Appendix III

Cover Page for Case Design/Analysis Competition

Title	International Collaboration and Human Research within Virtual Worlds
Participant(s) Teams can consist of one, two, or three members. All members must be doctoral students in the Laney Graduate School.	Name: Doctoral Program: Year: Phone: Email:
	Name: Doctoral Program: Year: Phone: Email:
	Name: Doctoral Program: Year: Phone: Email:

PSI Core Areas *Please check the following areas of scholarly integrity that will be addressed in the case scenario.*	**Data Management**	
	Mentoring	
	Authorship	
	Peer Review	
	Collaboration	✔
	Human Subjects	✔
	Animals	
	Scholarly Misconduct	✔
	Conflict of Interest	
	Ethics of Teaching	
	Public Scholarship	

Checklist

1. Cover page   ✔ _____
2. Case scenario (500-800 words)   799 _____
3. GRACE analysis of case (1500-2000 words)   1,943 _____
4. Description of instructional recommendations   375 _____
    (250-500 words)

**All documents are due through electronic submission (psi@emory.edu)
by 5pm on April 1, 2014**

Case Scenario

Background: Virtual environments such as *Second Life* have immense global popularity. Users of all ages and ethnicities create "in world" representations called avatars that engage in a wide variety of social, self-expressive, economic, entrepreneurial, and even simple day-to day activities in shared virtual spaces with other users. *Second Life* activities often transcend the barriers of the virtual world with real-world social and economic consequences. For example, users whose avatars meet and fall in love in-world sometimes arrange to meet and have even married in the real world. Further, *Second Life* operates on a virtual currency in which in-world money is purchased using real-world money and exchanged for virtual content, land, and products such as clothes and cars for avatars. Researchers, particularly in the social sciences, may become interested in (and in some situations have already begun) studying avatar behavior to gain access to a diverse range of populations of people and to have less restrictions on the kinds of research that can be conducted with humans.

Case Study: Lucy, a university professor, has been frustrated for years by her inability to gain access to a more internationally representative sample to study competitive behavior. For years she has made general claims about human behavior based on data gathered from the largely affluent, white, college-aged, university undergraduates that she has access to. Eager to be one the first in her field to publish a study using *Second Life* and to access a more international population, Lucy researches *Second Life* briefly and discovers that Brazil has one of the largest user bases. She immediately enlists the help of her Brazilian colleague, Roberto, to assist in communicating with non-English speaking Brazilian participants and with computer programming. She says to Roberto in their first phone conversation,

"Just think about it, access to thousands of people, they don't have to come into the actual lab. We can watch them behaving right in front of us in a virtual lab on a competitive task that we can create and build with no worry about physical harm. Plus, think of how many times this paper will be cited, it is the wave of the future!"

Lucy and Roberto get right to work – they join *Second Life* and create avatar scientists, buy a small piece of land on the Brazilian mainland portal, build a lab, and create a competitive task. Lucy submits the proposal to her university IRB as a "virtual world online survey" to keep things simple – that's basically what it is, right? She and Roberto hang up in-world signs recruiting participants and offer compensation with the standard internal currency, the Linden dollar. Participant's avatars come to the "lab" and are asked to sign a virtual consent form after they are given a description of the study and told that their participation is completely voluntary and that they may leave at any time. At the end of the consent form, Lucy and Roberto ask the avatar participants to provide their real-world email addresses so that the researchers can send a follow-up questionnaire that will ask the degree with which the actions of the participant's avatar actually represented their true self.

The design of the study is as follows: Two same-sex avatars compete at a time and engage in three competitive tasks. After each task, the winner avatar is automatically required to deliver a slap across the face to the avatar of the loser. The overall winner, out of three competitions, has to choose one of two options – give a hug to the loser avatar, or spit in the face of the loser avatar. After the

session is complete, Lucy and Ricardo's avatars thank the participants and transfer a small amount of Linden dollars to participant's accounts.

To compare effects of cross-cultural competition, Lucy and Ricardo design a second experiment in which Brazilian participants compete in the same tasks described above, but against avatars intentionally designed by the researchers to represent a stereotypical American. Dressed in American flag apparel and aptly named "American Bob" or "American Jill," these avatars are controlled by participants recruited from a real-world introductory psychology course at Lucy's university. As a result, American students controlling the American avatar created by Lucy and Roberto and Brazilian *Second Life* users controlling their own avatar compete against each other in the same competitions used in the previous experiment. Lucy and Ricardo record all behaviors including the frequency of slaps given or received, and the relationship between in competition actions and the end of competition punishment decision.

