IMPLICIT MEASUREMENT IN SENSORY TESTING

C. CRAWFORD, CURION; P. CONNER, EMOTIVE ANALYTICS

BACKGROUND

Sensory testing traditionally involves explicit, self-report ratings of products' taste, smell, touch, etc. However, advances in psychology and neuroscience indicate that humans also react implicitly to such stimuli. In other words, we have automatic, nonconscious, System 1 responses.

Curion and Emotive Analytics collaborated to explore how targeted consumers implicitly reacted to and explicitly evaluated several product categories (both fragrance and food/beverage).

We used an adaptation of the Affect Misattribution Procedure (AMP) to study System 1 reactions to products. The AMP has amassed impressive credentials over the past 10 years in part because it does not rely on reaction time. AMP is an indirect method; meaning respondents are primed with a stimulus of interest then asked about something else.

Although most of the implicit and explicit feelings were consistent across the products, some were not. Both consistencies and inconsistencies informed go-or-no-go decisions, as well as potential improvements that were not meeting strategic emotional goals.

IMPLICATIONS

- ACROSS ALL SENSORY MODALITIES humans process, evaluate, and react to stimuli both implicitly and explicitly, we need both implicit and explicit measurements in our research.
- Sensory research has traditionally only evaluated targeted consumers responses EXPLICITLY.
- Implicit measurement CAN reveal implicit responses to products' non-visual sensory features – smell and taste.
- Implicit results can lead to different and more detailed conclusions, therefore different product development and marketing decisions, vs. explicit results

EVOKING EMOTION THROUGH FRAGRANCE

OBJECTIVE: Developing a fragrance that evokes "energizing" and ladders up to overall opinion.

METHODOLOGY: N=125 respondents evaluated 4 fragrance prototypes both explicitly and implicitly.

EXPLICIT PROCEDURE

1. CONSUMERS ENTERED A FRAGRANCED BOOTH…
2. COMPLETED EXPLICIT HEDONICS AND SELECTED WHICH ATTRIBUTES APPLIED…
3. MOVED TO THE NEXT BOOTH AND REPEATED 1-2 FOR THE NEXT FRAGRANCE.

IMPLICIT PROCEDURE

1. IN SAME BOOTH, AFTER HEDONICS AND EXPLICIT ATTRIBUTE SELECTION…
2. WITH FRAGRANCE AS THE PRIME, RESPONDENTS SAW AMBIGUOUS PICTOGRAPHS…
3. AND SELECTED WHICH ATTRIBUTES THEY CONVEYED (AFTER PICTOGRAPH DISAPPEARED).



Ambiguous Pictographic

EXPLICIT ASSOCIATIONS	FRAGRANCE A	FRAGRANCE B	FRAGRANCE C	FRAGRANCE D
HAPPY	134	130	141	155
SEXY	21	35	46	49
ENERGIZED	85	78	70	123
BORED	32	28	28	4
COMFORTED	99	67	109	99
RELAXED	81	81	109	74
IRRITATED	25	25	21	35

POSITIVE
NEGATIVE

IMPLICIT ASSOCIATIONS	FRAGRANCE A	FRAGRANCE B	FRAGRANCE C	FRAGRANCE D
HAPPY	193	189	181	172
SEXY	87	82	76	73
ENERGIZED	146	155	136	126
BORED	98	84	108	114
COMFORTED	92	104	90	78
RELAXED	77	84	90	74
IRRITATED	95	96	98	103

CONCLUSIONS

Explicit Associations indicate Fragrance D is best candidate, Implicit Associations indicate Fragrance A or B would be better candidates.

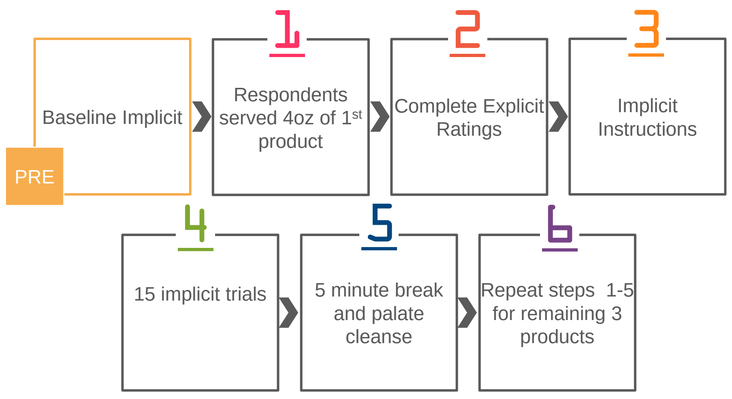
Implicit responses allowed for further investigation into the profiles of Fragrance A and B allowing for better positioning of this fragrance.

