

## The Grand Diversion: Play, Work and Virtual Worlds

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### ABSTRACT

**Enterprises, including corporations, use virtual worlds for such purposes as marketing, training, and recruitment and, increasingly, meetings. As researchers whose primary focus has been on the nature of “work” and the sites and institutions that mediate contemporary experiences of work, the authors reflect on the implications of play as a constitutive feature of virtual worlds through consideration of institutional uses of virtual worlds. Evidence for the claim that play has emerged as the paradigmatic metaphor for interpreting and designing virtual worlds is presented. A case from the authors’ company’s application of virtual worlds to work and learning environments is unpacked to explore how notions of play and game drove particular ways of proceeding and not others and the implications of this thinking for the resulting solution. Questions are raised concerning what such a rethinking may entail and the opportunities it may hold for opening up new opportunities and understandings of virtual worlds.**

**Keywords:** design, learning, metaphor, productive play, rehearsal, 3D virtual workplaces

This paper is an effort to outline some of the things happening in and around virtual worlds which make them more than “just games” and which may in fact point us in the direction of new forms of knowing and acting in virtual spaces and give us insight into what new, technologically mediated worlds may look like in the coming decades. (Thomas and Brown, 2008)

... business researchers have been dismissive of online games, characterizing them as technologies of play and, therefore, outside the bounds of legitimate arenas of inquiry, namely, technologies of work. These common notions of play and work, as well as of virtuality and reality, as mutually exclusive social arenas, have held back our exploration of synthetic worlds as legitimate media for productive activities (Shultze *et al.*, 2008).

Organizations, including corporations, are engaging virtual worlds for a variety of organizational and commercial purposes. A wide range of business

and organizational agendas – including marketing, training, new product development, and recruitment – are being pursued through virtual worlds. As both observers of and participants in this trend (the authors have a research and development offering called *Rehearsal Services* whose primary delivery medium uses virtual worlds technologies), we track what is becoming of virtual worlds as they become sites for organizational and commercial, in addition to entertainment and personal, use. We wonder about the impact of framing virtual worlds as play. Are the design and the behavior they are built to support changing as a result? What will be the ongoing interplay between workplace and non-workplace uses of virtual worlds?

The quotes above point to a proposal we wish to make here, namely that virtual worlds can and do support activities beyond those related to play and gaming, the now dominant framing. Moreover, we wish to interrogate this framing of virtual worlds as play and its impact on virtual world development and use in enterprise settings. Many uses and interpretations of virtual worlds begin from a starting point which views them as arenas of play or entertainment and then look to extend and elaborate them as sites for work and learning. Shultze *et al.* (2008) for instance, provide a framework for classifying virtual worlds that pivots around notions borrowed from games such as “rules” and “fantasy”. The authors of both quotes above refer to the participants in virtual worlds as “players” as do many commentators in the field. But is “play” the only or best way to enter into considerations of virtual worlds, the experiences they afford, and the potential for how they should be designed? What if the framing metaphor for entering into the space of virtual worlds use was something other than play? What if the framing metaphor were, for instance, work?

As researchers whose primary focus has been on the nature of “work” and the sites and institutions that mediate contemporary experiences of work, we explore in this paper the implications

of the dominant metaphor of play for workplace applications of virtual worlds. We set the terrain for an inquiry into what might happen if the underlying metaphor for interpreting and designing virtual worlds shifted from “play” to “work”. Specifically we suggest that by starting from a stance largely informed by notions of play (whether intentionally or not), early efforts to apply virtual world technology in work contexts often miss much of their potential. The impulse we see in workplace applications of virtual worlds to structure their uses in terms of games to take advantage of the play-like dimensions of virtual worlds – creating trajectories of rule-based leveling up and progression, for example, or explicitly ‘injecting’ in elements of fun – can divert from the affordances for engagement and learning available in the work itself. Such impulses suggest that work holds none of the potential for compelling engagement that adheres to play. Moreover, the route from work through play to game and back to work again often increases the distance between the experience and the very work it is meant to support. We see much the same pattern of thinking when it comes to learning and virtual worlds.

