Animation has a long history in media education, though it belongs equally in art education. The two domains bring different emphases: the one exploring animation as popular culture and as a filmic production medium; the other looking at it as an art form and emphasising its component elements of drawing, painting and model-making as well as its aesthetic properties. However, in recent years this traditional distinction has diminished to some degree with a disciplinary shift in art education towards a curriculum for ‘visual culture’, involving a move away from the institutions of fine art towards a more inclusive engagement with practices of visual representation (e.g., Duncum, 2001). This effort represents a move from a conception of art education as elite, cut off, and situated firmly within the project of modernity to a postmodern diversity of practices (Addison & Burgess, 2003). In this new dispensation, traditional oppositions between word and image, artistic medium and technology, the sense of sight and the other senses addressed by contemporary multimodal texts are challenged. Importantly for this chapter, this new diversity also implies a breaking of disciplinary boundaries, a new collaboration with other education practices occupied with visual culture.

At the same time, it is possible to see media education shifting away from its traditional character and curriculum location. Where once its central emphasis, inherited from its origins in English teaching, was on literacies and the critical analysis of texts, recent moves have involved a more pluralistic engagement with
the Arts. Media specialist schools in the UK, for example, are formally designated as ‘Media Arts Colleges’ by the government’s specialist schools programme, and while this term is arguably intended to locate such schools within a rationale of training for the ‘creative industries’, it has also given impetus to productive collaboration between media educators and educators in drama, music, art and dance (see Burn & Durran, 2007: ch. 8, for an account of this kind of work).

At the same time, the digital era has brought new possibilities to both subject domains, and this is true of the cultural practice of animation as it is of other media forms. Where a few schools used to make animations using traditional stop-frame techniques and a rostrum film camera, the arrival of digital video allowed the easy capture of individual images as frames, editing with a non-linear editing program, and a wide range of formats for exhibition and publication.

The most recent cultural form in the world of animation—both shaped by and shaping new technologies, in this case those of 3-D computer games and virtual worlds—is the art of machinima. Machinima, as has often been noted, is a portmanteau word combining machine and cinema, with a substitution of the ‘e’ by an ‘i’, implying animation and animé. It is defined by Kelland et al. as ‘the art of making animated films within a realtime 3-D environment’ (2005: 10). It can be thought of as animation made from the 3-D environments and animated characters of computer games or virtual immersive worlds. The first machinima films were produced by players of the game Quake in the mid-1990s.

Machinima-making in schools requires a rethink of animation as an artistic practice and as a form of media production. How is it different from, or similar to, earlier kinds of animation, in terms of its cultural context, its technical resources, the skills it requires, the pedagogies it implies, the creative possibilities it affords?

This chapter will focus on the work of artist, animator, machinimator and teacher Britta Pollmuller, who has taught animation to teenagers in many ways, ranging from stop-frame and claymation techniques to machinima made in the immersive virtual world Second Life. It will explore the interface between media and art education, and between new technologies and adaptive uses of them by teachers and students.

**ANIMATION AND DIGITAL VIDEO**

This story begins with a project recorded as a case study for the BECTa DV (Digital Video) evaluation (Reid et al., 2002). Britta was working with a Year 8 group in her school in Norfolk on animations of African folktales. BECTa had provided one i-mac and a DV camera, and like many teachers in other schools,
Britta had found creative ways round this restricted provision. One group of children were animating plasticine models against painted backdrops with clip-on lights, filming and recording frames onto the i-mac with a freeware capture tool. Other groups were scripting, storyboarding, painting backdrops, designing characters, and writing haiku-form credits.

As with the animation project discussed in chapter 4, this work can be seen as a hybrid of media and art education. In respect of media education, the children were learning through production about the language and grammar of animation and of the moving image more generally. They learnt through design and practice about the speed and duration created by the quantity of frames, about the meaning of lighting and set design, about the grammar of shot composition and camera angle, about the function of sound, dialogue and music. They also learned collaboratively, through group work, a process typical of media education production projects, where responsibility for authorship is shared, students may adopt different roles in the production process, and practices of the industry may be simulated (Buckingham et al., 1995). Group work is much less typical of art education, where individual endeavour is still a common model for creative production.

At the same time, a number of emphases were in evidence which were more characteristic of the art classroom. The ‘word wall’ at the back of the classroom displayed words like ‘harmony’, ‘composition’, ‘rhythm’. In fact, the wall combined media and art-related terminology, as Britta explained in an interview:

Well, I have got, to start with here, animate, abstract films, storyboard, digital, focus, rhythm, composition… tone, 2D, find a sense of space, harmony, and so on.

The process paid a good deal of attention to the component craft skills involved, especially drawing, painting and model-making, and to the aesthetic effects of these elements. Britta insisted on quality, overseeing the careful production of the artwork, demanding reworking or reconstruction or refilming where necessary, and conducting frequent discussions to reflect on the quality of work so far.

