



Product Body Shapes, Not Features, Provide Fast and Frugal Cues for Environmental Friendliness

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Motivation

Consumers use a product's visual design as cues that they mentally associate with unobservable attributes. Designers can make use of cues to deliver desired messages about a product to consumers. By providing visual cues to consumers, designers can also help consumers make the right inferences about products, and decrease the mental load required to make decisions [1]. Our work investigates the rapid-building of mental associations between visual cues and unobservable attributes. It questions if it is more effective to cue holistically, through body-shape, or by individual features.

Method

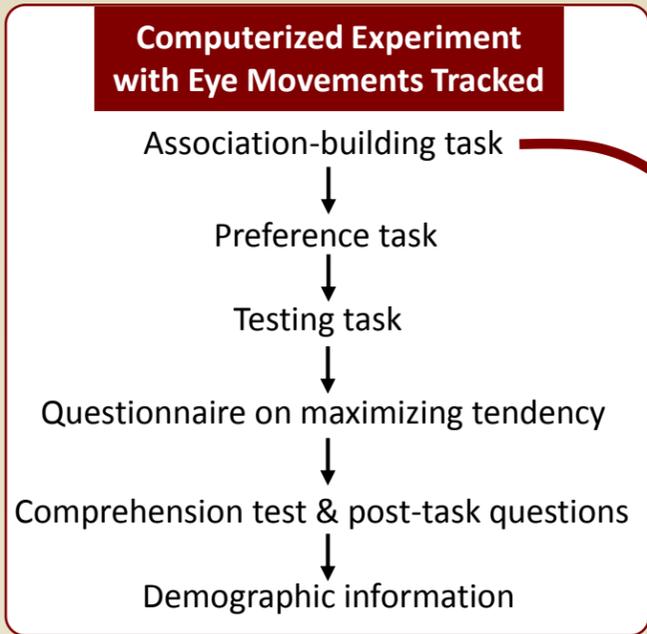


Figure 1. Flow of the computerized experiment

- Conducted a computerized experiment that incorporated eye-tracking technology (see Fig. 1)
- Used an association-building task (see Fig. 2) to associate the selected visual cues (see Fig. 3) with products' environmental friendliness
- If the associations form, the visual cues should affect a product's environmental friendliness (EF) rating either positively or negatively

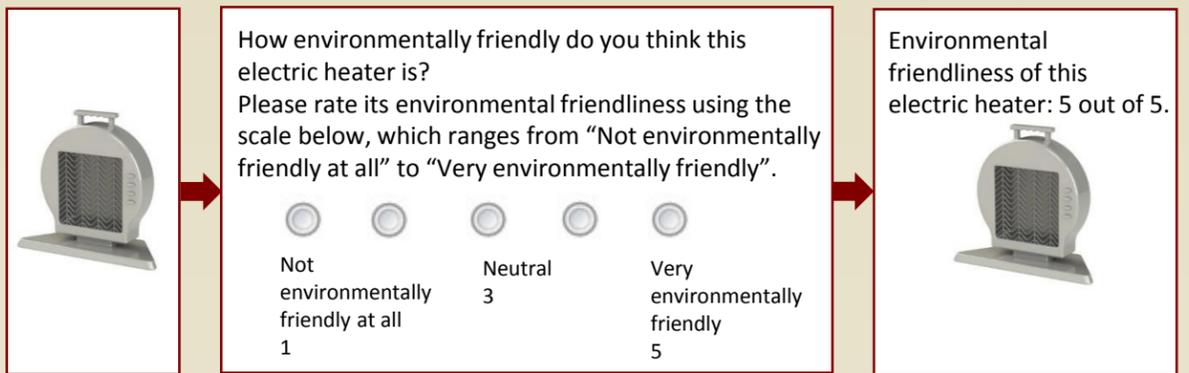


Figure 2. The association-building task aimed to associate the selected visual cues with either a positive or a negative judgment

	Electric Heater		Electric Bicycle		Sample Electric Heater Images		Sample Electric Bicycle Images	
	Body-cue	Feature-cue	Body-cue	Feature-cue	$\{Body^P, Feature^P\}$	$\{Body^{\emptyset}, Feature^P\}$	$\{Body^P, Feature^{\emptyset}\}$	$\{Body^N, Feature^{\emptyset}\}$
Positive (P)								
Negative (N)								

Figure 3. Selected visual cues and sample images

Results

- Mental associations between the electric heater's body-cues (but not the feature-cues) and its environmental friendliness formed (see Fig. 4). So does the electric bicycle
- Eye-tracking data indicate that cues work to distribute mental load more efficiently; subjects' decisions became more "frugal" when judging environmental friendliness (see Fig. 5)

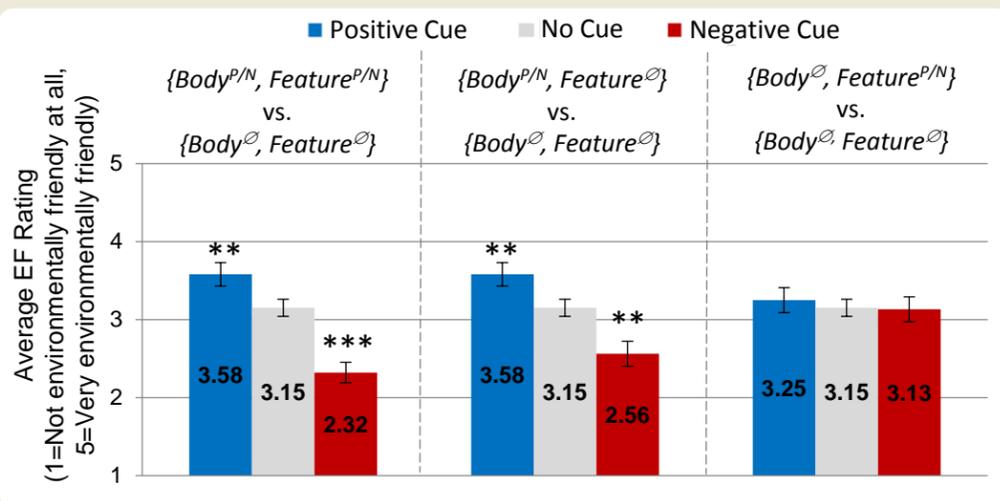


Figure 4. Body and body + feature cues of the electric heater affected EF ratings in the desired direction after the association-building task (No. of subjects=79; ** p<0.01, *** p<0.0001; error bars indicate +1 standard errors)



Figure 5. Subjects increased the % of attention spent on the cued areas and decreased the % of attention spent on the uncued areas after the association-building task

References

[1] Gigerenzer, G., 2004, "Fast and frugal heuristics: The tools of bounded rationality," Blackwell handbook of judgment and decision making, D. J. Koehler, and N. Harvey, eds. Oxford, UK.