

Participatory Approaches to the Ethics of Emerging Technologies for Children

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Area of Interest

Technology continues to progress at a speed that escapes the capacity for legislation. Primarily fueled by a capitalistic market, the primary focus of many of these technologies is aimed at increasing the capacity for selling advertisements. Furthermore, many techniques used in advertising are significantly more effective in children when compared to adults. There have been efforts in the past, such as the 1970 ban on cigarette adverts on television, that aim to reduce the harm caused by certain advertising efforts. As technology evolves, there are more creative ways, such as virtual reality (VR) and augmented reality (AR), to integrate potentially harmful messages into seemingly benign settings. More concerning is how many of these new technologies cater primarily to children. AR, for example, has been used in many social media applications such as Snapchat, Instagram, and Facebook. At the same time, VR has been marketed as an alternative game console and entertainment system for children. How subliminal advertising can be incorporated into these emerging technologies are of great ethical concern. Should the advertising be nefarious, the ramifications on normal childhood development could be severe. Finding novel ways to bring awareness to these occurrences earlier in childhood may provide an effective way to combat susceptibility. Through various methods of technology immersion education, we may have the capacity to increase children's ability to detect and become impervious to subliminal messaging and advertising in these new technologies.

Past Experience

Our lab has spent several years exploring various use cases for AR and VR applications. We have studied these as stand-alone applications and

as tools for conducting optical neuro-imaging research. These technologies afford an unbelievable level of control over the environment experienced by the participant, which provides a great deal of control over variables. From this experience, we can offer helpful anecdotal feedback for the state of AR and VR and research practices that have proven effective for each. Our lab has worked extensively with the Hololens, Oculus, Vive, and built-in AR functionality in the iOS environment. Our subjects have largely been college-aged individuals. However, there is growing interest in increasing our understanding of how children engage with this technology. As was noted previously, children have a significantly higher level of neural plasticity than adults. This plasticity mandates its own body of research to fully understand these technologies' impacts.

Workshop Outcomes

This workshop offers the opportunity to engage with individuals researching various aspects of the ethics surrounding emerging technologies. Through sharing ideas and experiences, everyone is bound to leave with new ideas and potential new directions to take their research but also a community of people with whom collaborative research can occur. The nuance of ethics in technology requires the perspectives of people from various backgrounds to account for all of the complexity properly. The BAIC lab is interested in two particular outcomes from this workshop: what research is needed to further our understanding of the ethical component of technology and the ethical nature of running said research. Leaving this workshop with a clear understanding of how various types of research can support the effort to evaluate various ethical stances will be immensely valuable in guiding our future research. We also hope to leave with a better understanding of technological research ethics pertaining to children. Working with children is an undertaking we take very seriously. We want to ensure that the research has no lasting impacts on the child's development while ensuring high external and internal validity. Accomplishing this while being able to shed light on other aspects of emerging technologies would undoubtedly make this experience successful.