to for ever greater complexity. Finding the solution is not as important in process drama as opening up the question/context/situation for raising more questions.

First steps towards the collision

To investigate this territory, we set about designing an experience where these two quite unique worlds would collide. The research was developed and funded under the auspices of the Australasian Collaborative Research Centre for Interaction Design (ACID), and the sub-project we were all involved in (The Media Station) had a specific focus on the educational potential of Massive Multiplayer Environments.

Our initial reaction to the research questions outlined above was to design a virtual environment that could be used in conjunction with a previously developed process drama. We believed that this course of action would be the most effective way of bringing these two forms onto a collision course. Immediately however, problems arose – problems that went to the core philosophical tenets of the drama educator’s worlds. For the interaction designer (Jane), the creation of a virtual world that replicated the dramatic one and provided a multiplayer game environment provided the perfect site for the collision, but for the drama educators (John and Julie) this approach sidelined the core aspect of their imagined world – physical engagement.

Our initial reaction to the research questions outlined above was to go straight for the technical dimension and create a virtual environment connected to our chosen drama and use this site as the focus for discussions. The environment was to be an adaptation of a MOO (a Multi User Environment which allows the participant access to Object Oriented in-world programming) previously developed for a project entitled “Lost Cities”. We believed that this approach would be the most effective way of bringing these two forms onto a collision course. Relatively quickly however, it became apparent that the inclusion of a media rich environment could so easily be detrimental to the whole structure of the process drama unless it was handled carefully. Our goal had never been to replace or replicate the experiences of the drama, but to enhance them.

We decided therefore to turn our original plan on its head and use the process drama as the vehicle for understanding the potential of this union – examining the possibilities from inside the dramatic world rather than from within the virtual one. A group of eleven and twelve year old students and their teachers from Mooloolaba State Primary School in Queensland, were invited to join us for the exploration, chosen mainly because of the school’s innovative work in process drama (we didn’t have to start from scratch here), and also on account of their ongoing interest in ICTs for learning. The project was conducted over one complete school day, with the students and their teachers working collaboratively with the research team. On the day, the interaction design member of the contingent was directly involved in the process drama, taking role and co-
facilitating along with the drama educators. This participation enabled her to enter the shared dramatic world and provided her with the engagement needed to better understand the tensions that characterize the “being there” of process drama.

The drama unit selected as the focus for this research day was a previously developed one entitled *History’s Purchased Page* (O’Toole & Dunn, 2002). In its original iteration, its purpose was to provide upper primary children with a direct experience of the notion of ‘knowledge as problematic’ – in particular, an understanding of the discourses of power that are at play in the recording of history. Our goals here were somewhat different however, for in addition to generating this learning goal, we also wanted to use the experience to understand the relationship between the virtual world and the dramatic one. Our plan was to use this work as a design springboard for the development of a learning experience for students that would involve a fully immersive graphical world, but one that would also be inclusive of features of the dramatic, including physical engagement.

This initial experience was intentionally therefore very “low tech”, using only simple web-based media as a source of information and visual support via images and films downloaded from the web. We hoped that this approach would give the students a chance to identify and design the kind of virtual world they themselves felt they needed to support their learning.

In its original format, the participants in this process drama were enrolled as historians - staff of a multimedia company called *The Virtually Impossible Computer Company*. For this event however, we decided to adjust these roles, choosing instead to organize the group into pairs – with each partnership having one historian and one interaction designer. Their brief within the fiction was to research and propose designs for an educational CD/Game entitled “Conquerors of the World: Mount Everest”. Funding for the project was announced as being plentiful, in order to encourage innovative ideas that included interaction possibilities not currently available.

Significantly, the particular manipulation of the conventions of process drama within this experience meant that the students were put in a position where they were not only investigators of this historical event, but also enactors of it. Conventions such as ‘still images’ and ‘thought tracking’ (Neelands & Goode, 1990, pp.19 and 54) were used to deepen the students’ physical and emotional understanding of the challenges inherent within this mountaineering feat, while the computer-based research provided them with the written and visual material they needed to understand other aspects of this moment in history. At different stages during this process drama therefore, the students were either in-role as designers/researchers, or as participants in the quest to conquer Mt. Everest.

