

## Inventive Interventions in Mental Imagery Design Process in a different perspective.

Ashwini Garde  
*Design student*

Sulekha Kuthiala  
*Design student and Uday A. Athavankar, Professor, Industrial Design Centre,  
Indian Institute of Technology*

### Abstract

This paper is a part of the series that explores the way blindfolded designers use mental imagery to solve design problems. Giving an identical design task to the three architects, this paper attempts to identify and compare the strategies that they developed to argue and take visuo-spatial decisions, when blindfolded and prevented from using sketching.

The new findings that these experiments throw up are very interesting. The spaces that the architects created and continuously modified in their Mind's eye, became a virtual stage in which they arranged events and acted out different roles. A critical look at the protocols as well as their post-experiment comments suggests that the architects were completely immersed in the visuo-spatial mental scenarios they created. They participated in their mental scenarios as if they were standing or moving around on the virtual site and simultaneously manipulated the scenes.

Apparently, the first few minutes of the design process were critical, where a number of design decisions were influenced by the early mental imagery experiences prompted by two major sources. They were, a) The written 'words strings' in the design brief. b) Images of similar spatial experiences and environments that they were exposed. These experiments further show that in the 'moves and reflections sequence' in the design thinking, the moves were not necessarily indicative of solutions, but sometime include setting-up of new and innovative goals. They become explicit during and as a reaction to the architect's reflections and give their designs a unique character. Discussing the relevant clips from the protocols, this paper attempts to further reveal the so far overlooked role that mental imagery plays in design thinking.

### Keywords

Intuitive evaluation, Distance measurement, Structure model, Mental imagery, Mind's eye, Goal setting, Design process.

## Design Guidelines for Environmentally Conscious Products Considering Consumers' Behaviors

Terauchi, Fumio  
*Chiba University*

Kasai, Yoshimi  
*Hitachi Co., Ltd*

Kubo, Mitsunori  
*Chiba University*

Aoki, Hiroyuki  
*Chiba University*

### Abstract

Consumers' environmental consciousness has been growing gradually in Japan.

However, the growing consciousness has not corresponded to environmentally conscious behaviors: purchasing environmental conscious products, saving the electric power, and so on. The purpose of this paper was to propose design guidelines for environmentally conscious products based on the tendencies of environmentally conscious behaviors. First, consumers' buying behaviors and environmentally conscious behaviors were investigated using questionnaire about eight kinds of products: casual wear, formal wear, television, refrigerator, furniture, cookware, camera and One-Time-Use camera. According to different buying behaviors, consumers (N=301) were classified into several groups with Factor and Cluster Analysis.

Subsequently, the effect of consumer buying behaviors on environmentally conscious behaviors was quantified by using the Structural Equation Model by each group. This model shows the causal relationships between these behaviors, and then it became clear that different buying behaviors would lead to different environmentally conscious behaviors. This has made it possible to predict the adoption of environmentally conscious behaviors.

Finally, guidelines for design of environmentally conscious products were constructed. With these guidelines and by taking consideration into each buying behavior, better environmentally conscious designs have been made possible.

### Keywords

Design Guideline, Environmentally Conscious Product, Consumer's Behavior