We do not wish to suggest that interpreting and designing virtual worlds through paradigmatic notions of play is wrong or unproductive. Indeed, one of the authors (Stucky) co-authored the article quoted above (her contribution is itself provocatively titled “Can Play be Rescued in Corporate Learning Technologies?”) and we recognize and appreciate a successful history of using play and game in workplace contexts for learning and collaboration purposes. And we believe there is room for more of this exploration. Nonetheless, in our experience of virtual worlds in the workplace, we have come to recognize ways in which work itself is often underestimated in the process. This makes us wonder what new opportunities might emerge for virtual world design and use if we shift from seeing them as sites fundamentally constructed around notions of play and game to sites constituted through activities of work. We are drawing attention to the need for metaphorical hygiene in the design of socio-technical solutions such as virtual worlds for collaboration, learning, and work.

In this paper, we elaborate our claim that play has emerged as the paradigmatic metaphor for interpreting and designing virtual worlds. We then explore a case from our own company’s application of virtual worlds to work and learning environments to unpack how notions of play and game act to suggest particular ways of proceeding and not others and we explore some of the implications

of this thinking for the resulting solution. Our aim is not to provide answers to what new designs should be but rather to offer a provocation towards a fuller engagement in virtual world research and development with non-play or game-based metaphors of design. We close by raising questions about whether such a rethinking may hold opportunities for new understandings, designs and uses of virtual worlds in collaborative work contexts and beyond.

## PLAY AS THE PARADIGMATIC METAPHOR OF VIRTUAL WORLDS

We are prompted in these questions for a number of reasons. As noted above, we are responsible for conducting research on and supplying solutions using virtual worlds such as *Second Life* and *Active Worlds*. We thus have had to confront both the opportunities and limitations of virtual world technologies for workplace interactions and activity. By pushing at the question of the foundational metaphors that underlie the construction of virtual worlds, we are asking, in effect, what it would look like if Linden Lab (the company behind *Second Life*) were just starting now. We wonder how the space of virtual worlds would be experienced and perceived if it had arisen not from the perspective of individual end-users engaged in personal leisure and commerce but from enterprise users engaged in work. We are aware that many companies, including Linden Lab, have begun developing workplace applications more in earnest. Linden Lab’s partnership with Rivers Run Red is one recent example.

Our question is: what would be different had virtual worlds stemmed more actively from workplace and other non-entertainment activities instead of migrating there? Now that enterprises are exploring virtual worlds for doing work, there are many issues being raised as to whether virtual worlds are appropriate. One issue is security in virtual worlds. If avatars are attending high-level or confidential meetings, how do you know the avatars are the people they say they represent? Sun’s *Wonderland* is using methods to authenticate avatars, which is very different from the anonymity that other virtual world platforms such as Forterra’s *Olive* provide. IBM indirectly requires authentication to get onto the private IBM islands in *Second Life* by requiring linking avatars to the users’ IBM ID. More generally, different work contexts demand and afford different considerations of anonymity and identification. Issues of trust, for instance, often pertain not just to an individual’s behavior but also the institutional contexts and affiliations he/she carries.

Also relevant are questions of what other technologies and objects can integrate into the space. Had virtual worlds developed to support work from the start might the everyday tools of work practice such as spreadsheets, power point presentations, and instant messaging be integrated more readily? The sequence of events and objects encountered as well as the techniques for navigation might also be somewhat tweaked as the improvisatory and collective nature of much work might shift the common pathways and trajectories or mapping systems common to virtual worlds. This is especially so of instantiations that follow a game-like rule or leveling structure designed in the form of a search or quest. If virtual worlds arose from enterprise users engaged in work, how would issues such as security, privacy, identity, veridicality of graphics and the objects (or the degree to which the representation in the virtual world looks like and acts like the corresponding graphics and objects (if any) in the real world), and integration with other desktop computer applications affect the evolution and features of virtual worlds?