BENCHMARKING COMPETITION

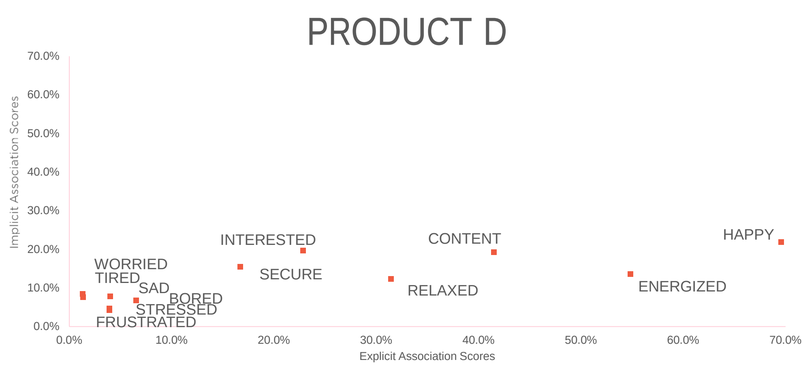
OBJECTIVE: To determine consumer differences in 4 competitive retail fruit smoothies.

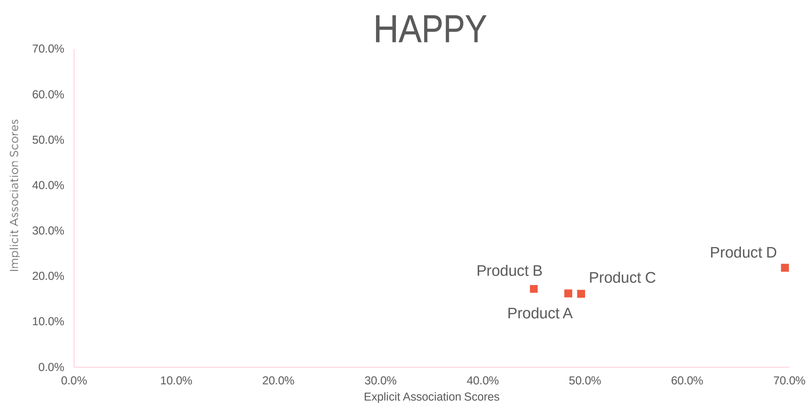
METHODOLOGY: N=125 respondents evaluated 4 smoothie products both explicitly and implicitly.

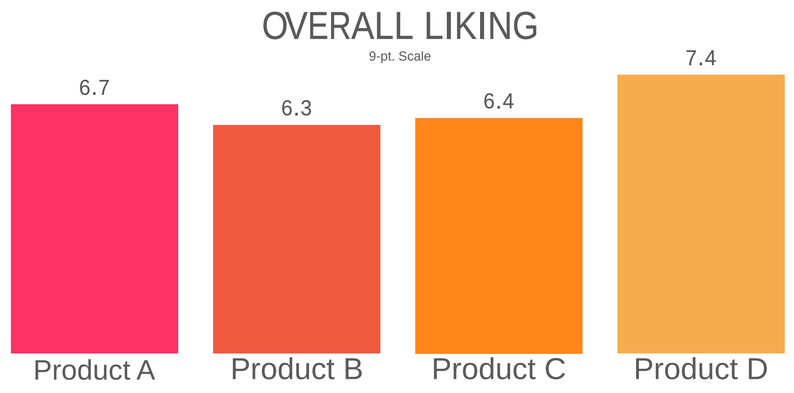
THE FULL PROCEDURE



RESULTS







CONCLUSIONS

Product D is liked significantly more than the other products.

