

AFFECTIVE ORIENTATION AND EATING BEHAVIOR:
TWO STUDIES OF EMOTIONAL, RESTRAINED,
AND EXTERNAL EATING DECISIONS¹

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Summary.—Recent work on how emotions guide decisions stimulated two studies on relationships among emotional, restrained, and external antecedents of eating behavior and Affective Orientation. In Study 1 were 195 undergraduate students who completed the Affective Orientation–15 scale (Booth-Butterfield & Booth-Butterfield, 1996) and the Dutch Eating Behavior Questionnaire. Higher scores of trait Affective Orientation were associated with more emotional and restrained eating. Women scored higher on Affective Orientation than men and were more likely to engage in emotional and restrained eating. Study 2 replicated the research with 79 employed adults (*M* age = 38 yr.). Results were similar in that Affective Orientation scores were related positively to similar eating patterns, and women scored higher than men on the psychosocial variables.

People often eat, not just because they are hungry, but for other reasons as well. Whatever the specific triggers, many aspects of food consumption are emotion-related adding to the explosion of obesity in the United States (Mokdad, Serdula, Dietz, Bowman, Marks, & Koplan, 1999). Eating may relieve negative affect, assert control, cope with loneliness, or demonstrate group solidarity. Eating decisions examined here include emotional, restrained, and external eating as they relate to the role of personality, specifically Affective Orientation (Booth-Butterfield & Booth-Butterfield, 1990).

Affective Orientation is the predisposition to actively scrutinize, consider, and subsequently use one's emotions as decision-guiding information (Booth-Butterfield & Booth-Butterfield, 1997). Individuals high in Affective Orientation attend to their emotions and act on them. Emotions are accessible because they are more routinely processed (Booth-Butterfield & Booth-Butterfield, 1990), but Affective Orientation may be particularly related to the experience and expression of negative affect (Yelsma, 1995; Booth-Butterfield & Booth-Butterfield, 2002). Affective Orientation has been linked to both personality traits (Booth-Butterfield & Booth-Butterfield, 1994, 2002) and communication behavior (Yelsma, 1995; Booth-Butterfield & Sidelinger, 1997).

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Emotional, restrained, and external eating, are typically studied as independent constructs (Wardle, 1987). Emotional eaters consume food to cope with negative emotions (Van Strien, Frijters, Bergers, & Defares, 1986). Although one response to arousal such as anger, fear, or anxiety is appetite loss, some individuals respond by eating more, which can lead to consumption of excess calories and result in weight gain (Van Strien, *et al.*, 1986). Restrained eaters intend to maintain a desired weight through the monitoring and control of caloric intake (Stice, Ozer, & Kees, 1997). External eaters represent disinhibited eating in the presence of external or situational food cues (Braet & Van Strien, 1997), e.g., watching TV, receiving food cues, and subsequently eating more (Brown & Walsh-Childers, 2002).

These three eating patterns are intertwined (Van Strien, *et al.*, 1986). Eating to cope with emotional upheaval may intensify a negative self-image and guilt after eating, leading to restrained eating. Restrained eating (more than just dieting) entails cognitive attempts to restrict weight gain, also associated with depression (Dewberry & Usher, 1994). Heaven, Mulligan, Merri-les, Woods, and Fairouz (2001) found that individuals who were heavier were more likely to engage in both emotional and restrained eating.

External eating occurs when a contextual trigger spurs the individual into eating without careful thought. These cues are part of the environment, usually smells or sights of food that entice the external eater into eating or experiencing emotional distress if they do not eat the food (Abraham & Beaumont, 1982). Individuals higher in Affective Orientation should desire to placate this distress and use emotions as guides in their behavior. Considering that individuals scoring high on Affective Orientation make more emotion-based decisions, it was predicted that higher scores on Affective Orientation would be associated with more emotional, restrained, and external eating patterns.

