



Linking objective web-design factors to facets of subjective aesthetic perception



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MEASURING INTERFACE AESTHETICS

Numerous studies show the influence of aesthetics on various HCI aspects (e.g., usability, trust, credibility, etc.). Consequently, it is important to understand which interface design features affect the users' aesthetic perception.

There are mainly **two approaches to measure interface aesthetics** [1]:

- The **objective screen-design-based** approach relates screen design factors and layout elements to the users' perception of visual aesthetics [e.g. 2, 5].
- The **subjective questionnaire-based** approach uses questionnaire-based instruments to measure the impact on users' perception of visual aesthetics [e.g. 3, 4].

So far, only **little is known** about how these two approaches are related [1]. Altoboli and Lin [1] concluded that there is a **need of experimental studies**.

MATCHING DESIGN FACTORS AND PERCEPTION

OBJECTIVE DESIGN FACTORS

Screenshots of real existing **websites**, five sets of web page screenshots for each design factor

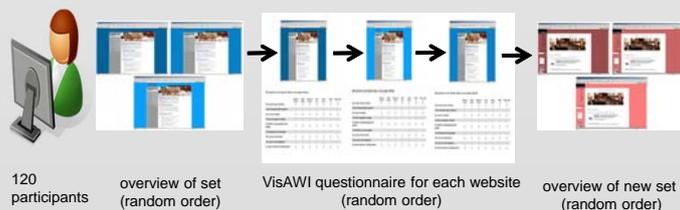
- **Bilateral symmetry**: symmetric vs.asymmetric - 10 websites
- **Hue**: red (0 on the HSB scale); yellow (60); green (150); blue (210); violet (300) - 25 websites
- **Saturation**: low (10%); medium (40%); high (70%) - 15 websites
- **Brightness**: low (60%); medium (79%); high (98%) - 15 websites

SUBJECTIVE AESTHETIC PERCEPTION

Visual Aesthetics of Website Inventory (VisAWI) by Moshagen and Thielsch [4]: A validated scale that includes four dimensions:

- **simplicity, diversity, colorfulness, craftsmanship**

EXPERIMENTAL PROCEDURE



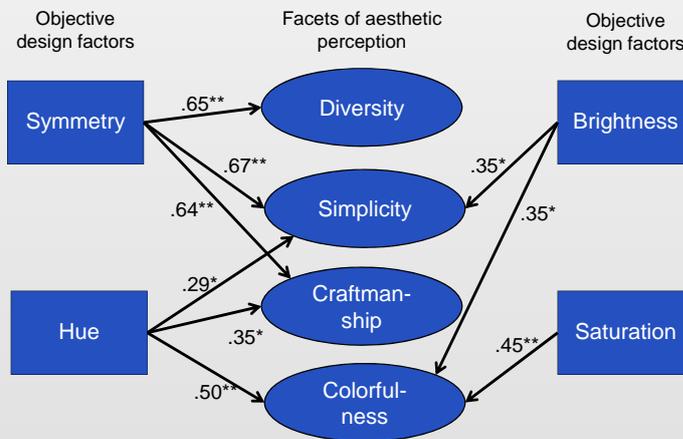
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EXAMPLES OF STIMULI



RESULTS



Note: Values represent effect sizes (f), *medium effect, **large effect

DISCUSSION

- On all facets, except for colorfulness, **symmetry had the largest effect**. The same was observed for the overall score (f = .80). In contrast, the perception of the facet colorfulness was influenced by hue, saturation and brightness.
- Our results suggest that all our objective screen design factors **affected subjective visual aesthetics**.
- This study showed that the different **objective design factors can be linked to specific facets of the subjective evaluation** of aesthetics.
- Our findings may **help designers** to systematically target specific facets of visual aesthetics.

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