Something which emerged from the case study was a sense of the varied cultural contexts which animation work invokes and the different kinds of cultural value attached to them. While the chosen subject of the work, the African folktales, and the craft skills of the art classroom invite fine art references such as the tradition of European animation, the children's own experience imports references to popular animation which appeared in aspects of the visual style, especially those constructing ironic or parodic humorous effects. This oscillation between a fine art and popular aesthetic can be seen as a consequence of the cross-disciplinarity of the project.
Finally, this project was infused by the status and experience of the teacher-as-artist. This kind of role varies through the arts: found most strongly in teachers of Art and Music, and perhaps least strongly in teachers of literature, with Drama somewhere in between. Britta had worked as a painter, was familiar with a range of digital media, had completed an MA at the Norwich School of Art, and worked part-time for a regional arts education project. The teacher-as-artist can be seen as complementary to a pedagogic role though it brings other practices, such as co-creator, quasi-professional mentor, studio director. It can be seen as a pedagogic stance, which backgrounds the statutory frameworks of schooling—curriculum design, assessment requirements, compulsory attendance—and foregrounds the creative endeavour and the social context in which it takes place.

A number of issues arise from this kind of animation work. Three are raised in the BECTa report, which, though general, are applicable here. One is the importance of the 'language' of the moving image: the projects perceived as the most successful in the evaluation, including Britta’s, were those which made the ‘grammar’ of moving image composition explicit.

A second was the nature of creativity: teachers in the project all strongly emphasised the creative nature of students’ work though all had difficulty in defining exactly what was meant. Recent research studies and literature reviews of creativity in education have shown that creative work in schools is beset by competing definitions and interests of different stakeholders (Banaji & Burn, 2007; Loveless, 2002).

A third issue was the affordances of digital media. Clearly, many instances of classroom work in the BECTa pilot could have achieved their results using analogue equipment. To distinguish the specific benefits of the digital filming and editing tools, the report focused on three affordances, derived from Moseley et al. (1999): feedback, dynamic representation and iterative opportunities for editing. An important reservation made in the report, however, is that these affordances could not be guaranteed by the technology alone but depended on pedagogic intervention and the quality of reflection the teacher could encourage during the production process.

In addition, there are specific issues raised by Britta’s work. These include, as suggested above: the nature of animation and the specific cultural and semiotic resources it offers for creative work with students; the constraints of formal educational settings; the meeting of art education and media education and their respective practices and pedagogies; and the identity of the teacher-as-artist.

The next section will follow Britta’s move into contexts of informal education, new contexts of artistic production and exhibition, and her current work with machinima. The questions raised above can be followed through; though it will be necessary to ask new questions too.
THE ARTIST IN SECOND LIFE

Britta left her job as a classroom teacher to work as a freelance educator in animation, running projects in schools in Norfolk. These projects continued to develop a range of animation techniques and hybrid practices of art and media education. Students were encouraged to learn specific filmic conventions, and to consider the artistic quality of their work, while incorporating resources from their experience of popular animation. Britta helped them to use the work as an expressive tool for their own interests and preoccupations and the exploration of their social roles and identities.

At around this time, she came across Second Life, the immersive virtual world created by the American internet company Linden Lab. It shares some characteristics of a Massively Multiplayer Online Roleplaying Game: it offers avatar-based interaction in a persistent online world; it provides resources for roleplay, fantasy and the building of communities; its aesthetic is derived in many ways from gaming cultures. Nevertheless, in other ways it is not a game in the same sense as an MMORPG: it provides no ludic resources, goals or other structures.

Britta had no background in gaming culture but was intrigued by the possibilities of Second Life for an artist. She exhibited her own paintings in Second Life galleries and sold her first painting for a couple of hundred Linden dollars (the currency of Second Life). In an interview with Diane Carr, project leader of our own research in Second Life,³ Britta described her feelings about exhibiting her paintings in Second Life:

I had to present my paintings in this world of modern technology; wondering how relevant painting is in our digital age? This grows out of a certain anxiety I sense about the influence of technology on art and our culture as a whole. How can art reposition itself in relation to image production in our technological age?

Second life certainly transforms the ways art is produced, exhibited, and valued, and how new art forms, new tools for representation and new conditions for communication are now generated. There are private views where avs [avatars] can drink virtual champagne and talk to the artist, poetry readings in an Irish pub, museum exhibition tours and talks, photography exhibition, avant-garde video art, scripted kinetic sculpture exhibitions, music live performances and even ballet. The SL art learning experience is endless, resourceful and stimulating.

Britta’s remarks, though inspired here by a new medium, recall older debates about what happens when works of art are produced by mechanical means. Perhaps the best-known discussion of this question is Walter Benjamin’s influential essay on ‘The Work of Art in the Age of Mechanical Reproduction’ (1938), which is still relevant to Britta’s comments in three ways.
Firstly, Benjamin’s original question about the effect of mechanically reproducing a work of art with a unique original applies here. What is still at stake is the ontological and aesthetic status of different technologies of inscription (Kress & van Leeuwen, 1996). Equally at stake are the social practices which deploy these resources. What is already clear is that the art of the machine in Second Life does not imply the inevitability of the forms of corporate exploitation that the Marxist thinkers of the Frankfurt School anticipated. Corporate motives continue to co-exist with independent artistic motives; popular art styles with fine art. Furthermore, Britta’s perception of the images of her own paintings as they are exhibited in Second Life is not of reductive, mechanical copies, their aesthetic quality flattened and depleted. Rather, she is surprised by their ‘strength’:

My first day in SL was to see a photography exhibition, and I was offered a show so I learned to set up my first virtual exhibition. I was amazed how strong my paintings looked, digital.

