Physical Presence in Simulation:
A Scratch at the Surface of Complexity

Popular abstract: This article examines the impact of physical presence on simulation and educational gaming. Through a meta-review of existing research, it reveals central issues that need to be taken into account when deploying physical simulations. On one hand, the method allows participants to experience events from a visceral first-person perspective. On the other, physical presence limits their vision to one viewpoint and removes tools that other media forms could use for additional exposition. As the environment is largely indexical, fewer elements require re-interpretation in order to fit the fiction, but they can likewise be disruptive, if too far removed from the expectations of play. To balance the play experience and the learning goals, physical simulations should deploy efficient briefings and debriefings. The former ensures that players have sufficient information for play and the right approach to it, while the latter ensures that the intended interpretation of the content and events remains dominant, so that the central learning goals can be ascertained. Physical simulations are revealed as an efficient and enjoyable, yet imprecise learning tool.

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1. INTRODUCTION

This lead-in to my keynote addresses the impact, possibly also significance, of participants' physical presence in simulations. While obviously a topic that is first and foremost of interest to live-action role-playing (larp) scholars, it in truth also carries an impact on the way in which we perceive simulations in general. This is why during this keynote, I treat simulations as a kind of *play*, and speak interchangeably of players and participants, games, larps and simulations. There is a difference, but on a conceptual level it can be argued that the introduction of a human element into a simulation inevitably makes it into a kind of game (Bell 1997).

Nevertheless, we exist increasingly in a global culture where the word game more and more denotes by default digital games. Board, card and physical games are seen as an exception to the rule, particularly in the classroom, and at the same time another type of physical play—professional-level sports—is increasingly taking resources from both newsworthy items in media and—at least in the United States—academic education.

The status of sports, however, is in truth as much of an inspiration for this lecture as is the long tradition of larp and its close siblings (see e.g., Morton 2007 for details). In many ways, athletic competition has taken the place of tribal competition, including a function as a light substitute for war, but also as something that drives societal expectations. For example, a fit CEO is more easily perceived to be a good CEO these days, and doubly so in the case of up-and-comers. Having mastery over the physical has become an increasingly expected part of the mastery of oneself.

Fans treat the most popular sport dead seriously, leaving little room for the playful. And successful coaches then also give advice to business and government leaders, as if their tactics were directly transferable. Research usually says, however, that they are not.

When taken to the extreme, amusingly enough, physical exertion seems to regain its playful attributes. Some ultra-marathon runners crossing over distances of well over fifty miles and on occasion up to hundreds, for example, may train and eat very rigorously before the trial, yet may binge on whatever they want during it. They exemplify that which I expect out of truly brilliant physical simulation participants: the desire to do well, the knowledge and will to prepare properly, the self-awareness to know one's limits, strengths and desires, and the ability to throw oneself into combining all of those in a natural manner. Of course, to be honest, endurance, the drive to win and a more-than-slight case of madness may prove to be advantageous as well.

Before I return to this, however, I wish to first discuss the traditions of physical simulation in general, what our growing body of knowledge tells us about and gives us for improving them, and the rather surprising effect physical presence actually has on how simulation is experienced.

2. CLASSICAL WAYS OF LOOKING AT SIMULATION

Typologies of simulation/games usually divide them based on the relationship between the game-as-artefact and the play processes that can and do emerge. Thavikulwat (2004), for example, uses two

axes, one on control and one on interaction, to discuss four options ranging from purely computer-directed to computer-assisted versions where the focus in on participant control and participant to participant interaction. Similar ideas can be found in the context of e.g., educational board and card games.

While discourses have increasingly leaned towards the digital, physical role-playing has been a recognized part of the traditions for a long time. Even if we do not take into account the various potential historical roots ranging from the re-enactments of rulers (Ericsson 2004; Stark 2012), historical enthusiasts such as the SCA (Stallone 2007), or the playful rituals of the so-called Hellfire Clubs (Lord 2008), we know for certain that explicitly educational role-playing has been successfully deployed since the 1970s (Crookall, Oxford and Saunders 1987)—which is right about the same time as computer-related gaming started to gain firm ground. In many fields, non-digital educational RPGs are even the standard rather than the exception. Whether we, like Crookall, Oxford and Saunders, count them as role-playing, or like Simkins (2015) do not, is for this purpose irrelevant.

No matter how fantastic the simulation or game content, the real world acts as our key referent for interpreting it and interacting with it (Klabbers 2009). It is therefore necessary to ask: how is it any different if we are physically co-present at play, when we are engaging our embodied cognitions for all role-playing no matter what (c.f. Lankoski and Järvelä 2013)?

3. WHAT IS SO SPECIAL ABOUT BODILY PRESENCE?

The participants' physical presence means that they are, frankly put, physically there, limited by senses, distances, abilities and so forth. While we will return to this topic more thoroughly later on, it is important to realize that this means that emphasis will be placed by others on e.g., physical cues (Säilä 2004), props (Bienia 2016), and physical appearances (Habbe 2012). Likewise, the players themselves will have to deal with bodily experiences (e.g., Gerge and Widing 2006) and the presence of their own mind alongside that of the character (e.g., Lukka 2011).