As is often the case, the exception proves the rule. In fact there are two virtual world platforms that have been explicitly designed with the enterprise in mind. The first, *ProtoSphere* by Proton Media, covers collaboration along with education and training in virtual worlds. Formed over 10 years ago, to provide online training and education, the company has now integrated virtual worlds into its offerings. The second company, Forterra, whose virtual world platform is called *Olive*, was explicitly designed for the enterprise as well. Like Proton Media their first applications are in the arena of training and education and collaboration. Forterra, unlike Proton Media, does have its roots in “play” as it split off from *There.com* in 2004, a virtual world environment for teens. It is worthwhile noting that splitting out a company Forterra from *There.com* seemed important to demonstrate the seriousness of the enterprise and to take technical development in a different direction.

Since the workshop that spawned this issue of *Artifact*, a number of players in the virtual world space have moved explicitly into the realm of work and we see them addressing exactly the issue of bringing in the more familiar applications such as PowerPoint and the like. *Qwaq Forums*, for instance, offers persistent work environments for collaboration. Linden Lab is partnering with Rivers Run Red, who also provide for the *Second Life* platform work environments for collaborative work.

Thus there seems to be a growing recognition that there is a role for explicitly designed work environments in virtual worlds. Yet, it has been an afterthought in many cases. So, for instance we see various solutions to integrating applications into the virtual world (yes, specifically to import PowerPoint presentations), but also more general solutions to bring in applications of any sort. IBM, for instance, has linked its chat program, SameTime, to various virtual world environments, so that you can be texting and then agree to meet up at a specific site in, say, *Second Life* (behind the fire wall at IBM) and Forterra’s *Olive*.

In addition, our reflections in this paper are motivated in response to a particular mode of engagement that we have experienced to underlie many interactions with others, both researchers and business counterparts, around virtual worlds. The business colleagues who come to us for our services in virtual worlds often default to an expectation that the use of virtual worlds will mirror experiences of play and game (as we shall see in more detail below). Such views are evidenced among researchers on virtual worlds as well. At the Productive Play workshop at UC Irvine in the spring of 2008 from which this special issue emerged there were, for instance, researchers whose focus crosses *World of Warcraft*, *Everquest*, *Second Life*, *There*, and other virtual worlds and whose interests transcend particular sites. And yet the typical frame of reference to address participants was “players” rather than the more generic “participants” let alone workers, creators, or other categories. We have come to see this as emblematic of the perhaps unwitting naturalization of virtual worlds as sites of play. Moreover, when discussion turned to workplace uses of virtual worlds we sensed that there were often assumptions being made to the effect that “work” and “workplaces” rarely allow for the kind of creative, engaged experiences commonly assumed to adhere to play. Just as Pearce (2006) argues to reconceptualize play as potentially productive, we wish to offer a reminder of the engaged, play-like, dimension of many aspects of work. If a richer understanding of the nature of work was available, would this stance remain? At risk of overstatement, “play” was held up normatively as a good, as an inherently positive and valuable experience and one whose benefit could not be realized through work. Play, thus, took on something of an emancipatory agenda, as a way to enlighten work and workplaces, and virtual worlds were positioned as a mechanism for that enlightenment.

We see glimmers of this view reflected in other ways as well. The movement of “Serious Games”, for instance, points to the centrality of notions of play in extending creative applications of activity into workplace and other organizational settings. Serious Gaming refers to the application of games and game-like approaches to the “serious” worlds of work and learning, or more generally as “games that have a serious or real result” (Schultze *et al.*, 2008). Though it might just as well have been named “Playful Learning” or “Playful Work”, the Serious Games designation suggests the development *from* games and entertainment *to* work. Moreover, Schultze *et al.* (2008) follow the frequent categorization of virtual worlds as “technologies of play”. Serious consideration of virtual worlds as legitimate collaboration, communication, or learning environments is a recent development, one that has come about through the struggle, largely, to argue for legitimate applications of play and games to workplace environments.