It seems likely that, while the technical production of high resolution images plays a part here—what Sinker calls the ‘digital aesthetic’ (Sinker, 2000)—at least as important is the participant’s view of the authenticity of the images and their context of exhibition and interpretation. In social semiotic terms, this would be seen as a modality judgment (Kress & van Leeuwen, 1996). The credibility, truth to genre, authenticity—all qualities relating to Benjamin’s ‘aura’—can be seen as a meeting of claims made by the representation, and judgments made by the participant.

What Benjamin could hardly have imagined, however, is the immersive, persistent virtual world which in this case provides the social context, in which the avatars of artists, spectators, critics and poets can conduct replications of the social genres which surround the exhibition, consumption and interpretation of art in the ‘real’ world. The artistic community of this world, as Britta describes it, reinstates the social practices of the art world, from the meetings and exhibitions of independent fine art, to the commercial practices of professional studios making corporate videos using the resources of the virtual world.

As well as producing the work of art, artists and spectators are producing themselves, with an emphasis on fluid performance, whose semiotic resources range from the customisation of the avatar to the typing of chat dialogue, the deployment of emote repertoires, and the use of expressive and functional animation resources in Second Life to sit, fly, play musical instruments, drive cars, and so on.

This kind of performance replicates aspects of performance in ‘real’ life (RL), of course. In Goffman’s sense of the presentation of self through dramaturgic
structures (1959), artists, students, critics and spectators have always performed their social roles in studios, galleries, museums, streets and cafes. The simple but difficult question begged by Second Life is, how to specify the differences?

These can be considered in terms of semiotic resources. For instance, Britta is able, as avatar, to adopt and change appearance much more fluidly, and with considerably more freedom, than she would be able to in RL. Her avatar, Pigment Pye, is a colourful figure with flying braids, patterned translucent garments, tattoos and cyberpunk decorations. Figure 8.1 shows her in conversation with me on her own island on Second Life.

At the same time, there are constraints. The communicative repertoires of gesture, facial expression, intonation are much more limited than in RL, for instance. However, the consideration of affordance in semiotic terms doesn’t entirely explain the performance of self here. Britta’s accounts, like those of other occupants of virtual worlds, insist on a strong feeling of presence in this world, a sense of embodiment which invites a phenomenological consideration. The identity of the participant is projected onto the avatar, as you become the actor in your own movie—except that it is played out in real time. At the same time, there is a concern for, a cognitive centring on as well as an affective commitment to the virtual body of the avatar; a dissolution of the barrier between the objective viewing of the image on the screen and the subjective experience of embodied selfhood.

In relation to Benjamin, we can recall, of course, that his interest was not limited to the artistic object and its mechanical proliferation but extended later to contexts of consumption and the social figure who occupied them—to the Arcades.

Figure 8.1 Pigment Pye and Juniper Mapp in conversation.
of his unfinished final work and the flâneur who strolled through them (1999). These metaphors are still resonant and applicable to the avatars and islands of Second Life. Indeed, while the technology of Second Life might have been beyond Benjamin’s imagination, he would surely have recognised the fantastic figures who loiter in its art galleries and shopping malls. The difference is in the application of the word ‘mechanical’ in Benjamin’s earlier essay. In Second Life, the world itself and its social agents are mechanically reproduced, struggling between the attempt to capture the aura of the original and the dawning recognition that it can produce its own aura, a mechanical aesthetic, sensibility, habitus.

Having exhibited her paintings in Second Life, then, Britta encountered the art of machinima. For professional animators as well as educators, machinima offered many attractions. Because it is made in realtime, it avoids the laborious process of frame-by-frame animation. It makes possible forms of character behaviour which are hard to achieve in amateur animation: a ‘walk cycle’, for instance, is hard to achieve with frame-based animation, whereas machinima in SL merely needs to capture footage of the avatar walking. In many respects, it is closer to live film, with avatars acting parts, events filmed in real time, and virtual camerawork which in conventional animation would be simulated by the animation process.

In relation to Benjamin’s argument, machinima is a recent example of his category of the technological generation of an art which has no original, and therefore no aura to be dispelled. For Benjamin, the exemplary instances were of course photography and cinema. In the case of machinima in Second Life, it is the common sharing of resources made in Second Life itself, using scripting tools and other authoring devices. No discernible ‘original’ seems to be generated by the artist here, so that no possibility of the aura remains. Rather, existing representations: characters, landscapes, sounds, objects, are adapted and incorporated into new productions. In fact, however, many entities in Second Life are conspicuously authored, retaining the signatures of their makers, sometimes freely available, sometimes for sale, paid for in Linden dollars. In this respect, some sense of an originating text remains, with claims either in the aesthetic domain, to be an original creation, or in the legal-economic domain, to intellectual property rights or to payment.

Britta taught herself the art of machinima, becoming acquainted with the Second Life machinima community, learning from them, and meeting them at specialist events. She attended seminars, festivals and exhibitions in Second Life, such as one addressed by Spector Hawks (real name Paul Jannicola), a member of the ILL Clan which made the first machinima films. Britta made a number of films of her own and exhibited them on YouTube and elsewhere. One film was made as an entry for a film competition and festival in Second Life: the Ed Wood festival. Films had to address a given title and had to be made in 48 hours. Britta’s entry won first prize in the festival, which was sponsored by the machinima
company Shortfuze, based in Cambridge, UK. The film is notable in two ways for the purposes of this chapter.