After collecting all their data, Lucy and Ricardo's avatars speak to each other in their virtual lab. Lucy says to Ricardo, "Isn't it great that we can collaborate face to face like this across continents? An international experience from the comforts of home."

Ricardo replies enthusiastically, "There really is no limit."

Case Analysis

This case scenario presents a variety of important ethical considerations and can serve as a catalyst to open discussions about the novel use of virtual worlds, ever increasing in popularity, in research and perhaps in other educational settings – including international, collaborative, and cross-disciplinary contexts. Because virtual worlds are without international boundary and used worldwide, this case is applicable for all types of research and teaching across the globe.

 Below is a critical analysis framework for this case developed using the G.R.A.C.E method for ethical reflection (Developed by D. Micah Hester, University of Arkansas for Medical Sciences):

*G*et the whole story:

Second Life and other virtual worlds (e.g. World of Warcraft) exist and are very popular, particularly in other countries. In 2007, it was estimated that more than 6 million people had virtual world accounts and, further, that these individuals spent the equivalent of several million US dollars per month on in-world products and experiences (Boulos, Hetherington, & Wheeler, 2007). More recent live feed data reports in 2009 showed that almost 16 million *Second Life* personal accounts were active and that the equivalent of over 2 million US dollars were spent within a single 24-hour period of study (Furber, 2009). In these virtual environments, people create 'avatar' versions of themselves that are free to behave in ways that are less restricted by laws and cultural norms of the real-world. Despite this apparent lack of restrictions, "in-world" actions may have real-world consequences (e.g., avatar relationships have led to real-world meet-ups and relationships). Researchers, particularly in the social

sciences, have begun using *Second Life* and other virtual worlds to "lessen or eliminate the trade-off between mundane realism and experimental control, thereby increasing experimental impact and helping us sample target populations more representatively and reduce the difficulties of replication" (Blascovich et al., 2002). In what has been termed the "Proteus Effect" researchers have revealed that, within minutes, users' characteristics in the real world, such as their comfort with interpersonal distance and their confidence in real-world interactions, are affected by their virtual interactions (Yee & Bailenson, 2007). This finding has important implications for the impact of in-world behaviors, particularly those demanded by a third party study protocol, on the well-being of the people whose second selves are engaging in offensive, violent, or psychologically harmful behaviors.

Details Specific to this Case Scenario

- Lucy, the lead researcher, is motivated by several factors. One factor is frustration and perhaps desperation with an inability to study behavior from a cross-cultural perspective given the sample pool (i.e. college undergraduates) that researchers typically use in university settings. A second factor is Lucy's desire for fame and the resulting career advantages that publishing an original and well-cited manuscript could generate for her.

- Lucy enlisted the help of an international colleague to fulfill specific, seemingly self-serving, purposes. Lucy recruits Ricardo so that she can communicate with the participants and to help with understanding, navigating, and building content in the virtual world.

- Lucy views access to international participants through virtual worlds as a research setting without the same boundaries that exist in the real-world. Avatars, though not physically real people, are connected to the mind and perhaps well-being of a real-world person. During the study task, participants cause physical harm to each other's avatars through an international show of aggression and disrespect. We do not know the extent with which emotional and physical harm from or towards a person's second-self impacts real-world emotional well-being. This issue is one of the most difficult for this case.

- This study pits American and Brazilian participants against each other in a competitive task with virtual-based violent and offensive consequences. Lucy expects that Brazilians will be more likely to choose the offensive option when competing against the American avatar, particularly if they had previously received a slap during the study task. This could potentially affect participants real-world opinions of others based on their nationality.

- Lucy garnered approval for the research through her university's Institutional Review Board (IRB). They describe the study in a way that makes it appear more benign in order to not raise alarm from the IRB. Personal/identifiable information (i.e. the participants email) is ascertained by the researchers for later contact.

- Lucy and Roberto recruit participants by hanging up virtual signs, offering to compensate participants with 'in-world' currency. Lucy and Ricardo also ask participants to sign an 'in-world' consent form.