Men and women orient differently to eating and to emotional communication (Kelly, Ricciardelli, & Clarke, 1999; Rozen, Bauer, & Catanese, 2003). In a wide ranging study of college students across the USA, Rozen and colleagues stated that men showed less concern with the role of eating and nutrition. Although women are more overweight than men, they are also more likely to know about healthy foods and attempt to eat them (Oakes & Slotterback, 2000). In addition, research has consistently verified that women are higher in Affective Orientation than men (e.g., Dolin & Booth-Butterfield, 1993; Bullis & Horn, 1995; Yelsma, 1995; Booth-Butterfield & Booth-Butterfield, 2002). It was then predicted that this study would replicate these patterns in both students and older adults as women were expected to score higher on Affective Orientation and to engage in more emotional, restrained, and external eating than men.

METHOD

Participants

The participants in Study 1 were 195 students (107 men, 86 women, 2 unidentified; M age = 21.8 yr., SD = 1.7) enrolled in introductory communication studies courses at a large land-grant university. Study 2 included 79 fully employed adults (32 men, 44 women, 3 unidentified; M age = 38.2 yr., SD = 10.0).

Procedure

Procedures were identical in both studies. Participants completed the Affective Orientation–15 (Booth-Butterfield & Booth-Butterfield, 1996) and the Dutch Eating Behavior Questionnaire (Van Strien, *et al.*, 1986), along with additional questions about food intake. The Affective Orientation–15 scale is a 15-item measure that asks participants to report on how much they consider and use emotions as guiding information. Scale items include “I use my feelings to determine what I should do in situations” and “I usually let my internal feelings direct my behavior.” Responses were solicited on a 5-point Likert-type scale anchored by 5: Strongly agree and 1: Strongly disagree. Cronbach alphas were .93 and .92 in Studies 1 and 2, respectively.

A 33-item version of the Dutch Eating Behavior Questionnaire (Van Strien, *et al.*, 1986) assessed three eating components: emotional eating, restrained eating, and external eating. Respective scale items include “Do you have a desire to eat when somebody lets you down,” “How often do you refuse food or drink offered because you are concerned about your weight,” and “Do you eat more than usual, when you see others eating.” This measure uses a 5-point Likert-type scale anchored by 5: Very often and 1: Never. Cronbach alphas were .93 and .94, .93 and .91, and .84 and .83 for the respective eating scales in Studies 1 and 2.

RESULTS

Scores on Affective Orientation were correlated positively with emotional eating for college students (Studies 1 and 2). For college students (Study 1) ratings on restrained eating were correlated positively with scores on Affective Orientation. For older adults (Study 2) rated external eating was correlated positively with scores on Affective Orientation.

Significant differences between men and women were predicted for Affective Orientation in addition to emotional, restrained, and external eating scores. A multivariate analysis of variance was computed to test this hypothesis with biological sex as the independent variable and scores on the Affective Orientation–15 and three subscales of the Dutch Eating Behavior Questionnaire serving simultaneously as the dependent variables. The two multivariate analyses of variance yielded statistically significant models for Study 1

TABLE 1
MEANS, STANDARD DEVIATIONS, ALPHA, AND PEARSON INTERCORRELATIONS AMONG VARIABLES

Variable	M	SD	α	r		
				1	2	3
Study 1						
1. Affective Orientation	49.4	10.6	.93			
2. Emotional Eating	30.3	9.8	.93	.17*		
3. Restrained Eating	25.3	9.4	.93	.16*	.35†	
4. External Eating	30.2	6.5	.84	.10	.32†	-.12
Study 2						
1. Affective Orientation	46.9	10.9	.92			
2. Emotional Eating	33.9	11.4	.94	.36†		
3. Restrained Eating	29.5	8.9	.91	.17	.23*	
4. External Eating	31.6	6.1	.83	.32*	.58†	.26*

* $p < .05$. † $p < .001$.

