Thesis Project Portfolio

Board Buddies

(Technical Report)

Contraception and Cultural Values

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

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Spring, 2023

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Sociotechnical Synthesis

There are many situations where people may want to connect with family, friends, and significant others they cannot see in person, such as living far away and being under Covid quarantine. One of the most beneficial modes of interaction is playing games. Although computer and phone games allow people to play remotely, studies have shown these are detrimental to users' health. Technology for playing games remotely without these devices is nonexistent. To address this, my capstone group developed Board Buddies – a system of two physical boards that communicate over wi-fi but offer a tangible interface. The technologies available to consumers for maintaining long distance connections dictate the vitality and quality of such connections. The board game system offers its users an opportunity to strengthen their relationships and wellbeing, but perhaps the constraints of the technology also limit the ways users can interact.

For my sociotechnical research however, I delved into a different area – the relationship between the norms and values of a people engaged in sexual relationships and their use of contraceptive methods. Contraception is a highly personal choice. Many groups feel that contraceptive methods propagate certain values, which they may or may not want to condone. Furthermore, the values of a group may determine which contraceptives are developed, used, and rejected. This dovetails with the theory of co-production–that technology and the social order are intertwined and affect the evolution of each other. I conducted a literature review of existing studies of contraceptive use to explore the relationship between cultural values and contraceptive choice across geography and culture. I discovered that there was no correlation between a person's usage of contraception and their religion's stance on the matter. Rather, a person is affected more by local cultural values and guided by their personal interpretations. Factors that do correlate with contraceptive usage include how freely women's health is discussed, whether pregnancy is viewed through a divine or practical lens, and whether education and gender equality are valued in the society. Contraceptive usage increases with the prevalence of these factors, and the converse is also true. This allows for a positive feedback loop in both the direction of greater contraceptive usage and reduced contraceptive usage. Both the board game system and contraceptives are cases where technology provides new capabilities and freedom – the ability to play a board game remotely and the ability for people to engage in intercourse without the risk of pregnancy. But how a group decides to respond to that capability will vary based on their existing norms.