AUGMENTING AFFECTIVE AESTHETICS IN DESIGN CONCEPTS

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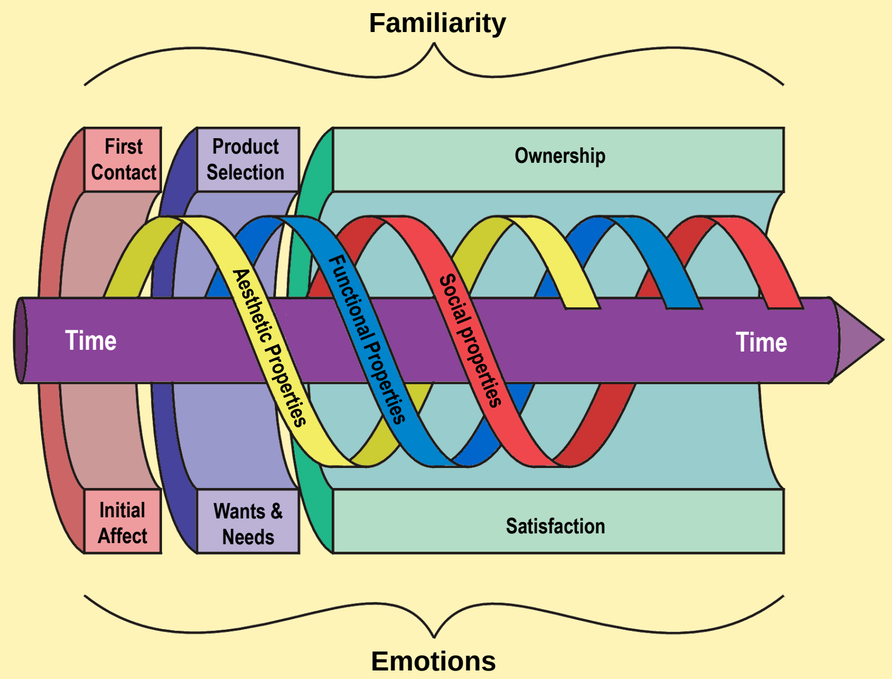
Context , Aim and Objective of this Research

Designers *want to design experiences and generate pleasurable or exciting sensations* (Hekkert 2002). But the emotional response that an individual experiences in relation to a product design may often depend on:

1) The individual's familiarity with the product or type of product.
2) The degree to which the product's design meets the expectations and aspirations of the individual.

The semiotics (Cobley and Jansz 1999) and referential semantics (Demirbilek and Sener 2003) of a product help to communicate information about it visually, especially at first contact when there may be little other information or experience to draw upon (see opposite).

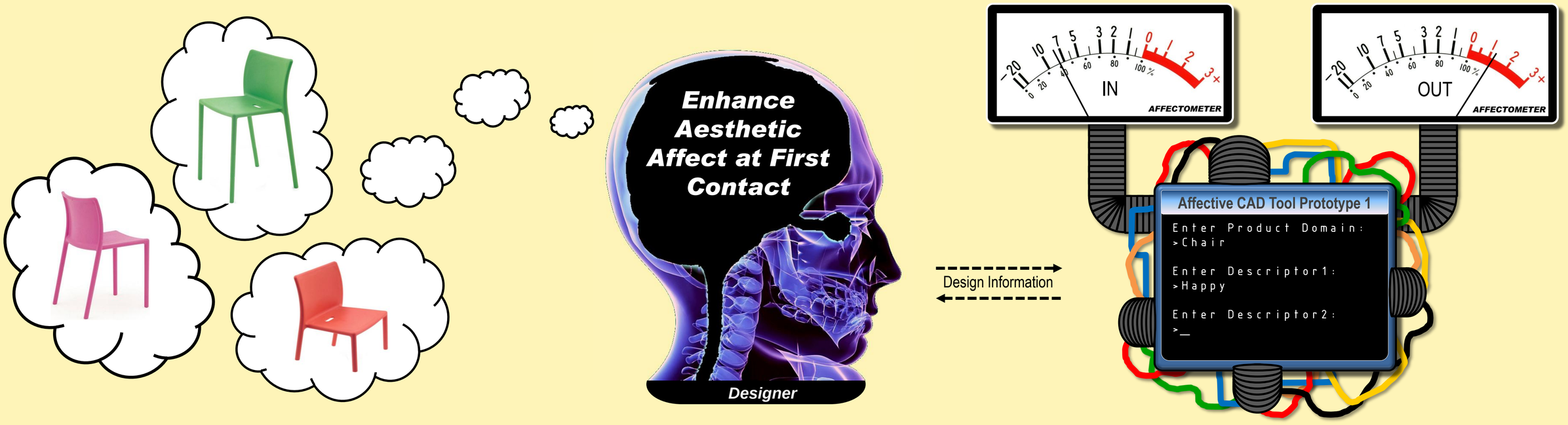
The aim of this PhD research project is to assist designers in eliciting emotional responses through design aesthetics, particularly at first contact. The specific objective is to develop a design tool that can augment affective aesthetic form in product design concepts within a given product domain.