Firstly, it exemplifies Britta’s parallel life as an artist, involved in the professional production practices which inform her work in education. She describes in interview how she found a suitable online location, used a horror-film avatar as a character, and worked with other machinimators to produce the film:

I went to the site Sleepy Hollow, excellent location of an orphanage…but this is why machinima is so amazing in SL as you have all this fantastic sets…so the title the origin where bad things come from…I worked with two or three people so we all had an input of what that might be? Pure evil…so we had to have pin head. Oh, Dalinian helped…he is a crazy artist…he makes weird avatars all the time…but has not been online in ages.

Secondly, the aesthetic of the film represents something of the range of cultural contexts in which Britta is working. The film is redolent in many ways of the surreal folktale animations of Eastern Europe, such as those of the Czech animator Jan Svankmajer. At the same time, it retains something of the game aesthetic, a residue of its inscriptive source. It also makes intentional reference to popular horror, in deference to the theme and title of the festival, employing the iconic villain of the horror film *Hellraiser*, available as an avatar in Second Life. This range of contexts, as observed above, might be expected also in the classroom of an educator whose pedagogies and cultural rationales are derived both from art and media education.

More broadly, we might note the nature of the social contexts of fine art, avant-garde art, and independent film-making here. They are replicated in Second Life, not only through forms of mechanical representation, but through systems of belief, commitment and social networking. While ‘communities of practice’ may be rather more open to anti-social practices than their proponents sometimes recognise (Oliver, 2008), in this case they do exhibit the forms of solidarity and organisation which are often claimed for them. Perhaps a better term is the one borrowed by Henry Jenkins from Pierre Levy: ‘collective intelligence’. The processes of self-education, knowledge-sharing, and communal viewing and critique undertaken by the machinima groups in Second Life closely resemble Levy and Jenkins’ new knowledge communities, which are ‘voluntary, temporary, and tactical affiliations, defined through common intellectual enterprises and emotional investments’ (Jenkins, 2002).

TEACHING MACHINIMA IN SECOND LIFE

Having taught herself the rudiments of machinima, Britta became involved with the Open University’s Schome project (a portmanteau of school and home). Schome has built an island in the Second Life Teen grid (Schome Park), in which
young people are separated from the adult Second Life in a protected environment, to which only accredited adults have access.\(^4\)

Britta has developed within the Schome project’s general remit a specific project growing out of her long-term interest in animation. She teaches an after-school class in machinima, working with students aged between 13 and 17 to create animation using the virtual world, avatars, and creative tools provided in Second Life to make short films.

Britta described in an interview\(^5\) how her work here began:

I started 3 weeks ago [July 2007]. First, I set up a film-makers forum where Schomers (under 18s) and Sparkers (their supporters) can learn all about machinima. We meet from Monday to Friday, from 17.00–19.00 on an airship that I transferred over from the main grid [the teen grid is for under 18s, the main grid is age open].

Schome Park has a media centre that is entirely made, organised and set up by Schomers. Between meetings we ‘talk film’ and get organised via the discussion forum, which is regularly visited by all.

In many ways, this project displays continuities with Britta’s earlier work: a strong commitment to animation as a cultural medium for her own work and for students’ expressive needs, a fusion of art and media educational aims and pedagogies; a productive interplay between her own professional identity as an artist and the pedagogic practices of the classroom.

However, while there are also differences, these are surprisingly difficult to pin down. Britta comments in interview on what feels different in this project:

I taught media studies for 12 months in a secondary school in East London a few years ago, and as part of my work and research I’m teaching new media technology to all ages (see www.schooltoons.com or www.mediaprojectseast.co.uk).

Teaching in a virtual environment is a very new experience. There is no classroom I have to walk into. No bell, no stress, no staff room (hurrah) Pupils are not sitting and waiting for their lesson.

In Schome Park the students are independent learners, they are in this world because they want to be. By the time I arrive at the machinima session the core group is already IMing [instant messaging] me to get started. We teleport each other to the ship and discuss what scene we can do and who is in world for acting. Sometimes we have to wait for a particular team member to log. But we ALWAYS talk, type, which is amazing. There is never silence. The team is always very keen to demonstrate props they made for the movie. I had one student build a grand piano in 10–15 minutes!

Some of the differences here can, of course, be accounted for in terms of the shift from formal to informal educational contexts. The latter can change the emphasis from the preparation of students for a future world of work to an emphasis on their
immediate expressive and cultural interests and their engagement with the world of leisure. More practically, it can escape the constraints of compulsory attendance, mandatory curriculum and assessment frameworks, and disciplinary regimes.

However, there are differences. The physical context of informal education, often based in school buildings, carries its own cultural overtones; and, most significantly, the students are present as themselves, in the flesh. All their performances of self through speech, clothing, gesture, could never eliminate certain fixed points of identity in the body, and, indeed, in such fixed social conventions as naming. Britta’s students, by comparison, are not present in her class except as avatar presences: the names they choose are recently-adopted and mutable; their physical appearance is freely editable; their gender might have been changed.

