To the Fall 2020 APA Board of Officers,

This report provides a brief summary of all of the activities associated with my APA Small Grant award project “Virtual reality thought experiments.” Small Grant funds were to be used to create three virtual reality simulations that included Peter Singer’s drowning child (from his *Famine, Affluence, and Morality*), Judith Thomson’s emergency room variant of the trolley problem, and a clinical bioethics simulator.

Although I had fully expected to have finished, or made significant progress toward finishing, these simulations, the COVID-19 pandemic has significantly slowed my and my research team’s efforts. At the end of this document, I am including three screenshots of our in-progress simulations. Santa Clara University switched to an online-only model in the Spring of 2020 and has continued in this form through the Fall quarter (and has given us every indication that our Winter quarter will also be fully online). As a result, I have not been able to meet with my student research assistants nor have these students had access to our VR computer lab where the simulations were being developed and coded.

Unfortunately, this has meant that my research team and I were not able to make as much progress in the Spring quarter as I initially hoped. During the summer, we were able to work out hiring arrangements with Santa Clara University so that I could use a portion of the APA Small Grant to pay one of my research assistants (Mohit Gandhi - SCU Class of ’20) to continue his work on our Clinical Ethics simulation. This simulation is now 90% complete and I expect that we’ll have it finished by the end of November (see Figure 3). This simulation recreates a hospital bioethics committee meeting and requires the participant to play the role of the clinical ethicist. Users are prompted, once the rest of the committee has weighed in on the case (including legal, medical, and family representatives), to provide a verbal analysis of the ethical issues involved (our simulations are compatible with both the HTC Vive and Oculus Rift families of VR headsets - both of which include an internal microphone). We’re working on a speech-to-text script that can output this analysis as a document in addition to providing an audio file.

Similarly, our work on Thomson’s emergency room variant of the trolley problem is now, by my estimate, about 70% complete. The simulation exists as a largely finished rough draft (it is possible to run through the entire decision process) but needs a good deal of refinements to its animations and voice-acting before it’s ready to be released (see Figure 2).
Our simulation of Peter Singer’s drowning child thought experiment is also underway and I estimate it to be roughly 50% complete (see Figure 1). The simulated world is built, we have storyboarded the entire scripted sequence that will comprise the scenario, and the student research assistant primarily responsible for developing this module (Lia Petronio - SCU Class of ’20) will soon be able to continue her work on the simulation (I was able to secure funds to purchase a VR capable laptop that she will be using to work on the simulation remotely). As a result, I’m optimistic that we will be able to finish all three simulations by the end of the 2020-2021 academic year.

Please feel free to contact me with questions about this report. I am confident that, once on-campus activities are allowed to take place, that my team and I can make quick progress on finishing the additional simulations. Thank you again for supporting this project with APA Small Grant funds.

Sincerely,

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Fig. 1 Screenshot of in-progress build of Singer’s Drowning Child Simulation (Child’s race and gender markers will be randomized for the final simulation)
Fig. 2 Screenshot of in-progress build of Thomson’s emergency room variant of the trolley problem

Fig. 3 Screenshot of the nearly-complete Clinical Ethics simulation