The historical development of virtual worlds is of course more complex and multi-dimensional. It has its roots in a range of arenas. The famous case of *LambdaMOO*, for instance, grew out of workplace efforts to understand how online community might form. However, the common point of reference for virtual worlds typically traces back to earlier personal end-user developments of MUDs and MOGs, and to the rich-graphical interface worlds of the video gaming industry. The virtual world market has moved primarily through the consumer market. Linden Lab, for instance, hired its first employee with the explicit goal of focusing on enterprise uses of *Second Life* only in mid-2008, nearly a decade after its establishment (Virtual Worlds News, 2008). Indeed, even in scholarly domains where scholars are trying to grapple with the experiences and potentialities of virtual worlds on social, political, and economic formations, the prominence of games and gaming is evidenced in the predominance of their being addressed in journals whose focus leans towards gaming (e.g. the journal *Games and Culture* has emerged as a significant site for scholarship in these areas) and departments of study at major universities including Rensselaer Polytechnic Institute, University of California Irvine, Massachusetts Institute of Technology, the IT University of Copenhagen, and others where game design and study forms a core element of their work.

So what is the problem if notions of play, game, and entertainment paradigmatically frame interpretations, applications, and the design of virtual worlds? The authors have collectively invested decades in pursuit of bettering work and

workplaces and in no way wish to deny that many workplaces and much work are indeed in need of reform. Bringing playfulness into the picture, whether by way of virtual worlds or through other means, holds great promise. Indeed we are aware of the significant literature drawn from philosophy, anthropology, sociology, cognitive science, and other domains on game and play that points to sophisticated and continuing debates around the nature of game and play within the context of these domains. Here we aim only to point to the observation that play and game metaphors are repeatedly being invoked in discussions about virtual worlds, whereas work is not. We cannot help but question the impoverished view of many forms and experiences of work that are assumed in the savior stance of play as emancipation to begin with. Conceptualizing virtual worlds through the framework of play risks leaving out consideration of other productive forces that could be brought to bear in virtual worlds. We believe that new possibilities for conceptualizing virtual worlds, how they are designed, and what they enable might emerge were the framing metaphors reconsidered.

Such biases are not independent of linguistic realities. Just as it has been pointed out that “the distinction between ‘games’ and ‘play’ is often unclear, since in many languages there are the same term or derived from the same term (e.g., Indonesian *main*, German *spiel*, Dutch *spel*)” (Boellstorff, 2008, p. 22), “play” and “work” are also not always fully distinct conceptual or linguistic notions. In Persian, for instance, both “to play” and “to work” are formed as compound verbs. The infinitive form of the verb “to work” is *kar kardan* whereas “to play” is *bazi kardan*. Essentially the verb translates as “work working” in the first case and “play working” in the second. In other words, the notion of *kardan* or “working”, which is used broadly to form compound verbs having to do with doing, effort, or laboring, is what modifies play. There is no play, one might say, without work.

Nonetheless, notions of play and game carry with them certain models and assumptions which act both to open up and to shut down possibilities. Drawing attention to the constructed dimension of participation in virtual worlds, to the fact of their requiring acts of doing or making, Boellstorff (2008) deploys the notion of “*techne*” to argue for the creative potentiality of virtual worlds. If we take seriously that much activity in these worlds indeed constitutes productive enterprise (a stance also echoed by Pearce, 2006) then would it not make sense to view the nature of activity and interaction as a kind of work, and the participants as kinds



of workers? If we did so, in what new ways, for better and worse, might virtual worlds develop? In the next section we explore some cases in which expectations of play and game may have worked against support of work and work practice development.

### **FROM WORK TO PLAY TO GAMES AND BACK AGAIN: A GRAND DIVERSION?**

In 2006, IBM announced its plan to start a program called IBM@Play led by IBM's Center for Advanced Learning. IBM@PLAY's approach is to examine the intersection of play and work and discover the business value that can be derived from this combination. In an IBM internal blog entry, the key champion of IBM@Play suggested that the "playful approaches" and "playful work" observed in emergent tools and game engines including virtual worlds should be reusable in workplace settings, and further refers to the potential of play not only for the development of new skill but as a "great global connector and equalizer". IBM@Play uses video game and virtual world technologies to quickly on-board new employees across IBM's global workforce and immerse them in IBM's cultural values, processes, and technical programs. Some examples include interacting with experienced professionals in speed mentoring programs, learning about Services-Oriented Architecture in a game called Innov8, and learning about technical tools and processes by playing against other teams in *Second Life*. These initiatives are directed at the new hires because there is a sense that new hires expect fun and engaging technologies when they come to work. Employers feel the need to entice recruits with leading-edge technology. It is as though we are apologizing for work, "this won't really be work, it will be fun".