These identities accomplish social purposes and desires arguably distinct from those they might adopt in school, though the comparison cannot be directly made. Britta makes the point that one of their purposes may be to escape the identities required by traditional schooling:

Well, it is such a new field to investigate how these kids already take on a virtual identity with 12 years of age, but they feel safe in this new ‘skin’ and e.g., voice somehow was neglected as it is too close to RL.

They enjoy to be what they cannot in RL... as of peer pressure, schooling and so on. School is limiting most of them, so they like to express themselves differently and not like the norm. We have one teen who is a blue fox or raccoon; one is a giant marshmallow who changes colour; one always wears a top hat…

While these performances of identity may be frequently re-designed, the markers of difference from the conventional performances of pupil identities can be generally described as playful. Exactly what kind of play this might be is difficult to pin down. In some respects, in that it fits well with a clearly-structured educational project, it resembles the form of play Sutton-Smith (2001) describes as ‘progressive’, in the educational sense: pro-social, collaborative, developmental. However, the avatar forms chosen by the students and the names they adopt also display elements of Sutton-Smith’s notion of play as phantasmagoria: anarchic fantasy operating quite outside the regulatory structures conventionally imposed by education and parenting. The ‘ambiguity of play’ proposed by Sutton-Smith challenges older oppositions between work and play which have bedeviled play theory. In the case of these young machinimators, a productive confusion between these categories is helpful in the manner proposed by T.L. Taylor in her discussion of the playful work, or the work-like play, of power gamers (2006).

For Carroll and Cameron (2005), educational drama specialists who have explored the pedagogy and practice of process drama in relation to roleplay in computer games and virtual worlds, both educational drama and roleplay in games
and machinima offer ‘role protection’—the ‘psychosocial moratorium’ which protects the roleplayer from real-life consequences. Here, the performance of teacher and student roles themselves are subject in various ways to the role protection Carroll and Cameron describe. Students—and teachers—can wear clothing or hair styles which might occasion comment or even prohibition in a school environment but which are in Second Life subject to a modality of identity play and fantasy. Students may adopt social roles quite different to those they would feel obliged to play in RL classrooms. However, the Teen Grid has more limited resources, so Britta has to create a different avatar for her Schome work, and says:

It took me two weeks to finally have a moment to change my avatar because I was always busy when logged on. It is relatively limited in Schome Park as you have no access to other shops. Yes, I do miss my outfits from the main grid! In fact, I miss a lot from the main grid. It is frustrating to move between the Teen Grid and the main grid because you’re always aware of what you have to leave behind—like my Dragon avatar!

So, while there are considerable freedoms available for teacher and students in terms of dramatic expression and the representation of self, the resources are by no means unlimited, and the limitations are subject to a range of social motivations. Main grid avatars have access to outrageous tattoos, highly realistic skins, even graphic representations of full nudity; while the Teen Grid, for obvious reasons, is debarred from some of these resources.

Similarly, SL has a dramatic topography—selfhood can be realised not only by what you wear but where you visit. Again, there are many freedoms here. When Britta visited a seminar we held in SL as a visiting avatar-lecturer, she took us to an SL machinima studio, where our M.A. students were able to question professional animators about how they made their films. By comparison with RL, this was remarkably easy: no lengthy negotiations, complicated and time-consuming travel, difficulty of access: we teleported to the studio in a matter of seconds, and the educational ‘visit’ was in full flow.

However, Britta comments on the constraints which apply to her students:

We can’t take the teens out of the Teen Grid for obvious reasons … but I still imagine taking ‘day trips’ with the students to visit machinima facilities and neighbourhoods on the main grid. Similarly, there are so many amazing educational sites in the main grid, but we can’t take the teens there. For instance, I recently met a Geologist in the main SL. She built an entire island on the History of Geology. Amazing! I’d love to take them there and meanwhile the Geology island has no visitors!

In some respects, then, the barriers existing in RL between the worlds of adults and teenagers, permeable because they are mostly legal, social and conventional
rather than physical, are rendered impermeable by the technological divide between the Teen Grid and the Main Grid. Similarly, ‘no-go’ areas in the Main Grid are defended by technological barriers which will not allow an avatar to pass through them. While such physical barriers—to property and so on—exist in the real world, they seem to be strengthened here.

Nevertheless, it may be that the context of Second Life does make a shift away from the constraints of formal education that conventional informal teaching and learning never quite manage. While the aims, curricula and evaluation practices of informal education may escape the constraints of formal schooling, the pedagogic practices may remain very similar. Indeed, it can often be the case that ‘informal’ classes are curiously formal and instructional, while ‘formal’ practices can be fluid, innovative, student-centred and collaborative. In the case of Britta’s Schome class, the agency of the student-as-avatar perhaps determines an informality in the teaching and learning process which is complemented by the fantasy setting—a huge airship on which Britta and the Schomers meet.

Britta’s comments about how she has adapted her teaching for Second Life are worth considering in detail.

As a classroom teacher you are always taught and reminded about classroom management. After ten years of teaching in real life I think I established a good routine of what works and what doesn’t. I have worked in a variety of schools, with a variety of learners of all abilities. But teaching in a virtual world is totally different. First of all, most obvious, there is no physical presence of the teacher and students, so there’s no eye contact, no voice to raise if you need them to be quiet, a very new personal space.

