

Visual Aesthetic Quotient: Establishing the Effects of Computational Aesthetic Measures for Servicescape Design

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Abstract

Visual aesthetics play a pivotal role in attracting and retaining customers in service environments. Building on theories of environmental psychology, this study introduces a novel and comprehensive aesthetic measure for evaluating servicescape design, which is called as the “visual aesthetic quotient” (VAQ). This measure is presented as the ratio of the dimensions of order and complexity in servicescape's visual design, and it aims to provide an objective and holistic approach of servicescape design evaluation. In addition, we introduce and validate a pioneering method for quantifying order and complexity objectively using algorithmic models applied to servicescape images. We investigated and established the influence of the VAQ on the perceived attractiveness of servicescapes, developing its role further in this context. The entire approach was comprehensively and rigorously examined using four studies (social media analytics, eye-tracking, a field experiment, and an experimental design), contributing to conceptual advancement and empirical testing. This study provides a novel, computational, objective, and holistic aesthetic measure for effective servicescape design management by validating computational aesthetic measures and establishing their role in influencing servicescape attractiveness; testing the mediation of processing fluency and pleasure; and examining the moderating effects of service context.

Keywords: visual aesthetics, computational aesthetics, servicescapes, retail environments, image analytics, processing fluency, eye tracking

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