Raising Voices: Diverse Narratives for Inclusiveness in Technological Design

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I spent the summer working with Professor Nascimento in the Digital and Computational Studies department, continuing to research the topic of utilizing fictional and non-fictional narratives in undergraduate computer science ethics education. This project built off of an independent study I performed in the Fall semester of 2021, in which I argued that narratives can be useful for provided sound ethical deliberation to the technology development process in particular through providing contextual and possible personal and societal impacts of a given technology product. The primary goal of this research was to create, and provide a philosophical framework and justification for, a method of ensuring that narratives which undergraduate computer science instructors use to teach ethics to their students are comprised of various diverse points of view. The methodology facilitates the collection of a wealth of diverse perspectives through gathering narratives, both fictional and case-studies, that lead technologists to consider how the design of a technical system or product individually impacts the various dimensions of human diversity, including but not limited to race, gender, socioeconomic status, and age. The ideal outcome of such a methodology is to instill within the next generation of technologists good ethical sensibility, specifically when it comes to the principle of inclusiveness in design when creating new technologies. Computer scientists who are thoughtful in terms of how their creations will impact diverse user bases through careful consideration of different narratives are more likely to thoroughly develop a product with inclusiveness in mind and addressing potential issues of inequity before the product is released, rather than trying to fix issues after the fact.

The method we propose takes the form of two matrices, which currently exist as spreadsheets. The first matrix is meant to consider how an individual technology could potentially impact the different dimensions of human diversity, which we list out based on different "diversity wheels" taken from careful research on the dimensions of diversity. This is meant to be a preliminary research phase, in which the matrix aids the researcher in thinking through each dimension individually and thoroughly as they search the web or other databases for resources or case studies of how the given technology might already be causing positive or negative outcomes for minoritarian user bases. The second matrix is more focused upon gathering the narratives themselves; the researcher once again considers each dimension of diversity individually, but this time they ascribe one or several narratives to each dimension to prove that they are considering the ethics of how a user base may be impacted by the technology. This matrix goes into more detail, asking the researcher to be more descriptive about the narratives they gather and how they meet considerations of the inclusiveness in design principle.

The final product of this stage of research was a paper which we intend to submit for review, and hopefully acceptance, by a conference on ethical computing. The paper first provides the context and justification for this research, describing the problems of vast inequalities within the technology industry itself and in the unequal impacts of technologies which this methodology aims to ameliorate. Secondly, the paper describes in great detail the ideal usage of each of the matrices, and the frameworks girding their creation.