Thesis Project Portfolio

Improving User Consent Acquisition: A Synthesis of Cookie Popup Design Elements and Proposed Modifications

(Technical Report)

Analyzing Deceptive Design in Cookie Consent Banners Through an Ethical Lens

(STS Research Paper)

An Undergraduate Thesis

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A Response to Deceptive Design in Cookie Consent Forms

My technical and sociotechnical papers closely analyze cookie consent popup design and address the topics of informed consent, autonomy, and privacy. Both projects aim to shed light onto the implications of deceptive design and the disregard for the freedom and inclusivity of internet users. While the technical project focuses on formulating an ideal, user-centric cookie popup that promotes inclusivity and improved consent acquisition, the sociotechnical paper submits cookie popups that utilize deceptive design elements to an ethical inquisition. Together, these projects convey a deeper understanding of the importance of design in the technological world and provide a comprehensive solution to overcoming bad design physically and preventing bad design through the promotion and support of ethical dialog in the web development process.

In general, the technical paper provides a synthesis of cookie popup design elements and proposes a cookie popup consent form that attempts to promote informed decision making and improve user consent acquisition. The technical paper compares deceptive and user-centric design elements and describes the necessary considerations to create a mockup of a cookie consent popup that promotes uninhibited and informed consent acquisition. For instance, the mockup reflects the needs and limitations of the web application while avoiding deceptive cookie designs that mislead users into providing consent to activities they do not fully understand or agree with. The proposed cookie popup is designed to be user-friendly and accessible for internet users with different preferences and levels of familiarity with cookies. The mockup directly avoids design elements that cause obstruction or interface interference. Additionally, it provides a clear explanation of cookies, a link to the website's privacy policy, and drop-down menus for additional information

on specific types of cookies. The interface has equally colored buttons and is minimally invasive, with an icon for easy access to cookie settings that appears at the bottom corner of the webpage after the user selects their cookie usage level. The paper serves to provide web developers, policy makers, or similarly interested parties with a concrete example of an enforceable cookie popup interface designed to enhance user autonomy and establish trust between users and the internet.

The paper on sociotechnical issues delves into the disconcerting effects of manipulative interface design elements found in cookie popups, which raise ethical concerns from both a utilitarian and rights-based standpoint. The paper analyzes the definitions of autonomy, privacy, and consent within and beyond the technology realm to establish their relevance to the design process and ethicality of technological applications. In terms of organization, the paper initially brings to light the infringement on internet user autonomy and privacy caused by deceptive design as an ethical issue. It then examines the involved parties, namely internet users, web developers, and the environments in which they function. Subsequently, it presents a comparison of the benefits and consequences of deceptive design as seen in cookie consent forms and an evaluation of the rights entitled to internet users and web applications in contrast to the rights they must provide and uphold for the opposite party. Ultimately, the paper calls for an increased use and incentivization of ethical and user-centric design practices as such measures can safeguard the rights and dignity of technology users in the face of the ongoing integration of technology into all facets of life.

My sociotechnical paper's focus on the intricate intersection of ethics and cookie popup design encouraged me to consider both the user and the web application perspective more thoroughly when proposing design modifications for cookie popups. As a result of the STS project, I realized

that solely catering to the user's needs would have rendered the mockup design unrealistic and useless. Equally, the technical paper allowed me to appreciate the requirements of the design process, including the time and effort it takes to identify problems, research potential solutions, and create mockups. I also gained insights into the limitations of ethics and the practical challenges that come with implementing ethical principles in design. Furthermore, my technical paper provided me with an opportunity to expand my knowledge of the design process and understand its technical requirements more fully. By synchronizing both papers, I was able to immerse myself deeply into the problem of deceptive design and gain a well-rounded perspective on the importance of data protection and privacy, without compromising my passion for technology. In essence, my STS and technical papers complemented each other, offering me a comprehensive outlook on the issue and enabling me to develop a robust stance on ethical design.