# Emotional Design of Helmet Graphics

Amitoj Singh*

*Indian Institute of Technology, Industrial Design Programme*
*amitoj_design@yahoo.com*

**Abstract:** Researchers world-over are investigating the role of emotional experience in designing so as to extend the established limits and boundaries of the design discipline. Efforts are also being made to make the design discipline more amenable to market realties and user satisfaction. Though the emotional responses of users towards products and influence of products on triggering emotions have been studied independently by researchers in the past yet very few tools and methods are available for designing emotion-laden products. It is in this context that an industry supported emotion centered design workshop was conducted with 20 design students at Indian Institute of Technology, Delhi. The aim of the workshop was to develop new helmet graphics on the basis of emotions. The paper explains the method adopted for designing 20 unique helmet graphics. The results of the workshop establish the efficacy of the proposed method in designing emotion-laden products.

*Keywords: Design Education, Design Creativity, and Emotion.*

## 1. Introduction

We all undergo myriad emotions in our everyday life. Emotions may be associated with our interactions with other fellow beings, objects, situations and with our inner self. There are times when we know that we are experiencing an emotion while at other times we may not even be aware of our emotional reaction to a situation. Parkinson (1992) has defined emotions as reaction to the personal meanings of situations. Since emotions are very personal in character they can be viewed in many different ways. Also emotions are always about something (Gordon, 1974). Averill (1980) explained this intentional characteristic of emotions. He explained "A person cannot simply be angry, fearful, or proud. He [or she] must be angry *at* something, fearful *of* something, proud *of* something" (p.310). The appraisal theory (Angyal, 1941; Arnold, 1960; Averill, 1980) explains the concepts of these differentiating emotions to an individual's evaluation of an emotion inducing situation at any given point in time. Thus different people can experience dissimilar emotions with the same product in different points in time. The personal and intentional character of emotions makes it a very challenging subject to teach, especially to product designers who constantly strive to design emotion-laden products.

Among the various theories of emotions, the appraisal theories (relating emotion to appraisal of an emotion inducing situation) and the transformational theories (relating emotions to person-product relationship) seem to be more relevant to the study of 'product emotions' (term used by Desmet, 2002).. From the viewpoint of the appraisal theories, emotions associated with products can be seen as an outcome of a person's assessment of a particular product. The transformational theories on emotions, on the other hand, give an interesting explanation for product emotions. According to Sartre (1948) in an emotional state a person reacts to an object in a magical non determinate world. The magical world causes a transformation in the person-product relationship. In such a situation certain key emotive qualities of product become more important than the rest of the object or rest of logical determinate world. This explains our emotions towards a striking tail light of a car and desire to own it without considering its other aspects or other viable competitive options. Thus emotion occurs when a person is transported from logical to magical world. Similar to Sartre, Pribram's (1969) stated that emotions occur when the flow of action is prevented.

According to the transformational theories (Pribram, 1969; Sartre, 1948) a product's emotive quality creates a kind of magic in converting it into an object of desire. The paper draws inspiration from these theories to propose a project based approach for design students to facilitate in their designing of emotion-laden products. The finding is based on a project done with a group of 20 industrial design students at Indian Institute of Technology Delhi. The project titled "Emotional Design of Helmet Graphics" was an eight weeks classroom assignment designed for first year industrial design students. The primary objective of the project was to integrate the understanding of emotions into current design courses being offered at the institute. The project was developed as a part of the course titled "Prototype and Die Development". The challenge was to integrate the understanding of emotions while teaching the participants techniques of prototype development. And secondly the project objective was to create an immersive learning experience wherein participants could be stimulated to express their individual concept of emotions.

## 2. Project Outline

### 2.1 Aim

The aim of the project was to learn the process of transforming an emotion into a prototype. Each participant was asked to select an emotive keyword and transform the meaning of the keyword in form of a helmet graphics. The participants had to develop a prototype helmet with new graphics at the end of the project.

### 2.2 Material

Painted helmet shells (grey and black), vinyl self adhesive sheets, cutters, vinyl gradation sheets, white pencils, flexi scales, film-applicator, soap solution, masking sheets and transfer films.

**2.3 Method**

1. *Identification of an Emotive keyword:* Each participant was asked to select an emotive keyword directed to or productive of emotions. The participants were encouraged to select keywords which triggered their emotions. However it was ensured that no two participants should select the same emotive keyword. This was done primarily to allow diversity in selection of words and their subsequent representation in graphic form.

