

**Second Life<sup>®</sup> in the classroom: an experiment in teaching the history of science, medicine and technology. Roberta Bivins, Department of History, University of Warwick**

With the help of a small grant from the History HEA (£200 to subsidise student and instructor costs in this first experimental year), I incorporated the use of Second Life<sup>®</sup>, a massively multiplayer virtual environment into my teaching of a First and Second Year undergraduate module in History at the University of Warwick. The module in question explores the impact of science, medicine and technology on personal, familial and group identity from the early modern period until the present. This year, I gave students the option to either produce a three-entry blogged media journal, exploring the themes of the class through contemporary or historical journalism, cinematography, television, and other media; or to produce a similar blogged journal of experiences and 'experiments' in Second Life<sup>®</sup>. Entries were expected to be approximately 800 words in length, to fit with formative assessment requirements in other similar modules. Two thirds of my students opted for the Second Life<sup>®</sup> blogs with considerable enthusiasm. For them, I designed a menu of 'experiments' in identity, one of which was mandatory.

*The Second Life<sup>®</sup> Assignment*

All participants experienced 'Birth', in which they had to design and personalise an avatar through which they would experience Second Life<sup>®</sup> for the rest of the year. I asked them to describe this experience (in blogs available to all class members), taking into consideration the secondary literature on 'identity tourism' and other personal and political factors that influenced their choices. In our seminar groups, we discussed the nature and processes of identification. Lectures explored the histories of anthropometry, fingerprinting and other biometric technologies, and the ways in which states used them to create unique identities for their citizens. My SecondLifers talked about the contrasting impact of technology on 'citizenship' in Second Life<sup>®</sup>, where biometric and visual cues to identity are all freely chosen, and where 'RL' [Real Life] identity is unavailable and unknowable. Interestingly a number of my female students talked about the persistence of RL concerns about security and social embarrassment when approached by a SL<sup>®</sup> [Second Life<sup>®</sup>] avatar of the opposite gender. My male students quickly learned that female-gendered avatars enabled more opportunities for interaction. Both groups noted one aspect of Second Life<sup>®</sup> that required careful negotiation on my part: its highly sexualised content. I had warned students about the need for caution in SL<sup>®</sup>, and few were unduly concerned. None reported any unpleasant experiences, but a number of my female students noted the difficulty of finding avatar customizations (clothes, 'makeup', hairstyles, gestures, performances etc are all available for purchase through a gateway called leading to the virtual world's commercial district. Second Life<sup>®</sup> collectively had a real world turnover of US\$1.5 million per day as of 2007) that were not overtly titillating. It was at this point too that a handful of students discussed their difficulty in 'bonding' with their avatars – while others talked about fear of 'SL-addiction'.

With avatar creation under their collective belts, and some experience in manipulating the SL<sup>®</sup> environment, I asked my students to begin their 'experiments'. The menu available was designed to reflect module themes. Thus one option for students was to become 'pregnant' in Second Life<sup>®</sup>, and to use the resources available in that environment to reflect on the experiences and assumptions about reproductivity embedded in it. For example, most pregnancy simulations

included a set of imposed thoughts and sensations (from daydreams about giving birth to new life to swollen ankle, nausea and urgent needs for the loo!). All of these assumed a female -- and stereotypically feminine -- avatar. I asked students to reflect on their experiences in relation to the expansive literature on the social, political and cultural impacts of New Reproductive Technologies, which we covered in a series of lectures. Almost all of my SecondLifers opted to participate in this experiment, and wrote insightfully about both the social implications, current events, and their own feelings. One student did a particularly spectacular job, discovering not only NHS-sponsored antenatal care clinics, but a set of user-groups whose members identified themselves as women pregnant in RL, and using SL<sup>®</sup> as a way to share the experience with supportive peers. Another student experienced and discussed 'virtual infertility', as for some reason the basic avatar he had chosen was not compatible with the pregnancy simulation software. An unexpected challenge arose in trying to find a pregnancy simulation that did not include overtly sexual content; most of the better-quality simulators included a set of masturbation animations that I did not feel were appropriate for the classroom.