This seems a startling juxtaposition of affordance and constraint. While the sense of presence and social agency is strong, the sensory experience of this is quite different. The noise which all teachers experience as stressful, something necessary but also necessary to constantly manage, is gone, and though Britta sees this space as ‘never silent’ in the sense that the students are always typing chat and instant messages, it is clearly ‘silent’ in sensory terms. The lack of eye contact might be read as communicative constraint though there is also a sense that to make eye contact with 30 students in a ‘real’ classroom might be a heavy responsibility from which the teacher is relieved in the virtual environment.

If we look at the chat dialogue between teacher and students, the sense of constraints becoming affordances becomes stronger still. The nature of chat dialogue, with its variety of affective devices, abbreviations which also serve as neo-tribe argot, and adaptation to specialist purposes (in this case, the teaching and learning of animation), deploys a range of features strikingly different from
the genres of traditional classroom discourse. The effect is to foreground humour, speed up turn-taking, and flatten social hierarchies.

In other ways, however, Britta acknowledges some similarities with the conventional teaching context:

However managing a group is still similar—you need to be fast! The first two sessions were totally mad as I organised everyone and gave everyone jobs to do. Here I found myself in a situation not very different from being in an ordinary classroom. You speak and ask the students what they like to do and about how they think they can do it—and what they think they are best at, and so on.

One specific difference between teaching in Second Life and RL depends on a technical resource—the private instant messaging function available in SL:

The thing is that I found that I had more ‘quality’ time with the students because I could chat with them in IMs too…I never had time to talk to real life students in schools.

The ability to switch instantly into private communication with a student is impossible to achieve in a conventional classroom, where a ‘private chat’ inevitably requires a highly visible movement of the student to another space, even another room. However, the question arises about whether the ‘quality time’ Britta refers to is replicated in other ways in conventional school environments, whether in informal after-school activities, school trips, or ‘corridor’ talk, all opportunities which teachers use to build relationships with students which escape the limitations of classroom-bound subject teaching. The difference, perhaps, is that such communication is here integrated into the teaching session rather than found with difficulty in the interstices of the school day.

STUDENT MACHINIMA

The students’ main production to date has been a 12-minute film about the destruction of the airship Hindenburg in 1937. It was inspired by the airship Britta transported from the Second Life main grid to the teen grid:

…so I had the chance to take a few things from the mg to SP so I took the ship: my first pirate home I had in SL. So I gave that to the teens. Very tricky to move objects from mg to teens…so that inspired their idea to make the Hindenburg film.

The process of devising the film is an important aspect of the pedagogy. Media, Art, Drama and creative writing classrooms always have a choice here: to specify
the topic (perhaps under constraints from exam syllabuses) or to leave it to the students. In this case, Britta strongly feels the students should choose what to film:

I am just a technician you see, and let them imagine. But sometimes I do interfere…like with the plan to refilm the TITANIC. I challenge them to tell me WHY? AGAIN? I encourage them to think again…to explain why they want to do this movie in that style—it has been done so what do they want to make different

Juniper Mapp: creativity?

Pigment Pye: yes…as I think teens refer first to what they know, but than once encouraged refer to their imagination. I think so. But once their imagination is going there is no stopping.

This raises a number of questions about the creative process which are not specific to machinima or teaching in virtual worlds. The relation between freedom and constraint (Sharples, 1999) was a theme of the BECTa DV pilot project evaluation, in which many teachers considered that freedom was the key to creativity, yet the evaluation repeatedly found that the most effective projects were those which constrained what the students did in some way. In Britta’s Hindenburg project, there is both freedom and constraint. Importantly, this includes the freedom to choose the content: though, as Britta’s account makes clear, this choice is challenged and refined. Creativity may involve the deployment of cultural resources students retrieve from their prior experience of the media, but it also involves the transformation of these resources in two ways. As Britta says, one aspect of the transformation is imaginative: the ability to rework remembered or found cultural resources into something new. But as her account implies, another aspect is reasoned discussion. In Vygotsky’s account of creativity (1931/1998), this element is criterial to creativity, seen as the alliance of imagination with conceptual understanding, rational thought. While it is commonplace for models of media literacy to specify a critical and a creative dimension (Buckingham, 2003; Burn & Durran, 2007), this instance shows how closely connected these apparently discrete dimensions can be. The ability to critically evaluate and assess the function, meaning or aesthetic effect of a media text is closely associated with the ability to imagine how it might be different. Conversely, the ability to produce something which has never existed before depends not only on re-imagining images, sounds, spaces and events, but on a rational assessment of what these resources might be made to mean.

A perennial debate in media education concerns the collaborative nature of creative work. Successive models of media education have resisted traditional essentialist post-Romantic notions of individual genius and inspiration, preferring accounts of group production which rationalise the creative process, democratise the
function of authorship, and promote social ideals of co-operation and solidarity (see Buckingham et al., 1995, for an extended account of rationales and practices of group production work in media education). It is possible, even desirable, to challenge these ideals to some degree. A case can—perhaps should—be made for individual creativity, and this remains, as noted above, the dominant model of creative work in Art education. Similarly, the virtues of collaborative work can be overplayed, even sentimentalised. Group work can easily conceal emergent hierarchies, covert or overt competition, forms of exclusion and power-brokering, and disunited intentions.