2. *Interpreting the keyword:* The participants were asked to write down the meaning of the selected keyword based on their personal interpretation of the word. The participants were encouraged to express their personal experiences and emotions with the selected word.

3. *Selecting an emotive image:* The participants were asked to create image boards with various images which represented the selected keyword. Based on discussions with individual participants one image was selected which best represented the meanings associated with the selected keyword.

4. *Sketching on helmets:* The participants were encouraged to sketch directly on the grey color helmet shells to become familiar with the spherical surface of the helmets.

5. *Application of vinyl stickers:* The designs were further developed using white color vinyl sheets.

6. *Transfer of data:* Lamination films were used to transfer the designs from the helmets to a flat surface.

7. *Digital artwork:* Digital artworks were created using Corel Draw X4 graphic software.

8. *Digital cutting:* The artworks were cut using Roland digital cutter

9. *Prototype development:* The final graphic prototype was prepared using screen printed polyester sheets of different colors.

10. *Gradation and finishing:* Gradation sheets were used for final finishing

**2.4 Findings**

The following keywords were selected by the participants: Happy, Joy, Fierce, Aggression, Angry, Fear, Danger, Temptation, Extreme, Violence, Simple, Trust, Strengthen, Lust, Power, Mean, Devotion, Hard, Thrill and Energetic. Figure 1 shows the overall process followed by one of the participants for his selected keyword 'Violence'. All the twenty participants were able to successfully complete the project in the same manner.

The project was successful in integrating the understanding of emotions into a current course on prototype development. The students were able to develop an understanding about the various emotive keywords while developing skills of making graphic prototype. Being spherical shape a helmet is one of the most difficult products for graphic development. However the students were able to develop good quality prototypes while learning the methodologies for emotion centered designing. The students were able to represent the emotive words in form of graphics.

# VIOLENCE

A very intense and bloody encounter; involvement of lots of blood which signifies a horrific happening a pronounce red color which indicates violence and terror; lots of veins displaying violent adrenaline rushes



Figure 1: Development of Helmet graphics by one of the participants on the emotive keyword of 'Violence'

Figure 2: Some of the helmet designs developed by participants during the project

Figure 3: An emotional experience-The participants wearing their designed helmets

The project stimulated the students to interact and discuss each others' work. Since all the participants were working with different keywords, each participant was able to understand twenty emotive words and its expression in design. The participants were able to differentiate between joy and happy, fierce and aggression, fear and danger, trust and strength, thrill and energetic, lust and temptation etc. Figure 2 shows some of the developed helmet graphics developed by the participants.

Most importantly the project turned out to be an emotional experience for all the participants. The desire to develop prototypes which were a reflection of their interpretation of emotions motivated them to complete the project in time. Figure 3 illustrates the emotions of the participants after the completion of the project. Though the project was not aimed at developing helmets for commercial sales but the developed designs were emotive and unique in character. Participants were surprised to find out that some of their final developed designs were selected by a helmet manufacturer for mass production.

## 3. Acknowledgement

## 4. References

[1] Angyal, A (1941). *Foundations for a Science of Personality*. Cambridge, Mass: Harvard University Press.

[2] Arnold, M.B. (1960). *Emotion and Personality*. New York: Columbia University Press.

[3] Averill, J.R (1980). Constructivist view of emotions. In R.Plutchik & H.Kellerman (Eds.), *Emotions: Theory, research, and experience* (Vol.1, pp.305-339). New York: Academic Press.

[4] Desmet, Pieter (2002) .*Designing Emotions*. Delft, the Netherlands: Delft University of Technology.

[5] Gordon, R.M. (1974). The about ness of emotions. *American Philosophy Quarterly*, 11, 17-36.

[6] Parkinson, Brian & Manstead, A. S. R. (1992). Appraisal as a cause of emotion. In Clark, Margaret S. (Ed.), *Emotion* (pp. 122-149). California: Sage Publications.

[7] Pribram, K. H., & Melges, F. T. (1969). Psychophysiological basis of emotion. In P.J Vinken, & G.W. Brunyn (Ed.), *Handbook of clinical neurology* (pp. 316-342). Amsterdam: North Holland.

[8] Sartre, J-P. (1948), *The Emotions: Outline of a theory*. New York: Philosophical Library.