In a separate development, we have been designing workplace Rehearsal Studios meant to support the iterative, emergent, and social nature of work practice. We use virtual worlds as a key platform or delivery mechanism for the studios. Given that in the workplace learning and work are not always separate activities (as we say, learning happens in the work), Rehearsal Studios are designed to support the principle of building learning experiences from the actual work practices. Rehearsal Studios are intended to be environments that support the work in the context in which it happens. In this way, rehearsal can support the tacit knowledge building that is crucial for workers to gain expertise through experience, mentoring, and peer interactions.

The Rehearsal Studio got its start in IBM's Services Research department because of a need to help service teams rehearse and coordinate before arriving at a client site to deliver a service. The idea of preparing or rehearsing for a client interaction is, of course, not an uncommon practice in the service domain, but typically it is done rather informally. The Rehearsal Studio is an attempt at giving some structure to the rehearsal based on the collective research theories on learning, work, cognition, and social dynamics, and provides a shared context and environment for the rehearsal. Some benefits of staging the Rehearsal Studios in virtual worlds is that they help enable role-playing, anonymity, contextual cues, ease of recording, and tracking.

Rehearsal Studios allow for the practice and rehearsal of situations in the safety of 3D virtual worlds and are developed according to the specific needs of the client. Currently deployed in *Second Life*, at Rehearsal Studio is a designed environment that people gather in to practice a set of work tasks, work interactions, or deployments of strategies. Avatars arrive at a set location and step through a series of pre-defined but generally flexible scenes in which they encounter work tasks they would expect to encounter on the job, either singularly or in groups. Embodied in the environment and supported through the interactions with each other and with the environment, participants may be offered learning tips, reference materials, and other relevant data. The point is for participants to walk through a semblance of the anticipated task(s) before having to do them in real life in front of actual customers. The longer term vision is to continually merge the kinds of tasks and practice efforts made here with actual work with others. This rehearsal is critical to moving service professionals up the experience curve and preparing them for the complex social situations they will experience in the field. Some examples of what clients would like to practice include negotiating with clients, developing project management skills for the implementation of an Information Technology (IT) system at a client site, or practicing consultative selling. The technology and method behind Rehearsal Studios allow for easy creation of situations and guidance during the rehearsals and allow them to be created in any virtual world. There is also a rigorous research agenda associated with each Rehearsal Studio and a multitude of data is collected and metrics are put in place to assess its effectiveness.

Our clients inside the company often approach us because of their interest in the virtual world dimension of Rehearsal Studios. In one telling case, we were engaged to develop a learning enablement

environment for salespeople of a particular software family of products (ZSeries Software). From the start, the client had in mind a game-like structure for the experience the sellers would go through as a part of their learning efforts. Thus, we step away from work and toward play. For us, this raised the question as to whether a game-like structure would be the best design requirement to build an environment in which sellers could most effectively learn, internalize, and practice everything from changes in the product strategy to future changes in the product feature and functionality.

The first use of the Rehearsal Studio was geared towards strategic selling. Sales performance has been linked to the accuracy of salespersons' knowledge of customers' motives, values, and beliefs (Weitz 1978). This involves selling the value of a product and how it will affect the customer's business. Part of understanding the customer's business includes recognizing and being able to communicate the value of a product in broader terms than they commonly do, e.g. not feature-functions, but business applications. The significant point here is that while some of these skills can be developed through traditional classroom methods, it is generally understood that this type of competence is developed over time and through experience. It is the acquisition of tacit knowledge that is the major difference between expert sellers and novice sellers (Wagner *et al.*, 1999). It is for this reason that we believed that rehearsing in a contextual selling environment would provide a sound infrastructure for sales learning.

