

ASSESSMENT AND SENSITIZATION OF ETHICS IN PERSUASIVE HCI DESIGN

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by

SANJU AHUJA

DEPARTMENT OF DESIGN

Submitted in fulfillment of requirements of degree of

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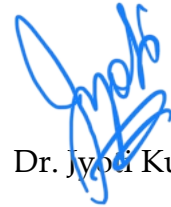
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AUGUST 2024

CERTIFICATE

This is to certify that the thesis titled, '**Assessment and Sensitization of Ethics in Persuasive HCI Design**', being submitted by Ms. Sanju Ahuja to the Indian Institute of Technology Delhi for the award of the degree of Doctor of Philosophy has been carried out under my supervision.

The research work contained in this thesis has not been submitted in part or full to any other university or institute for the award of any degree or diploma.



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-Sanju

ABSTRACT

The use of persuasive designs has become ubiquitous within information technologies, such as on the web, in digital platforms, and within mobile applications. Recent years have seen the emergence of problematic persuasive designs in the form of ‘dark patterns’. These designs can trick, coerce or manipulate users into acting in ways that are not intended by them or not in their best interests. Individual autonomy has been argued to be one of the normative lenses for the evaluation of these dark design practices. However, there is a lack of frameworks which can help researchers, designers, and policymakers evaluate the ethics of persuasion from this lens. To contribute to this area, this thesis proposes a framework for ethics assessment of persuasive designs from an autonomy perspective. Six studies were conducted for this research. To identify autonomy related concerns, a content analysis of 151 dark pattern definitions and descriptions from literature was conducted. A qualitative interview study (n=40) was conducted to understand the felt autonomy impact of persuasive designs. Based on these findings, a framework for assessment of persuasive designs from an autonomy perspective was developed grounded in existing models of UX design and behavior change. This framework was primarily intended for educational contexts and two research studies validated its usefulness (n=38 and n=20). These studies found that the framework was effective in helping students identify persuasive designs in the digital context and assess their impact on user autonomy. The thesis then developed an educational module to sensitize design students towards ethical concerns in persuasive HCI design. Two pedagogical studies with university and school students (n=12 and n=419) observed the effects of this intervention on student experiences, design assessments, design outcomes and design thinking. Both studies yielded positive effects. However, the need for continuous and integrated ethics education within design curriculums was observed. Implications of the proposed assessment framework are discussed in the thesis. Recommendations for design educators, practitioners and policymakers are also suggested.

सार

हाल के वर्षों में देखा गया है कि उपभोक्ताओं को प्रभावित करने वाले डिज़ाइनो का उपयोग वेब, डिजिटल प्लेटफ़ॉर्म और मोबाइल एप्लिकेशन में सर्वव्यापी हो गया है। प्रायः ऐसे पर्सुएसिव डिज़ाइनों में नैतिक चिंताएँ पाई गई हैं। इन डिज़ाइनों को 'डार्क पैटर्न' नाम से जाना जाता है। इस प्रकार के डिज़ाइन उपभोक्ताओं के सर्वोत्तम हित के अनुकूल नहीं हैं। पर्सुएसिव डिज़ाइनों के मूल्यांकन के लिए व्यक्तिगत स्वायत्तता को महत्वपूर्ण माना गया है। हालाँकि, ऐसे ढाँचे की कमी है जो डिज़ाइनरों को पर्सुएसिव डिज़ाइनों का नैतिक मूल्यांकन करने में मदद कर सके। इस अंतर को पूरा करने के लिए यह थीसिस स्वायत्तता के दृष्टिकोण से पर्सुएसिव डिज़ाइनों के मूल्यांकन के लिए एक रूपरेखा का प्रस्ताव करती है। इस शोध में छह अध्ययन किए गए हैं। स्वायत्तता संबंधी चिंताओं की पहचान करने के लिए साहित्य से 151 डार्क पैटर्न परिभाषाओं का सामग्री विश्लेषण किया गया। पर्सुएसिव डिज़ाइनों के स्वायत्तता प्रभाव को समझने के लिए गुणात्मक साक्षात्कार आयोजित किए गये (एन=40)। प्राप्त निष्कर्षों के आधार पर पर्सुएसिव डिज़ाइनों के नैतिक मूल्यांकन के लिए एक रूपरेखा विकसित की गई। दो अध्ययनों के माध्यम से इसकी उपयोगिता को मान्य किया गया (एन=38 और एन=20)। यह रूपरेखा डिज़ाइनरों को पर्सुएसिव डिज़ाइनों की पहचान करने और उनके स्वायत्तता प्रभाव का आकलन करने में प्रभावी पायी गई। तदनन्तर इस थीसिस के माध्यम से पर्सुएसिव डिज़ाइन में नैतिक चिंताओं के प्रति छात्रों को जागरूक बनाने के लिए एक शैक्षिक मॉड्यूल विकसित किया गया। इस सन्दर्भ में विश्वविद्यालय और स्कूली छात्रों पर इस मॉड्यूल का प्रभाव देखने के लिए दो अध्ययन किए गये जिनमें सकारात्मक परिणाम पाये गये (एन=12 और एन=419)। साथ ही साथ डिज़ाइन शिक्षा के भीतर दीर्घकालिक नैतिक जागरूकता की आवश्यकता देखी गई। प्रस्तुत थीसिस में प्रस्तावित मूल्यांकन रूपरेखा के निहितार्थों पर चर्चा की गई है व डिज़ाइन शिक्षकों, अभ्यासकर्ताओं और नीति निर्माताओं के लिए सुझाव प्रदान किए गये हैं।

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