

Thesis Project Portfolio

Smart Shoe In-Sole

(Technical Report)

The Emergence of Minimalist Phones

(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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Sociotechnical Synthesis

The problem that my capstone research is trying to address is gait disorders and walking issues that can result from strokes, rheumatoid arthritis, age, and other factors. My capstone team and I created a shoe sole that can provide a pressure distribution across the foot when a patient steps on it. With this tool, a trained medical professional (i.e. a podiatrist) could have the information to diagnose gait disorders and otherwise guide a patient. The interaction with a human is the most important part of our technology, so making our shoe sole applicable to most people was crucial. If our product can't be worn or understood by the user, it will not serve its purpose. Technology aims to meet the needs of its user. My technical project addressed gait disorders through providing a pressure distribution to improve diagnostic capability. Another important technology that changes to meet the needs of its users is the smartphone. My STS research will analyze the development of minimalist phones as an alternative to traditional smartphones.

I will be using the Social Construction of Technology (SCOT) framework to analyze minimalist phones. This framework is useful for this subject because it emphasizes the push-and-pull relationship between the users and creators of technology. I want to get into the pull, or the why, behind the emergence of minimalist phones from the user's perspective. I am using a survey to conduct my STS research. This will allow me to get a good overview of how people feel about minimalist phones based on age and their own phone usage. I expect to draw conclusions about the nature of people's want for a minimalist phone, by providing targeted responses that crystallize the users interest or disinterest in the phones. The STS research will help give context to the emergence of minimalist phones, which promise to provide an option for those who don't want to look at their smartphone as much.