A CAD Tool

The types of emotional affect that designers seek to elicit through their concepts can be diverse across a broad array of product genres.

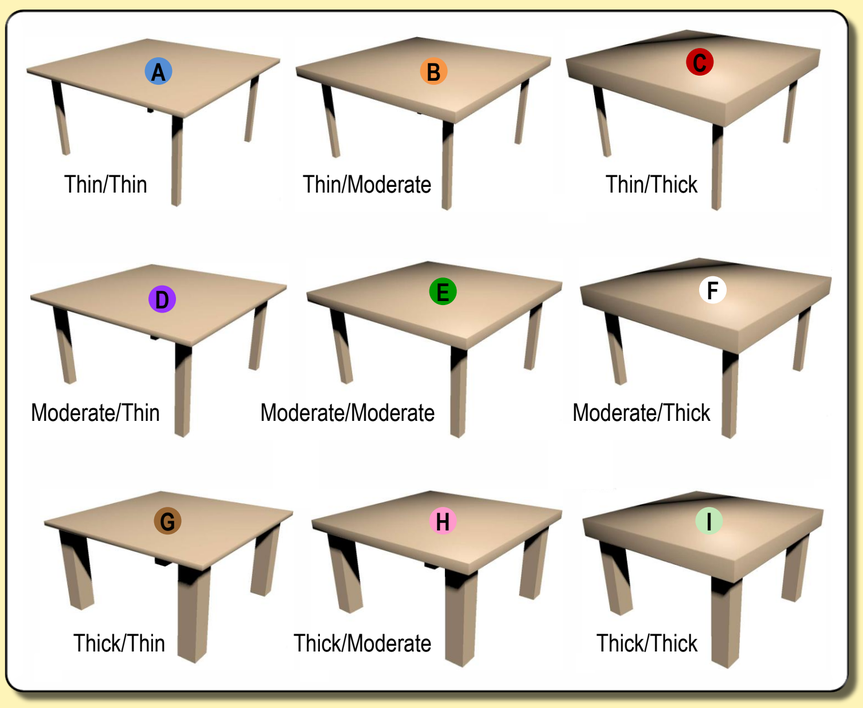
The initial proposal is for a CAD tool that can apply and manipulate geometric transformations within the CAD model's hierarchy using verbal descriptors in order to enhance the aesthetic affect of a given concept.

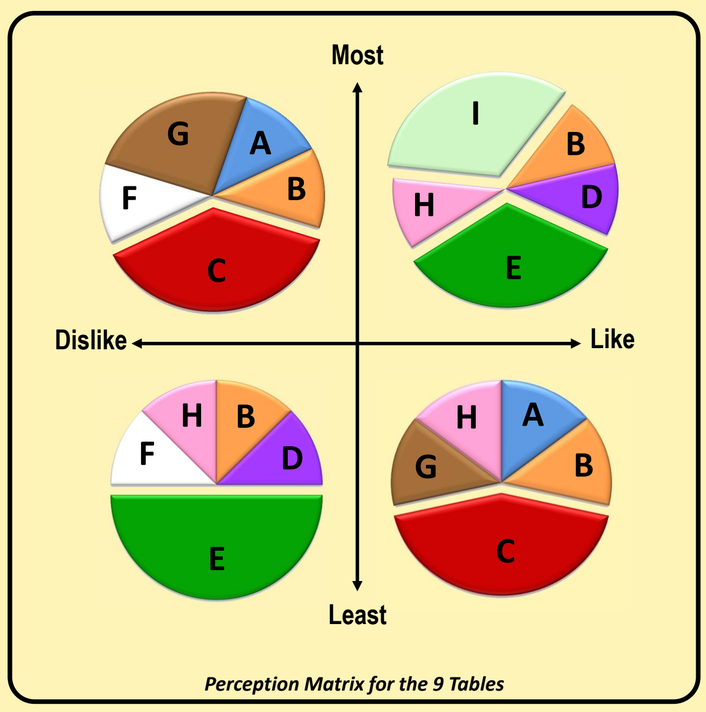


Initial Study

A range of table concepts was generated in CAD with all but two identical attributes:

i) Table Top Thickness ii) Table Leg Thickness





A questionnaire was distributed online, in which participants were asked to:

a) Indicate their emotional response (via 5-point Likert scale) to each table.

b) Indicate which designs they liked *most* and *least* from groups of three tables.

The results of the study indicated that there was a significant level of accordance between participants:

Tables 'E' and 'I' were perceived to possess the most positive affect while table 'C' the least, demonstrating the potential for a design tool as outlined above to be used to evoke an emotional response to product aesthetics within a CAD environment.

The next stage of this research will be to undertake a new study in which participants take on the role of designer, interacting with and modifying a CAD concept via a dedicated user interface in order to achieve a predetermined emotional affect.

References
Cobley, P. and Jansz, L., 1999, Introducing Semiotics, Icon Books Ltd
Demirbilek, O. and Sener, B., 2003, Product design, semantics and emotional response, *Ergonomics*, 2003, vol46, pp, 1346-1360,
Hekkert, P. 2002, Announcement of the 3rd Design and Emotion Conference, 2002