

Press Release

Nov 28, 2013 | ID: 136009

Volvo Cars' world first experiment reveals the emotive power of car design

Car design proven to be on a par with the most basic of human emotions

The first scientific experiment of its kind has revealed that beautiful car design can tangibly evoke a powerful range of feelings that are on a par with the most basic of human emotions. The scientific experiment, conducted by Volvo Car Group (Volvo Cars) in collaboration with EEG specialists Myndplay, tested respondents to analyse how the brain reacts emotionally to car design and how design aesthetics actually make us feel.

EEG is the recording of electrical activity along the scalp and measures voltage fluctuations resulting from ionic current flows within the neurons of the brain. The experiment proved that humans react emotionally to the shape of a car, with men in particular seeming almost genetically programmed to like sleek design with beautiful lines.

The experiment was conducted to coincide with the launch of the Volvo Concept Coupé, the first expressive interpretation of Volvo's new design strategy aimed at building a more emotive connection with the brand. Participants were asked to rate a series of images whilst wearing a dry sensor EEG headset that measured brainwave activity in the pre-frontal cortex of the brain. The images included the new Volvo Concept Coupé alongside perceived 'bad' and 'out-dated' car design, visuals of happy and crying babies and men & women *considered* to be 'beautiful'.

Thomas Ingenlath, Senior Vice President Design at Volvo Cars, said: "This survey finally proves what we've always suspected. Beautiful car design can elicit strong emotional responses ranging from a positive frame of mind to a sense of empowerment."

Men experienced more emotion whilst looking at images of beautiful car design than they did whilst looking at an image of a crying child

- Women displayed an emotional intensity to the picture of a crying baby which almost doubled that of male participants
- 74% of men claimed that good design made them feel positive
- Only 33% of women rated images of car design higher than an image of an attractive man
- 60% of men claimed that driving a beautiful car makes them feel confident and empowered

Dr David Lewis, a UK leader in the neuroscience of consumerism and communications stated: "Appreciating an aesthetically pleasing design is an experience which combines understanding and emotions. These are so closely intertwined that it is impossible to distinguish between them. Aesthetic experience involves a unity of sensuous delight, meaningful interpretation, and emotional involvement."

A parallel survey conducted by OnePoll revealed that 43% of men said that they found the car shape and design to be the most appealing aspect, over the interior, gadgets, wheels and engine. The front of the car was the most attractive feature for men, in contrast to the reaction from women where the rear of the car scored the most highly.

The only image both men and women shared the same reaction was that of a crying baby. They both expressed the highest emotional intensity and the highest negative score of all images. Women displayed the most emotional response to the crying baby, whereas men demonstrated more emotion looking at pictures of beautiful car design than to the picture of the distressed child.

Click here to explore the Volvo Concept Coupé in 3D and create your own personalised heat map: www.EmotionOfDesign.com

The experiment method

Onepoll – The survey of 2000 respondents was conducted by OnePoll www.onepoll.com

The Volvo '*Emotion Of Design*' study was designed to measure the emotional response of subjects whilst watching a series of images. In order to measure the emotional response of participants, a single dry electrode MyndPlay EEG headset, was placed on FpZ (middle of forehead) and Fp1 (left prefrontal forehead) to measure activation in the left prefrontal cortex. The experiment was specifically looking for activation and spikes in the Beta and Gamma frequencies. The experiment used existing attention and meditation algorithms and user generated scores in order to cross-reference the results. Participants were asked to rate how they felt about each image immediately after being shown the visual.

In order to gauge emotional response to known positive emotional stimulus, a picture of a smiling baby was included within the experiment. To gauge how subjects respond to old design in comparison with new design, images of a 30-year-old car was also included within the experiment. A blank image was added to normalise and measure baseline. A further study was conducted as a follow up study in which we added further known positive stimulus to measure arousal response. For the purposes of validating arousal, during the second experiment we utilised ECG monitors to measure increase in heart rate for specific images.

The data was cross referenced and analyzed against previous experiments to calibrate and substantiate the results & findings.

For more information, or to request an interview, please contact:

Emma Tills

Emma.tills@uk.ogilvypr.com

Landline: +44 207 309 1044

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Username: VolvoExperiment

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Keywords:

Life Style, Design, Press Releases

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