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**Special Research Report #709: Public Benefits
Not Your Grandmother's Flowers: What combination of flower
fragrance and color is preferred by young adult consumers?**

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BACKGROUND

Consumer trends in the floriculture market indicate that there is a need to introduce young adults ages 18-25 to floral products. There is an industry need to examine this audience segment, commonly referred to as “generation Y”, not only in terms of buying trends but also to determine what factors influence their purchasing and retail shopping behavior.

The purpose of this project is to look at the relationship of two of the most important floral characteristics, fragrance and color, in order to determine the most appealing combination for young adults, as well as assess how important flower fragrance is for these consumers.

METHODOLOGY

An innovation of this project was the use of facial recognition software. Facial recognition software uses computer algorithms and facial modeling to analyze facial expression on the basis of six expressive states ranging from “happy” to “sad.” These states combine to create a measure of emotional response, called hedonic response.

To complete this project, two studies were conducted. N=86 college aged subjects were in the first study and N=121 were in the second. In study 1, subjects were randomly assigned to one of ten experimental booths containing a computer monitor that displayed a set of instructions for smelling a series of four of the most common flower fragrances--sweet, spicy, rosy, citrusy—which were derived from natural flower scents. Subjects were asked to choose which of the four fragrances they preferred, then the color of flower they most preferred from a selection list of five most commonly available choices. Next, subjects were asked to select their preference from 20 possible combinations of fragrance and color.

In study 2, subjects were again randomized to one of the ten experimental booths. This time, they received a set of styrofoam cups with lids that contained five fragrance color combinations (representing most and least preferred) from the previous experiment and

asked to smell them. Subjects were then asked about their response to the treatments as well as which treatment they preferred.

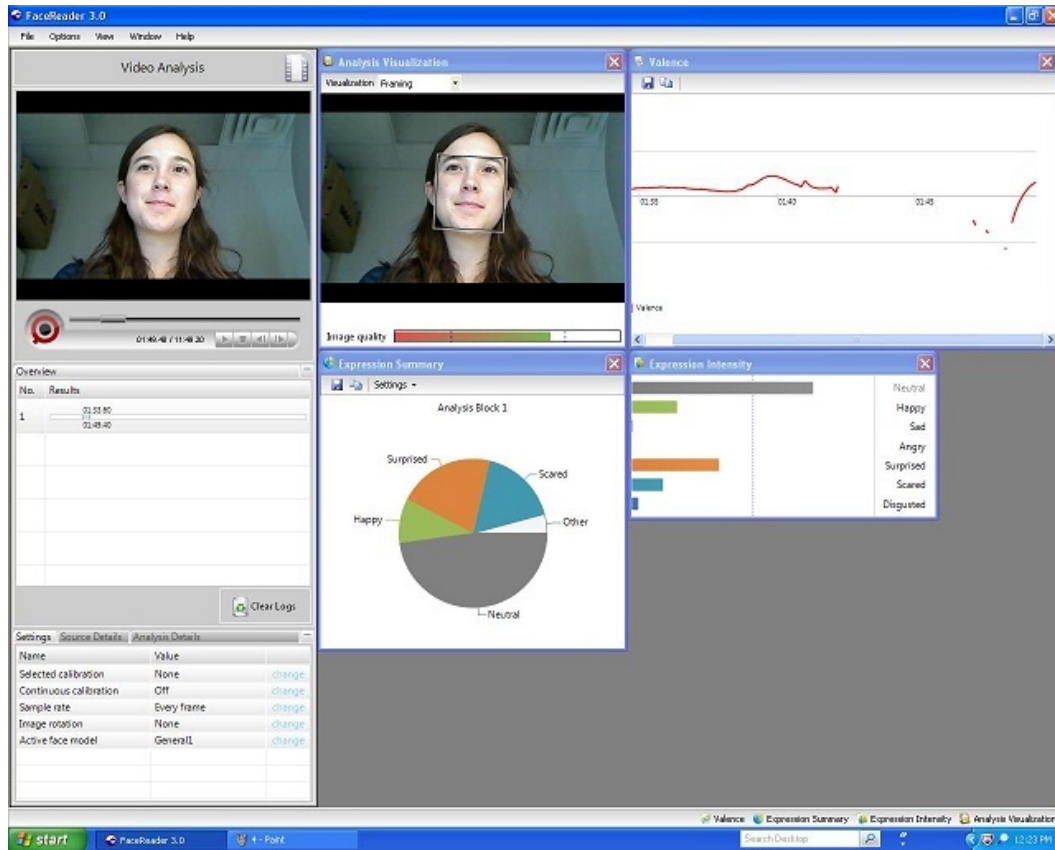


Fig. 1. Screenshot of facial recognition software used to record hedonic response.

RESULTS

It was hypothesized that subjects in experiment one would prefer more novel combinations of fragrance and color. When asked, 66% of subjects (n=57) had a fragrance preference for flowers, while 79.1% had a color preference. 20.9 % of respondents indicated that they prefer flowers that are red and the same percent indicated that they prefer flowers that are pink. 17.4% indicated that they prefer yellow, 16.3% prefer purple, 8.1% prefer white flowers, and 16.15 prefer flowers of other colors such as orange or blue. 44.0% of respondents indicated that they prefer flowers with a sweet scent while 35.7% prefer rosy fragrances. Citrusy fragrances, spicy fragrances, and other fragrances capture 8.3%, 6.0%, and 6.0% of respondent's preferences respectively. However, in the second experiment, when provided with the actual standardized fragrances to physically smell, data shows that respondents prefer rosy, sweet and citrusy scents equally with 28.2% of the vote to each scent. The spicy fragrance lags behind at 15.3%.