Nevertheless, the evidence in this case is that group production lives up to its ideals. Students choose production roles in negotiation with the teacher:

- Decimus - editing/SFX
- Prof - story
- Faz - explosives/props
- Achilles - recording
- Martin - casting/storyboards
- Hapno - Directing/animation
- ??? - Music/sound effects, costumes

(the ‘???’ indicates that we still need someone to do those)

In the case of Britta’s class, the Schome students make some of their own assets. Her evaluation of the project’s outcomes referred to these processes: ‘Skills included character design and realisation of objects and sets using second life interface building and scripting tools’.

The content of the film shows clearly the kinds of transformation of genre, semiotic resource and given information to which Vygotsky’s notion of creativity can apply. It is a hybrid of documentary elements—the historical narrative of the Hindenburg’s destruction – and fantasy elements suggesting murder and thriller genres, which produce a mysterious saboteur who kills a guard and plants the explosive which destroys the ship. The process of negotiation which accepts the various ideas here, as well as the joyful exploitation of big disaster scenes which machinima allows amateur film-makers to do (Kelland et al., 2005), and fuses all this into a coherent narrative, is a distinctive feature of this project.

On the other hand, where constraints and structures are clearly apparent is in the pedagogy Britta describes here, which recalls, as in her earlier work in schools, the synthesis of art education and media education. There is a strong emphasis on the ‘language’ of the moving image, as well as the metalanguage of the digital medium:

We have a specific media discussion forum where we set up topics, such as the machinima workshops. We post ideas, scripts, and I also manage to include terminology about film language. We discuss a lot of technology too, how things work such as streaming media, what codec to use.
The teaching combines old and new—the grammar of shot types developed in the early days of cinema and still fundamental to the art of machinima, and the social processes of film-making, along with the specific filming tools provided in SL:

We are very ‘hands-on’ and the students learn a variety of skills. It’s not just about technology. I help the team to be a complete film crew, from script writing, prop making, clothes design, filming, to editing. This means that the participants learn how to use the alt-zoom camera, the SL interface camera, how to set up shots, including wide, medium, close as well as over shoulder shots, etc.

The pedagogy recalls the emphasis of media education and art education on the craft of creative production work. On the one hand, this is rooted in what Metz (1974) called the cinematic language: filming and editing. In some respects, this seems to resemble closely the production processes typical of media education:

We get organised via the forum, and in world everybody makes what is needed, or I train and teach camera skills and recording techniques. That can be very demanding once we get to film. The Hindenburg took 3 months to make… I was filming alongside Achilles (16 years), so we had two sets of files…. Editing was tricky as the teens haven’t got very good editing software. Most use movie maker and that really is not very good, so that is what I like to develop with them further.

However, there are specific differences. A screenshot used by Britta to teach different roles shows the student camera operator floating in mid-air to film the ship from the outside. Machinima makes possible, then, shots which would normally be quite beyond the technical possibilities of a school production: shots which are only possible in professional production with cranes, planes, or, indeed, CGI.

If the teaching focuses on Metz’s cinematic language on the one hand, however, it also recognises what he saw as the wider filmic language: the multimodal nature of film, and the other signifying systems it incorporates, such as costume, words, dramatic movement:

Acting—he he, tat was hard as I had to probe the teens and the camera man, all by typing. But we had a script, and the teens followed their basic idea… e.g., the guard shooting and the bomb. They negotiate via chat of how to film and what to do… I only took over when it got tooo complicated or I wanted to focus them back to their ideas.

The dramatic element is, because of the nature of machinima, a much stronger component than in traditional animation work, where it is really limited to speech characterisation. Here, the process is much more like live action moving image production work in education, in which students act roles as well as filming, editing and directing. Performance is perhaps the feature of machinima which most obviously distinguishes it from conventional animation. Avatars perform
roles in real time, filmed by themselves or others, replacing the atomised production process of cel or stop-frame animation with the performative continuity of virtual bodies and running cameras.

The dramatic element in the multimodal ensemble of moving image production is under-recognised in media education: at its worst, the acting roles can be given to students perceived to be less competent with filming and editing. More generally, however, it is simply a failure of dialogue between the pedagogic traditions of media and drama education: the one has equipped itself with a language of representation, mediation, screens and distributed exhibition; the other with a language of dramatic presence, phenomenological embodiment, and local, immediate display. The truth is that the two need each other.

In the case of the Hindenburg project, it is not immediately clear what the nature of the dramatic work might be. It is clearly a form of roleplay, as Carroll and Cameron argue:

Both process drama and machinima possess the kind of agency that Murray wants to build into the form she calls Cyberdrama [20]. Both of these forms lead to a type of dramatic creative work that is intermediate between dramatically ‘linear narrative’ and functional ‘game’ play. Role distance allows the required ‘psychologically present entity’, which is somewhere between ‘me’ and ‘other’ to operate within the framed context. (2005: 8)
Role distance offers here the possibility of critical distance, in effect a descendant of Brechtian alienation, which process drama in education has at its core. The point is not so much to be emotionally immersed in a role as to be able to move in and out of role to reflect on the development of the drama and its meaning for the various participants and spectators. A different metaphor is offered by Henry Lowood:

This was a first step towards what Paul Marino, one of the founding members of the Ill Clan, would call the virtual puppetry of machinima, that is, the careful synchronization of avatar actions (moving, speaking) to voice actors/game players via keyboard bindings. (2005: 20)

The avatar as puppet resembles in some ways Augusto Boal’s notion of the spectactor—the member of the theatre audience who crosses the threshold and becomes part of the drama (Boal, 1992). Most importantly, both offer critical distance. But there are differences of emphasis. The spectactor implies a serious political project. The puppet, by contrast, suggests play, carnival, street theatre, childhood. Of course, the future of machinima, whether as art form or as educational process, can embrace both.