Two experiments encouraged students to change gender or race, again in line with module topics exploring the roles of science, technology and medicine in the construction of these categories. Students found that the effect of changing race was insignificant, perhaps because of the wide-spread and well-known prevalence of 'identity tourism' on-line and in SL<sup>®</sup>. They did note the challenges of finding appropriate avatars/customizations, and discussed the implications of this scarcity for the user-community. Many had already experimented with gender-swaps, and this option was not taken up in 2009-10. A final experiment allowed the students to become ill in Second Life, to explore the module theme of the 'patient identity'. There were only a limited number of visible simulations available online for this experiment, including leprosy and pubic lice (which were, fortunately, not explicit: the simulation consisted of an animation of insects scrambling over the avatar, and a sign identifying the bugs as sexually transmissible). Students used both of these animations, and found that the stigma associated with each disease in RL definitely translated to SL<sup>®</sup>, despite the obvious differences in mechanisms of transmissibility. Blog entries discussed the question of stigma, and contrasted the cartoonish visibility of impairment in SL<sup>®</sup> with RL patient identity and visibility. This experiment worked fairly well as a discussion piece, but I would prefer to use a more sophisticated version of it; I discussed collaborating with Imperial's Medical School to create a diagnostic simulation in which my students would be the 'patients' and their medical students the 'doctors' but unfortunately we were unable to coordinate our term schedules.

#### *Feedback and Outcomes*

Overall, the average score for teaching on this module was 9.3 out of a possible 10, with no significant outliers. Lectures were particularly well appreciated for incorporating discussion and student input, and allowing interaction between students and with the lecturer. The students universally felt that the seminar discussions were useful and enjoyable. They praised the fact that they were encouraged to relate module content to current political and ethical controversies, and that the module incorporated material from western and non-western contexts side-by-side. Most topics were given positive ratings, though one unit was judged to be too complex for the short amount of time allowed [incidentally a unit with no related Second Life<sup>®</sup> applications] Second year students struggled slightly more than first year students with the wide range of topics covered, and also requested more emphasis in seminar on essay writing and revision. This was the one area in

which I felt that the use of Second Life<sup>®</sup> proved somewhat restrictive: the time devoted to it, and departmental constraints on models of assessment meant that this formative assignment did take time away from discussion of the more standard essay assignments.

Therefore, I asked students to spend extra time assessing the value of their unassessed media journals/Second Life<sup>®</sup> experiments and blogs. I also asked them to give an opinion on whether these elements should be retained or replaced next year. Only one student felt that these elements should be removed, and replaced by an additional standard essay. The majority of students felt that these assignments were valuable, particularly for allowing them to develop their ideas more informally than in standard essays, but still within a framework of rigorous analysis and critical reading of appropriate literatures. Interestingly, many of the students also wrote more fluently and grammatically in the blog format than in their essays. Several students, however, suggested that the current three short journal/blog entries should be replaced with two longer ones. They also asked for this part of the module to be incorporated more fully into class and seminar discussions. I think both of these suggestions are excellent and will work on ways to bring this aspect of teaching to the fore in seminars next year.

I will be using Second Life<sup>®</sup> again this year, with some modifications. However, I must admit that I considered dropping it before reading the students' feedback. Although I was very happy with the impact Second Life<sup>®</sup> had on the students' participation in discussions and with the responsive blogs they produced, the time costs of using Second Life<sup>®</sup> were enormous, both for me and for them. We all started the year as novice users, and certainly in my own case, it took a considerable investment of time (and the capable assistance of Mark Childs, an experienced user writing his PhD on Second Life<sup>®</sup> in the classroom) to become very moderately skilled in navigating the SL<sup>®</sup> environment. The students adjusted much more quickly, and were palpably more comfortable in-world, but still struggled to find sufficient time to interact in-world with other users – a necessary feature of their experiments. Designing the experiments and particularly finding and vetting the various simulations required also took more time than I anticipated, as did guiding the students through the processes of adapting their avatars (often on the weekends, since this was when they did most of their in-world work). I expect to see some improvements this year, as I build on my experience – but this is a very time-intensive mode of teaching. Moreover, Second Life<sup>®</sup> itself is not a stable environment, so some re-invention of the wheel will be necessary to update the module for use this year.

So what are its benefits? As I indicated above, probably the most significant factors encouraging me to continue using this technology are its impact on the students' comfort with and enthusiasm for interacting with each other in the classroom; and the additional tool it gave them for engaging with what is often very complex and theoretically dense scholarly material. Second Life<sup>®</sup> allowed them to experience directly, and to question phenomena we discussed in class and in the readings. It was endlessly useful for starting discussions, and for challenging assumptions about the roles of technology, gender, race, etc. Moreover, it did harness aspects of their creativity and sociability that I would have struggled to access through standard essay-writing. Thus for this particular module, Second Life<sup>®</sup> worked very well and added value. For more conventional modules, I expect that some of these benefits could be harnessed: the availability of alternative styles of assignment, the option of meeting in-world as a way to encourage participation from quieter

students, etc. But I am not convinced that SL<sup>®</sup> would offer additional intellectual traction, as it did in this module. For this reason, I will not be adapting it for my other modules.

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