

The Effect of Added Dimensionality on Perceived Image Value

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Objective

The capability now exists to generate prints having three-dimensions. These prints are similar to traditional 2D prints but have added texture. It seems intuitive that the added dimensionality would add to the perceived quality of the image, but to what degree? To explore this question, a survey was conducted that examined the perceived quality differences between 2D images and 3D images by asking participants to determine the relative worth of sets of print products.

Experimentation

To examine the question of what impact adding a third dimension has on the perceived quality of printed images, pairs of print products were created where one of each pair was printed using traditional 2D processes and one was the same image printed using the three-dimensional think4D™ process. The participants were shown seven pairs of print products and asked to rate the relative value of each pair by apportioning a specified amount of money between the two items according to their perception of what each item was worth. The image pairs included two book covers (one on a blank book entitled “Her Secrets”, and one the jacket on a NASCAR book), two greeting cards picturing flowers, a DVD cover; a label on a spirits bottle; and a soap box. After rating the seven pairs of items, the participants were asked to select one of the fourteen items as a “thank you” gift for taking part in the survey.

Results

1. The data indicated that the addition of a third dimension or texture to the printed images gave a clear boost to the perceived worth of the printed products.
 - a. The rating results were 50% higher for the 3D products than the 2D products, indicating that the participants would, on average, pay 50% more for a product presented in think4D™ than for the same product in traditional 2D format, Figure 1.
 - b. About 80% of the time participants felt that the 3D items had at least some added value over their 2D counterparts, Figure 2.
2. Consumers are substantially more likely to choose products advertised or packaged using the think4D™ technology - 29 of the 30 participants in the experiment selected a think4D™ item as a ‘thank you’ gift. Only one participant opted for a 2D item, Figure 3.
3. The age and gender of the participants and the items being assessed did not significantly affect the results with the exception of the spirits bottle label. Many were impressed with the 3D bottle (it was one of the hottest ‘thank you’ items), however, a few older participants felt that the label had iconic value and should not be changed.
4. Many statements were made regarding the positive impact of texture, but, without question, the most common word uttered when the participants saw the think4D™ products was, “cool”.

All 3D products were produced using **think4D™** technology

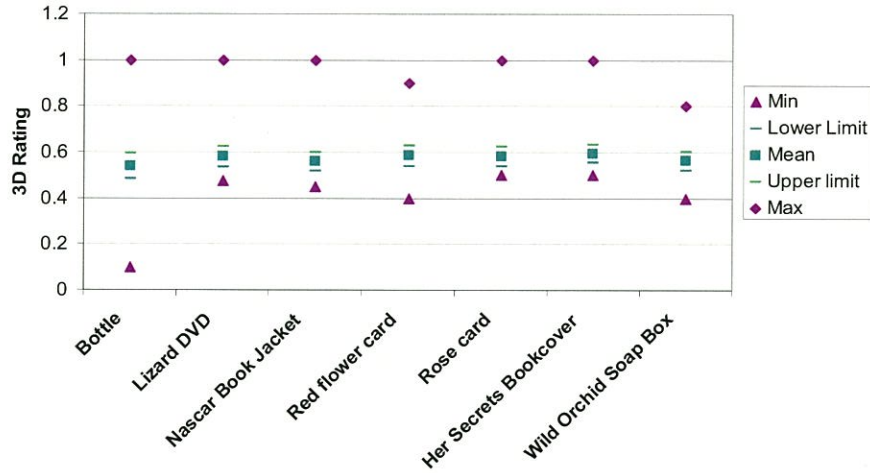


Fig. 1: The mean, maximum, and minimum ratings (percent of the available budget) for the 3D object of each of the seven pairs of items. The limit values represent 95% confidence limits on the mean.

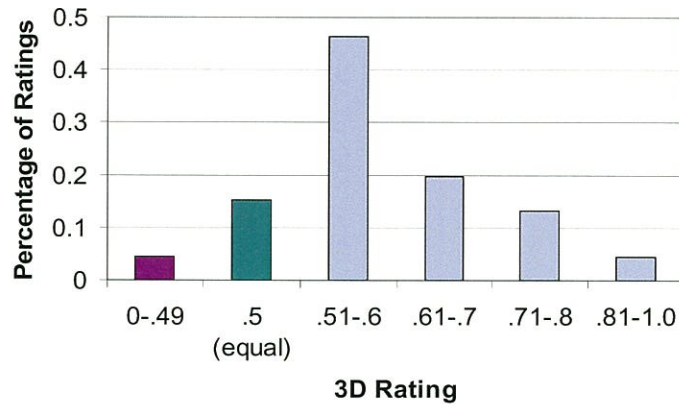


Fig. 2: The percentage of the total ratings for the think4D™ items as a function of the 3D item rating value. About 80% of the ratings were higher for the 3D item relative to the 2D item, about 15% were equal to the rating of the 2D item, and about 4% were lower for the 3D item than for the 2D item.

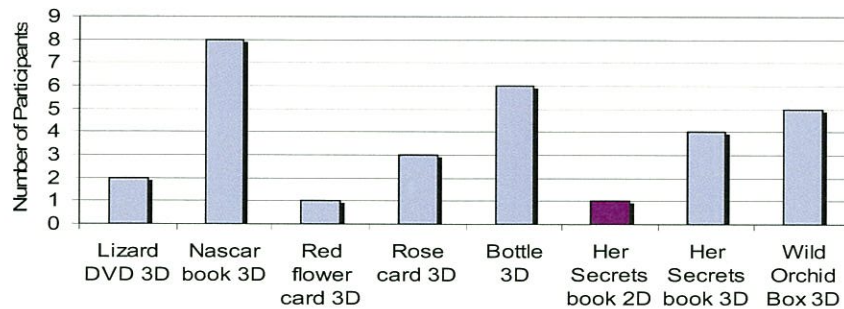


Fig. 3: Items selected by the participants as “thank you” gifts. One out of the 30 participants selected a 2D item, shown in dark purple.

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