*R*ecognize Obligations:

In any research or teaching setting, the researcher or teacher has moral obligations. These obligations include preventing physical and/or emotional harm, providing participants with equal opportunity for potential benefits, maintaining confidentiality, and being unbiased with regards to research outcomes. Researchers in the present case have these same obligations, but also deal with a new and unknown set of obligations. Lucy and Ricardo are obligated to answer the question of what are they morally and ethically obligated to do when conducting research in a virtual world where actions have real-world consequences. Below are select examples of specific obligations relating to the present case.

- Conduct Honest and Unbiased Research: Lucy and Ricardo are obligated to conduct their research, analysis, and reporting of results with integrity and in a way that is unbiased, objective, rigorous, careful, and accurate. As discussed above, Lucy appears to be motivated in part by the desire to publish for fame. This may be problematic if it results in a bias towards expected findings and less-than-desirable care being taken in the handling of data. This obligation for doing respectable and rigorous research extends also to the university. Record of publication is used in making decisions about tenure and salary, and research merit reflects on related institutions as a whole.
- Maintain Confidentiality: Lucy and Ricardo are obligated to keep all records attached to participant's emails separate from their data and confidential. A tangential but distinct and unprecedented question is what rights of confidentiality should apply to data collected in a virtual world from participants using their virtual identities.
- Minimize Risk: Slapping and spitting are two aggressive and offensive behaviors that, in the real-world, could potentially cause physical and/or emotional harm. It would not be ethical to conduct this study in the real-world. The researchers in the present case appear to deem avatars as free from this type of harm.
- Respect Collaborators: Both Lucy and Ricardo have a responsibility to each other to maintain communication about authorship, be honest and respectful, and honor requirements of their individual universities.
- Recognize and Respect Cross-cultural Norms and Sensitivities: Lucy and Ricardo are morally and ethically obligated to be aware and sensitive to differences in cultural norms and how participants of different cultures may be impacted by their research the publication of its findings. In this case, these sensitivities may be particularly important for how in-world actions could affect real-world attitudes towards people of the other country.
- Secure Permission: Lucy and Ricardo are responsible for securing permission for this research through a university Institutional Review Board (IRB) for research with human subjects. The IRB should be given honest and accurate information about the full details of

the proposed study. In the present case, Lucy reported that the study was a "virtual world online survey." Although this may technically describe the study in that the recruitment, exchange of information, and activity of researchers and participants is all conducted through a computer interface, it does not accurately describe the nature of this research. Much less passive than an online survey, research through virtual worlds requires more active interaction and manipulation. Also, the degree with which people view their avatars as an extension of their physical self, rather than just their self-reported attitudes, is uncertain.

*A*ccept Responsibilities/Avoid Over-reaching

Responsibilities for conducting ethical research in this situation lie primarily with the researchers. The research does not appear to be influenced by larger institutional structures. Lucy and Ricardo have the primary role of fulfilling the above obligations in conducting this research. There are some additional responsibilities, however, that the researchers in this case should accept. It is important that Lucy and Ricardo realize that this study may set a certain precedent for how people view ethical responsibility for avatars in *Second Life* and other virtual interfaces. They should take precaution to consider how their actions will impact future research. It is also important for Lucy and Ricardo to realize the ethical complications of this study and engage in conversations with other researchers to fully discern the potential consequences of this research in advance.

*C*onsider Consequences:

Potential Harms:

- This study could potentially create real-world animosity in participants towards American or Brazilian nationals.
- Brazilian avatars who compete against each other could encounter each other again in *Second Life* outside of the study setting. How they interact may be influenced by the events that occurred within the study setting.
- Givers and receivers of the in-world violent/offensive acts may experience emotional trauma and/or carry over the psychological effects of this type of encounter into real-world relationships
- Lucy's eager and perhaps self-serving approach to conducting research and engage in collaboration could harm her personal relationship with Ricardo, reflect badly on her university, and result in careless, poorly conducted research.
- In all cases, careless or biased collection, analysis, or reporting of data could misinform other researchers and society at large.
- Publishing biased or careless research could result in unfair and undeserved promotion and career success and reflect poorly on the affiliated universities.

- If personal records of participant's data linked with their real-world identity through email are not kept confidential, it could have damaging effects on participant's reputation and personal life.