Secondly, being physically present in the situation means having limited vision. The spatial implications of this will be discussed later, but here I want to focus on the mental side. The limited vision carries into one's viewpoints. While one of the central advantages of role-playing is that it allows participants to experience different new viewpoints, in a physical

simulation or larp that opportunity tends to be limited to one viewpoint at a time. Unless the situation includes meta-techniques that permit adopting someone else's point of view (e.g., inner monologues), there is a significant risk that the motivations and complexities of other characters remain hidden. This can be quite crucial, in the case of, for example, military simulations (Vanek 2012) or political larps (Harviainen 2016), and carries the risk of taking the scenario from the field of experiential learning to the domain of propaganda.

This is connected to the fact that our knowledge of the world is always incomplete (Wilson 1977). Information gaps are inevitable; in artificial worlds, even more so, as the designers are unable to define everything in advance (Harviainen 2012). Likewise, with virtually no escape from the physical environment of the play and its content, players can feel anxious or even threatened, in both the good, exciting and the bad sense (Schick 2008). In the flow of play—even with safeguards—knowing how far things may go is hard to predict.

Beyond content and environment, a key question is also: Who is the simulation supposed to affect and how? Sandberg (2004) speaks of playing to a first-person audience, but what is its focus? An educational school larp is meant to teach the players (Harviainen & Savonsaari 2013). A Happening's primary audience is the participants themselves, even as others may also be affected (Kaprow 1966). Boal (1995), in turn, used role-play alongside theatre to influence passers-by—an approach others have applied to, for example, living museum design (Snow 1993). How deeply are non-player characters' players role-playing, if they are first and foremost supposed to advance the play of others (Stenros 2013)? This is part of the wider question of optimizing physical simulations' design, which we will briefly explore next.

4. APPLYING PRESENCE TO DESIGN

Physical simulations have been, as mentioned before, deployed in fields such as military and crisis exercises (e.g., Lloyd 2007; Bowman 2010; Vanek 2012), and medicine and nursing (e.g., Standiford 2014), in addition to more playful contexts such as larps. The better the situation corresponds to the goals of the simulation and the facilitation of functional, realistic-seeming interaction, the better. In principle, therefore, the rule is that the space should support and foster the fantasy (Turner and Harviainen 2016). The Nordic "360 degree aesthetic" exemplifies this (see Koljonen 2007), as does the Central European

tradition of making sure that scenic props and settings look the part (Bienia 2016).

Staging a larp or simulation can be used to make sure the participants are exposed to an environment, in addition to a topic. For example, a *Vampire* larp run in a former asylum probably creates a more effective mood than would a cafeteria, but a larp run in a library also guides the players to peruse the collection (Harviainen 2013). If the topic and the environment complement each other, all the better, as is the case with e.g. many museum re-enactment larps. As a general idea, the situation should contain both enough familiar elements to help participant acclimatization and enough new to create both the sense of novelty and to enable actual learning to take place (Van der Heijden 2004).

Content and style should also correspond with each other. The game's topic, playing emphases, and interpretational goals need to be sufficiently aligned, or purpose is lost. For example, if a serious horror larp is played as a comedy or a military simulation as a god-mode rampage, it does not serve its purpose. Nor is it likely to be fun. While museum re-enactors can sometimes play comically with their characters outside of the audience eye (Snow 1993), there are limits. A medical or nursing simulation patient, for instance, will be able to ruin everything should they decide that this particular patient happens to be non-standardized and never speaks of what ails him.

What cannot be in this achieved through design can be handled through two tools: *briefings* and *debriefings*. This is the so-called 1-2-1 model (Henriksen 2008), roughly describable as preparation-action-debriefing, or a process of freezes and unfreezes. Briefings establish the tone and often clear away many problems of missing information. Debriefings, in turn, not only anchor and ascertain learning lessons (Crookall 2010), they also establish a central interpretation (or a few) from the mass of possible options (see Lehrskov 2007).

With these design properties also come some crucial challenges. Following Juul (2010), we can claim that the physical body's presence within the game or simulation is the ultimate mimetic interface. Effectively, what you can touch, you can touch, and so forth. Most important though, is the fact that the naturalness of the "interface" makes the actions seem more normal and realistic, and can feed somatic memory formation, at least eventually. However rules, increased access, cross-gender/species/ability/etc. play, and so forth, all blur the interface once more. Because of this, designers seek varying levels of optimization: to enable more safety, access,

and/or skills that the players themselves do not possess means lessening the impact of the simulation on the participants' minds. I will return to this point, but before that, some spatial and perceptual issues need to be addressed.

Presence within the play means having a singular viewpoint. The participant is where they are. This brings us to the facets of the first key factor: favoritism, missing out things, and the Fog. I suspect that almost everyone who has ever played a court game or a *Vampire* larp will recognize the way in which design structure favors characters of higher status with more things to do. Under realistic settings, power might be delegated, but oftentimes in games and simulations people take advantage of playable content. This creates an "if you are not in the room, you are out of the action" effect, known to drive away many players in the long run. Sometimes designers even foster this by intent, by for example spending large parts of the budget on game areas that only a handful of "favorite" player will be able to experience. More often than not, that feeds just the sense of favoritism, not of "wow."