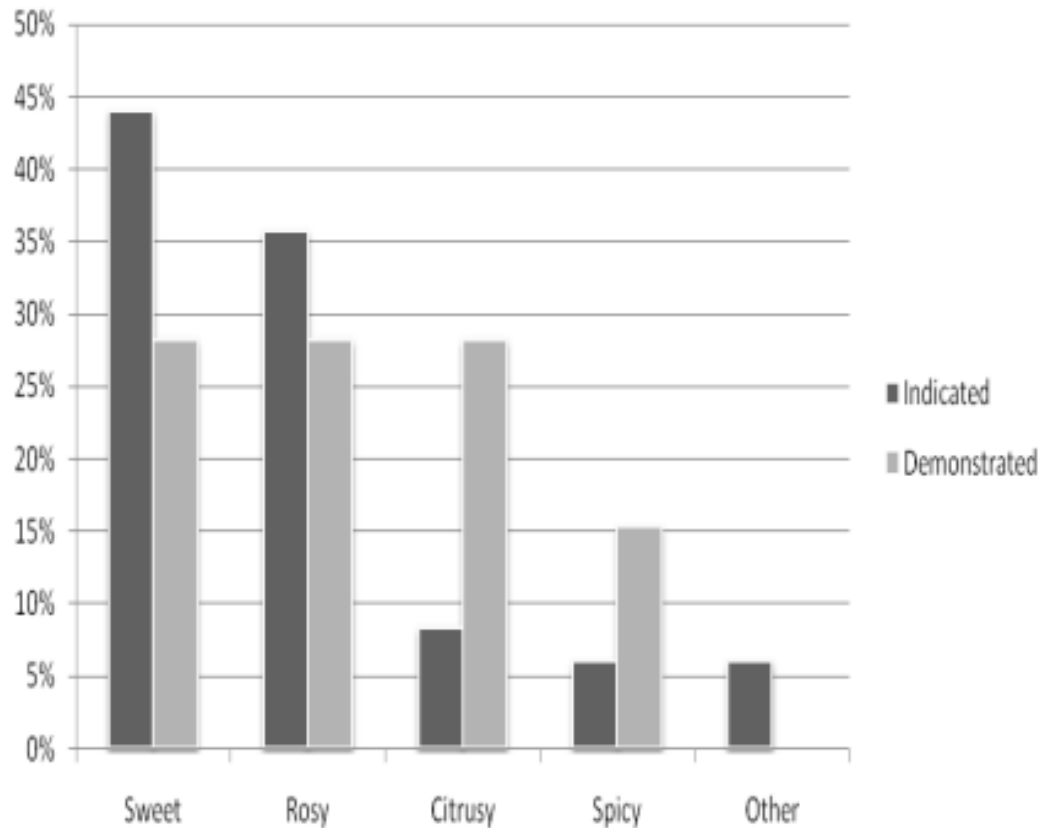


Fig. 2. Self report and actual fragrance preferences

We then analyzed color and fragrance preferences to determine preferred fragrance/color combinations, and used the top five combinations, plus a control with no color or fragrance to find out what subjects responded to emotionally and what they preferred to purchase.

We hypothesized that subjects would be significantly more likely to purchase a sweet/red combination and least likely to purchase the control condition combination. We found that subjects had the strongest hedonic emotional response, and were most likely to purchase the rosy/red combination, followed by rosy/pink, sweet/purple, spicy/red, and sweet/red and least likely to purchase the control condition combination. There was also a significant relationship between hedonic response and purchase behavior-the stronger the response, the more likely subjects were to say they would purchase that combination of flower and fragrance.

SOCIAL MEDIA USE

Subjects were also about their preference for online and social media when used to promote flowers. Facebook pages for a leading online flower retailer were used as message stimuli for testing purposes. Results to the descriptive questions showed that the majority of subjects preferred to get information about flowers from their florist, followed closely by search engines. Focusing on Facebook as the most widely adopted

and currently utilized form of social networking media by young adults and retailers, subjects were asked a series of questions about their perceptions of Facebook as a promotional tool. Interestingly, 39.7%, n= 48, said they would be unlikely to purchase flowers based on seeing the retailer on Facebook, and another 22.3%, n = 27, said they would be very unlikely. The great majority, 98%, n = 118, did not “like” any major flower retailers on Facebook, and a similar percentage had not joined any retailers’ Facebook groups. When asked if they would respond to a posting on a Facebook page, the majority said they would be unlikely to respond. When asked what specific additional information should be on the Facebook pages of a major flower retailer, analysis of the open-ended responses indicated that the common themes representing the most important factors included price, special deals, shipping information (speed, location, price) and variety of flowers and scents that can be bought.

CONCLUSIONS

Results of this project show the importance of fragrance and color to young adult consumers, as well as the challenges of using social media to market products to this audience. Given that young adults are more likely to be novice buyers/non-purchasers, it makes sense that they would be more likely to respond to “expected” fragrance/color combinations and less likely than core buyers to respond to novelty effects.

INDUSTRY IMPACT

Breeding decisions have often focused more on breeding for color, shelf life, etc., and less so on fragrance. Based on the strong degree to which these subjects did prefer fragrance as well as color, it may be important to consider breeding for fragrance and color combinations that consumers respond to, as opposed to what is novel, and to consider how social media is being used to market floral purchases to young adults.

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