The adults involved in the facilitation of this experience worked both in-role and out of role, with their in-role characters being the project managers. The adults then, not only had control over the form of the drama work and the selection of conventions outside the fiction, but were also powerful within the dramatic world, as managers.

From an interaction designer’s perspective, it could therefore be argued that much of the action of this drama experience was being directed in a similar manner to the way that a game world environment might manipulate player action. Also similar was the fact that competition was used as a force to drive engagement – with the *Virtually Impossible Computer Company* employees striving to outdo each other for the design contract.
In drama terms this is described as application of tension of the task (Haseman & O’Toole, 1979, p.18; O’Toole, 1992, p.152) - a tension that must be carefully managed to protect the fragile and easily damaged acceptance of the dramatic world “as real”. However, tension of the task in and of itself cannot usually sustain a drama and other more powerful tensions were also applied. One of the most significant of these is the tension of surprise, and when introduced here, the results were striking.

The surprise for the designers was a visit from a mountaineer (teacher-in-role) who had been part of the 1999 expedition that located the body of George Mallory – a climber who many believe may have conquered Everest a considerable number of years before the generally acclaimed Hillary and Norgay partnership. The climber challenged the group to alter their plans and rewrite their games/CD roms and web sites to set the record straight about the ‘true’ conqueror of Everest.

This disruption to the confident work in progress set the participants into a frenzy, especially as the climber was a somewhat confronting individual who challenged the integrity of their work thus far. The discussion that ensued was lively indeed, and the students became keenly engaged in a cross-examination of this individual and his motives.

It was at this time that the truly embodied engagement of drama seemed to kick in and the students work moved to a deeper level, with two tensions now operating simultaneously – the tension of the task and the new, but even more challenging, tension of relationships. The challenge had suddenly become personal and the decisions more urgent, with design no longer being the only issue. Decisions now also had to be made about how best to present history.
By the time the designers and historians were invited to present their proposals to the (in role) client, one final surprise was waiting. The well-healed financial backer stunned the students when she outlined an agenda that was quite different from the one that the students expected, being willing to accept only those proposals that fell into line with her personal agenda and to dismiss any that offered an alternate version of history.

There was outrage and the room erupted with loud complaints and intense arguments, with one child shouting loudly, “Who do you think you are? You can’t buy history!” and in this moment the final, but most significant tension of this drama had been activated – the tension of metaxis.

Metaxis has been variously defined, but using Boal’s definition given above, the students at this moment were expressing “real” anger about events taking place in a “dramatic elsewhere”. This metaxis, and its physicality, should be of critical interest to the world designer, and during the process drama de-brief phase, some very important pointers for such design became apparent.

**Metaxis and the virtual: where three worlds collide**

De-briefing after a process drama is always an important aspect of the whole event, precisely because such dramas often invoke metaxis and also because it is usually in the unpacking of this tension that the most exciting learning outcomes are generated. Our work with these children was therefore far from finished, for this debriefing process not only needed to examine the participant’s experience of the drama, but also their reactions to the question of how potential virtual worlds might have been used to extend, enhance or even replace the dramatic one they had just experienced.

The responses generated during this time reflected the fact that many of these students were very experienced in virtual world and multi-user communication, being habitual MSN messenger users and regular players in shared online environments such as Runescape and The Sims online worlds. Many were also experienced game players, and indeed the majority of the submissions for the *Conquerors of the World* project aspect of the process drama were clearly influenced by a strong tendency to games.
Given this interest and enthusiasm for the multiplayer and rich graphic environments, it was salutary to hear the participants steadfastly insist on maintenance of the dramatic world and its inherently physical interactions:

G3: I think you should keep the debating live because you can see the facial expressions and you can, you know, like it feels more real when you're doing it in role-

G2: I kind of think, sorry, I kind of think the same as Lauren, like you can’t really have an argument on the computer, well you can, but it’s more, it would be more fun having it live. (Students all resoundingly agree and chuckle) And with the role plays and stuff, or the freeze frames of the climbing, it would be a bit hard to do them on the computer. Like, and it’s more better if you actually do it, not on the computer, out in the open.