The approach to designing Rehearsal Studios has a number of phases: Situation Assessment, Concept, Design, Development, Deployment, and Analysis. We began with the Situation Assessment, which uses an ethnographically informed approach to get a broader feel into the actions, thoughts, concerns, and practices of intended participants so that what we create is appropriate to and resonant with their broader context. As part of the Situation Assessment, we attended and observed an annual

two-day product group kick-off event with zSales sellers from North America. We observed all aspects of the meeting including a break-out session of a hundred sellers doing a live practice session that involved giving a value pitch to a customer and trying to answer customer objections, very similar to what our client expected us to have in the virtual world. We also had many informal discussions with sellers and their managers. We followed up with individual semi-structured interviews of six sellers of varying levels of selling expertise.

We surfaced six general themes as being particularly important to the work of sellers in the Situation Assessment. These were:

1. Selling is a joint enterprise and happens among teams.
2. Many sales are made to clients inside companies who already operate a particular IT environment (e.g. mainframe).
3. Sellers identify opportunities by scanning the environment and asking lots of questions.
4. Sellers learn from each other via war stories and customer cases.
5. Much selling, including articulating the value of certain solutions, happens in informal conversations.
6. Selling is part and parcel of the everyday guts of making the business run.

We then identified some specific design implications for the zSales Rehearsal Studio based on these themes. For example, with regard to the last point, we suggested that sellers should have to encounter the difficulties they face in their own firm, such as the challenge of structuring deals and getting others to provide pricing, in the learning experiences. Or, pertaining to the fifth point, that the experience should not be structured (or not too heavily) around giving a formal presentation.

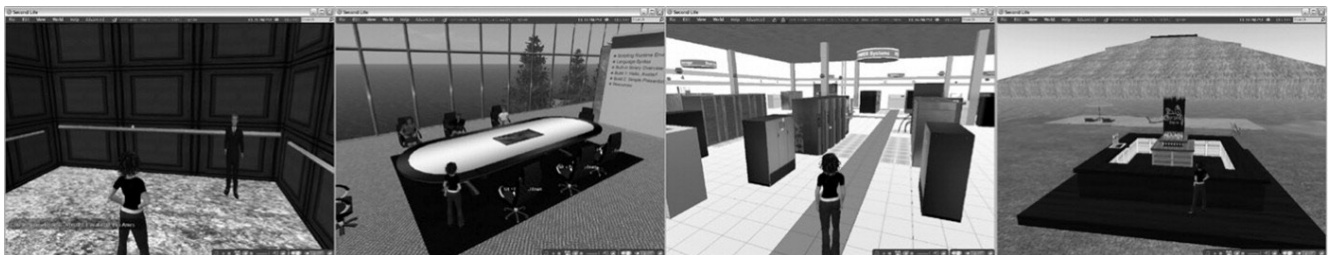


Figure 1. zSales Rehearsal Studio.

We knew if we were not true to these themes there would be greater distance between the sellers' learning experience and their work experience. They would then have to translate their learning back into the work once back on the job, requiring additional effort and potentially widening the gap between what they learned and their ability to apply it. In the process, the zSales Rehearsal Studio would risk losing the impact of the learning experience.

During the Concept Phase, we came up with scenarios that would give sellers numerous opportunities to practice informal selling in realistic customer settings. We created a back-story to motivate and move the experience. The story involved a seller visiting a client, having an impromptu meeting with another person in the client company she had been wishing to speak with, attending to a sudden technical issue in the client's data center, and joining other sellers for happy hour. As she steps through the settings of the story – the client's building lobby, an elevator, a conference room, a data center, and a lanai for happy hour – she is able to notice magazine covers, news tickers, and other clues containing learning content related to the challenge. She also encounters various other participants in either a planned or impromptu manner, mirroring the work experience of sales. In doing so, she has to make an elevator pitch (quite literally!) and respond to other situations. She is meant to find new selling opportunities and to respond to client objections on the fly. With her colleagues, she has the opportunity to exchange war stories and ask one another for advice.