- Both Implicit and Explicit associations show that Happy, Energized are the highest associations with Product D.
- Product C is associated with HAPPY explicitly, however it is not associated it with implicitly. Indicating that implicit response of HAPPY affects overall liking more than the explicit HAPPY response.

This allows for fine-tuning in the positioning of products.

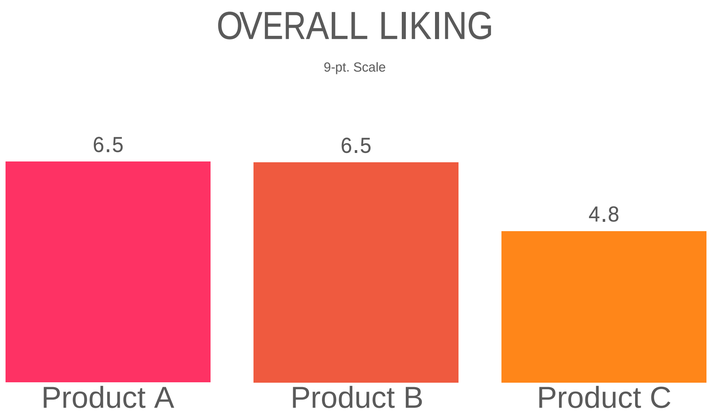
PROTOTYPE SELECTION

OBJECTIVE: To determine which of 3 prototypes to move forward.

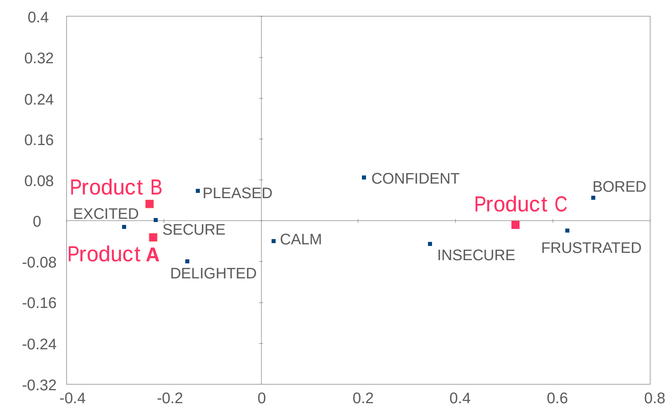
METHODOLOGY: N=250 respondents evaluated 3 chocolate nutritional beverages both explicitly and implicitly.

THE FULL PROCEDURE

The procedure used is the same as Benchmarking Competition.

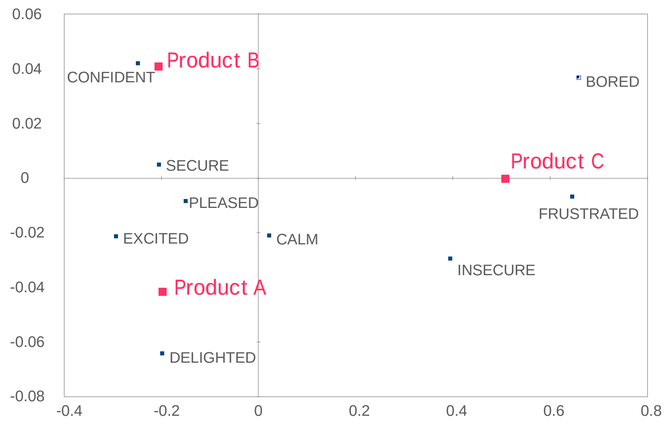


EXPLICIT RESPONSE CORRESPONDENCE ANALYSIS



- Product A and B map close to each other, associated with feeling Secure and Excited, but not well differentiated.
- Product C is much different, mapping to feeling Bored, Insecure, and Frustrated.

IMPLICIT RESPONSE CORRESPONDENCE ANALYSIS



- Product A and B are much more differentiated, A more Excited & Delighted, B more Confident.
- Product C remains differentiated around Frustrated, Insecure, and Bored.

CONCLUSIONS

Product C is a clear loser both in overall liking and the implicit and explicit responses. Product A and B show no differences in liking or in Explicit response. Implicit response indicated differences between product A and B.

Implicit measurements helped to decide the prototype to move forward with and allowed for more information for positioning.