By expressing these viewpoints, the students appear to be highlighting the intense engagement that the dramatic world generated for them – engagement that their previous experiences within virtual worlds alone had apparently not provided. Certainly, similar tensions operate in both worlds, but, according to these students, it seems that they are of a different order and do not offer the type of engagement they reveled in here.

However, in spite of the overwhelming advocacy they expressed for the dramatic experience, the students also outlined for us details relating to enhancements that would be made possible via engagement within a specially designed virtual world. Significantly, it was once again the physical domain that they directed most of their comments towards.
J: Would you like to have had some way of experiencing this event within a virtual environment?

G4: Yeah because then you feel like you’re kind of there and you’re, yeah you just feel like you’re in that position and everything is around you.

J: How important would it be to get the sound and the noise [of the mountain] ....

G4: Pretty important really.

G1: I think people will get a better picture in their mind about it.

G3: Cause if it was just a picture, you’d sort of go “ok I can’t hear anything and I can’t do anything apart from see what’s in front of me, so what now?”

J: Do you think there will ever come a time on computers where you can actually feel cold, and feel tired as you got to the top? And can you imagine... would that be useful?

G8: That would be really like good information because people would actually feel what they felt when they actually did it. And like (cause some people go) “oh that would be easy” and then they know how it feels.

J: Ok so what kind of touch? What sort of things would you- B1: Like so you can feel what you’re meant to be feeling.

B1: Like if you were climbing up Mount Everest you would feel cold, or if it was like rock through the snow, it would like hurt your fingers if you had no gloves on.

G6: I think like seeing and hearing are the main ones, cause they’re more possible to do on the computer.

J: What would you want to see and hear?

G6: I don’t know, just like you know say we were doing Mount Everest, like you can hear the wind and you can like hear the snow, and like when you’re walking like the snow and that crunching under your shoes and like, you know seeing actually everything.

G7: I think it’d be heaps better cause you could feel things ...

They also suggested that a well designed avatar, providing opportunities for them to explore a virtual environment relevant to the dramatic one, would have supported them in the process of creating sensate private and shared dramatic worlds (Dunn, 2002). For them, the dramatic world could have been at least partially enhanced through engagement with a deeper graphic environment but insisted that while this engagement would help for visualization, it could NOT be a replacement for the physical presence of the drama and the opportunities it afforded them for them to experience metaxis.

Their design suggestions were therefore keenly in tune with these aspects and the ideas offered for the enhancement of this experience included:
• provision of on-line chats with the historic figures involved in this debate (although interestingly insisted that this chat be conducted as text only – voice/image would destroy the illusion);

• development of an on-line environment to be used as part of the belief building and enrolment process of the drama. Here the students would enter the Virtually Impossible Computer Company as staff, being able to access their briefings and record their work.

• inclusion of an Experience Room that would offer the researchers a virtual experience of the Everest environment

Designing for a future collision: What have we learned and where do we go from here?

This small research event seems to offer some critical pointers for the design of educational experiences offering the most effective exploitation of these two quite diverse worlds - vital in the current era of academic and educational interest in re-engaging the large number of students who have "switched off" from learning. Continuing investigations will hopefully extend our understanding even further, and the participants in this initial component of the study expressed a keen desire to be part of any further iterations of the project - particularly if we could provide them with a richer graphic multi-player environment that included their suggestions (we're on to this....). But the History's Purchased Page experience has also left us with some broader concepts to explore.