Potential Benefits:

- This particular study could make important contributions to the understanding of human behavior by making original observations of human reaction to offensive/aggressive gestures during competition.
- The ability to use *Second Life* and other virtual worlds in research could increase the amount of experimental control in research with human subjects. For example, *Second Life* allows researchers to create multiple avatars to use as confederates in studies of social behavior that look, act, and dress a certain way.
- Virtual world research, in general, could reduce burden on college undergraduates often used for this kind of research, give researchers quick and inexpensive access to larger more global samples of people, and result in findings that are more globally generalizable.

*E*valuate character:

The study design in the present case scenario is likely to be viewed as ethically risky by people within the profession and institution as well as those in the general public. Although avatars do not have real-world physical presence, their virtual presence is tightly intertwined with the minds of real people. Many people would likely recognize the "something seems wrong about this" feeling while others would not feel the same. Some of these same individuals might recognize a certain degree of ethical uncertainty but still believe that the potential benefits outweigh the uncertain risks. Lucy and Ricardo, perhaps acting out of excitement, view the potential of research with *Second Life* as unlimited. In similar situations of murky ethical boundaries, it would be best practice to approach this research with more careful consideration. How these researchers choose to conduct their study could set a precedent for the use of virtual worlds in many academic and scientific fields. Additionally, *Second Life* as a medium for teaching and research could change the way people interact with each other.

Separation of one's identity from the permanence and accountability of a physical presence could have dangerous effects on how people treat each other, reason morally, and regulate behavior. With increased accessibility for international collaborations through *Second Life*, researchers and institutions must begin to provide ethical guidelines for how virtual world research, teaching, and collaboration is governed to ensure that the rights and well-being of all people involved are protected.

References

Blascovich, J., Loomis, J., Beall, A.C., Swinth, K.R., Hoyt, C.L., & Bailenson, J.N. (2002). Immersive virtual environment technology as a methodological tool for social psychology. *Psychological Inquiry, 13*(2), 103-124.

Kamel Boulos, M.N., Hetherington, L., & Wheeler, S. (2007). Second Life: An overview of the potential of 3-D virtual worlds in medical and health education. *Health Information & Libraries Journal, 24*(4), 233-245.

Furber, M. (2009). Ethics and virtual worlds: Second Life as a case study. *Tabah Analytic Brief, 9*, 1-33.

Yee, N. , & Bailenson, J. (2007). The Proteus Effect: The effect of transformed self-representation on behavior. *Human Communication Research, 33*(3), 271-290.

Instructional Recommendations

Engage/Immerse in *Second Life*:

This case scenario and analysis would be best presented with an active learning component in which the instructor, in advance, creates a *Second Life* avatar and sets up an in-world classroom. For small classes or workshops, workshop attendees come to a classroom that has computers for use. Then each attendee creates his/her own *Second Life* avatar. Once everyone is "in-world" the instructor, as an avatar, reviews the case scenario then walks students through various *Second Life* basics and has each of them go out into the in-world domain and engage in various social interactions for several minutes.

When the group reconvenes, still in-world, in the virtual classroom they discuss the case and analysis from their newly experienced perspective (including the below "example deep thought questions"). *For larger groups*, the instructor can use his/her avatar to demonstrate some *Second Life* interactions and then have the same discussion in the real-world.

Example Deep Thought Questions

- What implications does the use of virtual worlds in research and teaching have for international collaboration and research?
- What are the ways in which virtual worlds can be used in research and teaching?
- Do avatars have the same rights as people?
- How do people use and interact with each other in virtual worlds?
- How can *Second Life* be used for international research and collaboration and what are the potential complications?
- What ethical issues do crossing in-world/real-world barriers present?
- What is the potential for psychological harm in research with virtual worlds?
- What are the potential issues of people's avatars from different religious, socio-economic, and cultural backgrounds competing and expressing violent/aggressive behavior towards each other?

<u>Classic Round-table Discussion</u>:

      Because this case offers many novel discussion points (see above) that people are likely to disagree on, this case could serve as a great framework for an open-ended round-table discussion of issues regarding ethics in research or teaching within virtual worlds. This case could also spark a discussion about the general use of technology in the classroom or the advantages and complications of technology for international research and collaboration.

<u>Additional material for Instruction</u>:

      Discussion of this case could be supplemented with the below materials.

"How Second Life Affects Real Life" Kristina Dell, TIME Magazine, May 12, 2008, http://content.time.com/time/health/article/0,8599,1739601,00.html

Sherry Turkle "Connected, but alone" TED Talk, http://www.ted.com/talks/sherry_turkle_alone_together