Likewise, if you happen to be on the other side of the forest when the great battle takes place, it sucks to be you. It may be realistic, sure, but not very much fun to miss out things, and is a sign of bad design (Widing 2010). This, alongside with what Fatland (2005) calls the "Fog of Larp"—the way which news, or even game master rulings, cannot equally reach all in the play space—creates multiple truths within the situation, which can be a distraction for all concerned, or even ruin the whole thing for some participants. Similarly, not every designer takes care to calculate the systemic effects of design decisions, which means incentive webs may be lost in action (Salik 2015).

Secondly, and tied to the Fog, is the fact that no matter how many instructions are given and how many meta-rules established, we as humans have a tendency to react on a "what you see is what you get" basis. Therefore, we may need to overcome a mental hindrance when we see a non-skinny elf or a tall or non-hairy dwarf (Habbe 2012), or have to deduce whether something or someone is actually part of the play (Montola, Stenros and Waern 2009). This is also a key strength—whenever people are able to pass such barriers, they have a chance to explore roles, tasks and situations to which they would not normally have access (e.g., Musleh 2015; Vorobyeva 2015b). In play, things do not denote that which they would normally mean (Bateson 1955), and this enables us to simulate safely, but in physical play things such as adrenaline still kick in (Gade 2001).

In optimal cases, we can even take advantage of that in simulation or play design (e.g., Nordgren 2008).

We instinctively seem to switch between in- and off-play (Vorobyeva 2015a). The role protects us as an alibi, but it can also lead to distanciation and dissociation, especially since we know the situation is not real. This is something that has been observed in training simulations (e.g., Laakso 2004; Lloyd 2007). If we have indexical clues, we are likely to treat them as indexical (e.g., Montola, Stenros and Waern 2009; Bienia 2016). Likewise, the knowledge that a risk, simulated wound or emotional encounter is not real means it is harder to translate experiential learning from simulations to other settings (Kim 1993; Lloyd 2007). In a sense, the participants are "there", but know that they are not really "in that situation."

Ethically, in turn, things tend to escalate in complexity the more the activity touches (literally or physically) on the player rather than just the character (Meriläinen 2011). Sometimes such an approach is part of the plan (Harviainen 2005), as in the case of bullying simulations and other designs that are meant to make participants feel, frankly, bad (Schick 2008; Montola 2010). In others, it is a side effect of bleed, and thus the organizers' responsibility in a sense at least to avoid (Kessock 2013; Saitta 2014).[1]

Finally, it is frankly much easier to simulate conflict of some kind than it is to depict more mundane life (see Pegg 2011). The technique can be used, however, to explore everyday moments of stressful situations, such as prisons (e.g., Raasted ed. 2012) or insane asylums (Pedersen 2012). Even those cases, however, are in my experience more likely than not to stage the everyday life to take place in conjunction with an event such as a wedding (Stenros 2012; Rabah and Anderson 2015). To summarize up, it's easier to be present in the exceptional than the mundane.

5. CONCLUSIONS

As a basic rule, physicality in simulations presents us with a conflicting dilemma. On the one hand, participants' presence in the situation brings the activities and experiences to an embodied, sometimes even visceral level, something which few other tools can even remotely achieve. On the other hand, participants in a sense feel the impact of an uncanny valley of sorts: just because they are physically present, they have less to fill up with imagination, and thus can start to look for differences rather than similarities.

World knowledge is incomplete, and our sense of that is exacerbated in physical simulations. Missing-but-crucial information has to be conjured up somehow, as no absolute truths can be said to exist—especially since the Fog of Larp enables multiple facts to exist at the same time. Closeness to the real world facilitates the use of heuristically convenient indexical interpretations, yet the setting and rules may wish to emphasize that participants not do so. Therefore, I believe, the true impact of the form is only reached when briefings and debriefings are optimally deployed alongside the game or simulation proper. Without the briefing, interpretative frameworks do not align properly and the players will have to invent missing pieces or constantly disturb the play. Too light a debriefing, in turn, will leave multiple conflicting interpretations and possibly even a strong sense of dissociation from the content. Or it may lead someone to dominate the post-deployment interpretation too much. And a very strict debriefing will, like that dominant persona, feel arrogant, limiting and even tacked-on.

The clever debriefing, however, plays on the very dissonances that that situation provoked. It discusses the uncanny valley of physical play, fostering discourse on what in the simulation felt simulated, what created possible bleed and to which direction, and what seemed realistic and what one-sided and blocked by the Fog. These are games of multiple interpretations, so we owe it to ourselves to discuss those interpretations and find the ones that we as designers, organizers and players find the most valuable.

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[1] Whether the current culture of extra care and trigger warnings will prove more a tailored advantage or a disruption for play remains to be seen.

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