In general terms, the question here is about the pragmatic diversity of creative work in education. This kind of work moves beyond the traditional practices of the media classroom or the art classroom. We can no longer be certain of whether the work of art belongs to the world of popular culture or the avant-garde, or both; whether students are fledgling filmmakers, visual designers or actors; whether their work belongs to literacy, visual culture, popular cinema, digital drama, or all of these. Whatever the case, it is clear that the teaching intelligence at work here is quietly refusing to throw out pedagogic babies with the bathwater. The old order may be giving way to something more pluralistic, more fluid, more easily characterised by postmodernist modes of thought than modernist, but the process of creative making still needs to retrieve the detailed procedures of older media, their grammars and their cultural echoes. This is as true for the Schome students as it is for the adult machinima community.

CONCLUSION

One possible conclusion of this study is that new media raise old questions, albeit in new forms. Britta’s work with the Schome students suggests that students need a stake in the content of their work, that approaches to creative production which somehow balance play and work are successful, that a detailed attention to the semiotic specificity of the moving image pays dividends. It raises the question of the differences between the aesthetic practices of art education and media
education but also suggests that this kind of project can be situated within changing practices in both disciplines, the one moving towards a more pluralistic, critical approach, the other towards a closer engagement with the arts in education. It raises the issue of the advantages enjoyed by informal education and its freedom from the constraints of statutory mechanisms of curriculum and assessment. It demonstrates the advantages in both art and media education of a teaching approach rooted in and informed by professional artistic practice. It shows the complexity and the benefits of collaborative production work.

This much is a reinforcement of older lessons about media education, though ones which need repeating and refreshing, especially in the context of new media.

But what can be said that is distinctive and different about machinima—its culture and its technology?

Machinima is both enabled and constrained, defined and confined, let loose and tied down by its dependence on game worlds and the resources they offer. It can never start from scratch, but must always adapt, transform, re-purpose. This is its strength and its weakness. Maybe not too much of a weakness—the art of collage, synthesis, and the transformation of found materials has an honourable history in the modernist period (Braque’s newspaper collages, Picasso’s bike saddle bull’s head), while practices of bricolage are well-established markers of postmodernist culture, in the sampling practices of contemporary popular music; or in the material and semiotic transformation of codes in fashion and design, in which military uniforms become garments of dissent, or the severe lines of Shaker domestic style become markers of bourgeois wealth.

More specifically, an aesthetic practice based in the adaptation of existing resources is conducive to the cultural work of schools and education. Chapter 3 of this book describes a popular media education activity—the making of film trailers by editing found footage from popular movies. The forms of cultural raiding represented by mash-ups, fan art, fan fiction, modding, reverse engineering: these are all grist to the mill of the educational project. In this sense, school students and their teachers resemble always the textual poachers of Jenkins and de Certeau’s metaphor (1992): they create in rented space, with borrowed tools, in genres and forms invented by other people.

Furthermore, these practices enact the central processes of creativity envisaged in Vygotsky’s essay on the subject, as noted above. His emphasis on the transformation of semiotic and cultural resources serves as a vindication of the use of machinima in education. To provide resources which are already heavily culturally shaped, and shaped within contemporary gaming cultures, is to offer a starting-point full of possibilities for young animators to play with. While social semiotics has always regarded language and other systems of signification as being
systems of meaning potential, to regard games and game-like environments in the same way is a productive way forward. Lowood cites Manovich’s notion of the ‘cultural economy’ of games in this respect, seeing them as toolkits for creative work, rather than fixed textual entities (Lowood, 2005).

It must be acknowledged, though, that metaphors of border raiding and trespass run the risk of romanticising educational creative production work. There are counter-arguments: schools are in many ways authentic and distinctive cultural spaces owned by teachers and students, with no need to trespass; their creative work is more like professional apprenticeship than amateur production: it is their day job, not a transgressive leisure activity. In particular, if the teacher’s identity derives as much from professional artistic practice as from a pedagogic role, as Britta’s does, then apprenticeship becomes an even more appropriate idea. In addition, there is an important question about the ontology of the artistic work, which is in many ways made from scratch by the Schome students, who script and shape their own assets for their animated films rather than adapting them from found objects within Second Life. This looks much more like a digital equivalent of the plasticine modelling of stop-frame animation than like the bricolage of culturalist rhetoric.

Nevertheless, if they are a professionalised production team, as Britta’s machinimators in many ways are, they work with restricted tools, budgets, time. They beg, borrow and steal, as well as design, invent and transform; and, while its future may hold something quite different, this is the dominant aesthetic practice of machinima in its early years and what makes it so suitable for educational animation work. What is clear already is that it is a mistake to over-generalise. As Kelland et al. emphasise (2005), there are already many different genres of machinima, some of which depend on gaming culture, some of which derive from established film genres, others which occupy a new kind of indie space. Plenty of room and time, then, for art and media educators to find the creative spaces and resources for their young machinimators to play, work and learn with.