It has been difficult to bring these concepts into the final design and development. While the concept embodied the nature of the work (i.e. the themes identified in the Situation Assessment) and was built from interactions that can be supported in the virtual world, as we continued to work with the client there was a tendency to pull away from these interactions in the name of interest and fun. We believe the difficulty arose because of the client's initial images and broader expectations from contributors to the effort for how a virtual world should be used. In the client's original idea, the zSales Rehearsal Studio was envisioned as a single-player 'course' with many fantastical scenes (e.g. going on journeys to slay dragons, getting advice from sage wizards, and battling enemies). It was also imagined as something sellers did for 2–3 hours of practice by themselves at first and then with a coach. In short, the client expected it to have an entertaining game-like structure.

In our concept, it was desired that sellers have interactivity with peers, mentors, and coaches in order to practice in the selling environment, mirroring the reality of their work context. The interactivity is crucial to gain feedback and have realistic dialogs with the customers. Throughout the scenarios, the sellers would also be recorded and have a chance to replay the interactions, allowing for an important piece of the rehearsal, the reflection and review with others to help stimulate conversations and additional war stories. We envisioned the environments and participants to be semblances of the actual kinds of people and places they would encounter.

While the client agreed to give up some of the initial notions of slaying dragons or getting advice from sage wizards, as we proceeded the client requested a number of additional structured experiences be designed into the original concept: practice giving a PowerPoint presentation, customer objections with multiple-choice answers, trivia questions during happy hour, a point system for performance and participation, and prizes for those who accumulated lots of points. At times these playful aspects seemed to bear little relation to the actual task at hand (e.g. it was suggested that sellers could earn extra points by going into a hot tub at happy hour). These new ideas make it arguably more fun than what was originally presented, but the question remains, will it be more effective either in pedagogical or in business performance terms? Will the game-like nature of the rehearsal serve to capture the attention of the sellers more fully than if it were not game-like? Conversely, will the sellers' participation in a pseudo-game require the double work of translating their game experience back into their everyday work experience?

Thus, in this example, we went from the work that sellers do, to a game-like structure and, in the end, back again. If we had not had the notion of play in the first place, might we have arrived at the design structure more directly? Was "play" just a diversion?

## **METAPHORS MATTER: TOWARDS A REFRAMING OF VIRTUAL WORLDS**

We began this paper by noting that notions of "play" and "game" permeate and underlie much consideration of virtual worlds. Our aim in this paper was to begin to ask what things might look like were different paradigmatic notions to have framed the development and interpretation of virtual worlds, particularly with consideration of notions of work and working. As suggested above,

in matters ranging from security, anonymity, trust, and avatar-based interactions to the options for and possibilities of integration of everyday work tools, what is suggested in instances of play and gaming and what is demanded in varying contexts of work differs and hold different opportunities for concepts and design. This is also true for navigation pathways to better enable improvisatory and collective work efforts, and basic structures of what happens in the environment. For instance, whereas *Second Life* is heavily designed around “building” as a key activity, *Qwaq Forums* highly simplified this dimension given its only marginal relevance to the kinds of enterprise interactions they are aiming to support.

We do not here aim to provide answers as to what those changes would or should be, but rather to invite critical inquiry to the question of whether metaphors matter, and in what ways. We think they do. As we explore in the example offered above, the game metaphor can get you into trouble. We call for care and attention to the metaphors underlying developments, designs, and uses of virtual worlds in ranging settings.

In short, we believe that new possibilities for conceptualizing and designing virtual worlds and for considering what experiences and actions they may enable emerge from reconsidering the framing metaphors of game and play. We have seen that conceptualizing virtual worlds through the framework of play risks leaving out consideration of other productive forces that could be brought to bear in virtual worlds. And, as we have seen in the example above, it can seriously derail efforts to create learning experiences of the sort so desperately needed. Taking seriously the productive nature and potential of virtual world engagement as argued by Boellstorff (2008) and Pearce (2006), then it is not surprising to view the nature of activity and interaction as a kind of work, and the participants as kinds of workers. If we do so, we can begin to see new ways in which virtual worlds might develop – such as, as suggested above, changes to the platform and changes to the nature of activity enabled in the environments.

Our stories point to the strong pull of play and games in virtual worlds. But, together with different assumptions about work, they have also raised questions concerning the effectiveness of these frames for workplace applications.

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