The first of these appears to relate to the very aspect of design that almost brought our partnership unstuck in the first instance – physicality. Multiplayer world design – both game worlds and social – have a history of confrontation with the physical world, with these environments attempting to replicate it, but generally doing so with the 'safety protocols on', ensuring that experiences within the virtual remain distanced from the actual. Drama educators, on the hand, construct and craft their experiences to ensure that the participants have the opportunity to cognitively, emotionally and physically experience dramatic worlds.

Beyond this ‘safety protocol’ concept lies the deeper issue of simulation versus play. This tends to raise its head when the virtual game world exhibits rich detail of the less salubrious kind. For example, much of the concerns over the more recent versions of Rockstar Games Grand Theft Auto are about the high resolution graphic detail of some of the mission activities.

Tentativeness in this area is not simply based around the fear of potential furor and public outcry, but also in the design need to ensure that such worlds persist and the legacy of a rationalist design philosophy. As Coyne (1997, p.29) puts it:

Rationalism is largely indifferent to the role of the body and the engagement of the senses in our working with technology. Rationalism makes the distinction between mind and body and elevates the mind over the body. In computer systems design and research this is translated as an interest in cognitive models, knowledge representation, formalised procedures, and generalisations about human behaviour in terms of variables. Computer systems do not rate highly as physical objects to be touched and handled that occupy space. Paradoxically, even virtual-reality systems deny the importance of engaging the senses in the physical world. One of the more extreme aims of virtual reality is to present sense data "directly to the brain,” circumventing the body's normal engagement in the physical world.
The participant group’s clearly rationalized desire to experience the pleasure of the physical, emphasizes the importance of this element, but suggests that virtual designers might be better off focusing on supporting the process of visualization, rather than attempting to replicate physical engagement. The consensus on the part of the students was clearly that the virtual can best be used to aid and abet imagination by providing rich graphic visualizations and sense-based inspirations – such things as the look, feel and sound of snow. They were very aware of where they wanted assistance in their imagined worlds and where they viewed such assistance as intrusive.

As we move towards more widespread exploitation of multi-player and virtual worlds in our teaching, this leaves us with some critical questions to explore:

- What kind of virtual environments can we design where the fragile world of the imagination is not obfuscated by the virtual world itself?
- How can we re-invent the depth of sensory immersion required to aid visualization for the imaginative world without damaging it?

The worlds do evidently collide, and the research partnership remains intact, but the excitement we first felt about the resonances between our worlds has now been replaced by the challenge of creating for all of us a “bigger place to play” – a place to boldly play where no one has played before.
References


Biographies

Professor John O’Toole, University of Melbourne, Melbourne, Australia
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Professor O’Toole has recently taken up a position as The Chair, Arts Education, University of Melbourne after a long and distinguished career at Griffith University in Brisbane. John has worked in drama education for over 30 years and is the author of a number of key texts in the field including *The Process of Drama* (Routledge, 1992), *Dramawise* (Heinemann, 1987), *Pretending to Learn* (2002) and *Cooling Conflicts* (Pearson, 2004). He is also a published playwright. John is director of publications for the International Drama/Theatre and Education Association and the winner of a number of important international awards. His teaching and research work is broadly based and currently includes exploration of the complementarity of drama and computer education.

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Dr Julie Dunn has worked in the field of drama education for more than 20 years, teaching in a broad range of contexts. Her doctoral research examined play and playfulness, while the bulk of her publications have explored the relationship between play and drama. Julie is currently extending this exploration and actively investigating the resonances that exist between drama, play and on-line gaming environments. Her most recent publication, *Pretending to Learn* (co-authored with John O’Toole), was last year voted Best Teacher Reference Book in the Australian Education Publishers Awards. In 2005 Julie took up a position at the Queensland University of Technology (Australia) after a long association with Griffith University.

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truna aka j.turner is an immersion and game design lecturer and consultant in Brisbane, Australia. She has been working in various ways with multi-user environments since the mid-nineties, exploiting them as both constructive and manipulative spaces for teaching purposes. She is currently involved in research into the potential of massive multi-player games as constructive educational environments and is writing a course book on game design as critical thinking for high school students.

Her favorite game is still Lemmings

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