(Wilks $\lambda = .73$, $F_{4,183} = 16.8$, $p < .001$), and Study 2 (Wilks $\lambda = .67$, $F_{4,68} = 8.3$, $p < .001$). Follow-up analyses of variance showed that women reported higher mean scores for Affective Orientation as well as emotional and restrained eating in both Studies 1 and 2.

TABLE 2
ANALYSIS OF VARIANCE FOR SEX, AFFECTIVE ORIENTATION AND EATING SCORES

Variable	Mean		F	η^2
	Men	Women		
Study 1				
Affective Orientation	48.4	53.0	10.3†	.05
Emotional Eating	27.3	34.5	28.9‡	.13
Restrained Eating	21.9	29.9	42.0‡	.18
External Eating	30.4	29.8	0.4	.00
Study 2				
Affective Orientation	43.7	50.0	6.4*	.08
Emotional Eating	28.7	38.5	15.1‡	.18
Restrained Eating	24.2	32.1	18.7‡	.21
External Eating	30.6	32.9	2.6	.04

* $p < .05$. † $p < .01$. ‡ $p < .001$.

DISCUSSION

The purpose of these studies was to examine patterns of eating and emotional decision making in two separate and differing samples to facilitate message-based intervention. There were two major findings: (a) scores for the personality trait of affective orientation were related positively to scores on both emotional eating and restrained eating and (b) women engaged more in emotional and restrained eating than did men. These patterns are consistent with predictions from recent work in the field (e.g., Rozen, *et al.*, 2003) and allow inferences for creating eating/nutrition health messages.

First, the concept of using feeling to guide behavior is clearly associated with eating motivators. People scoring higher on Affective Orientation appear more likely to eat as a way to control their affect and may make detrimental decisions concerning their health. Their emotions regarding harmful behaviors are not rational (see also Booth-Butterfield & Booth-Butterfield, 1997), and more affectively oriented individuals tend to make less logical decisions about food intake. Although there are better ways of coping with negative affect, e.g., being consoled by a friend, exercising, individuals who more regularly pay attention to and use their emotions may be more likely to turn to food as a means of coping.

Individuals scoring higher on Affective Orientation were also more likely to engage in restrained eating, although this relationship reached significance only for the college sample. It may be that after emotion-based eating has occurred, such individuals experience negative affect (e.g., guilt, remorse, embarrassment) and attempt to rectify a lapse by restricting their eating. For example, if such an individual terminates a relationship and feels sad or angry about it, the person may eat a quart of ice cream or drink a quart of beer. Subsequently, there may be feelings of guilt or self-condemnation associated with such consumption. The same pattern of response to negative emotions compelling this individual to eat initially may also be reasons why such a person compensates and utilizes restraint in other situations. Thus, if people eat spontaneously to deal with negative feelings or to give themselves a reward and feel distressed in retrospect, the new negative feelings concerning the past eating decision may compel them to use restraint. It should be noted, however, that these were small effects, and clearly there are additional stimuli for both emotional and restrained eating. Nevertheless, such a pattern suggests an important mechanism for health professionals who want to encourage change in eating behavior. Understanding the emotional mechanism may then be used to construct messages, environments, or responses which support more nutritional eating.

The relationship between scores on Affective Orientation and external eating was inconsistent and not significantly related among college students but significantly related among older adults. This may not be interpreted until further work is done, perhaps including opportunity and magnitude.

The second set of findings involved sex differences in response. Women scored higher on Affective Orientation and more likely to engage in both emotional and restrained eating. Numerous empirical studies indicate that women may have more variant scripts and triggers for emotion-based communication but tend to be more attuned to affect than men (e.g., Booth-Butterfield & Booth-Butterfield, 1997; Canary & Emmers-Sommer, 1997; Metts & Planalp, 2002). Similarly, recent work by Gross and John (2003) indicates that men tend to "handle" their emotions more often with suppres-

sion. Women may be more likely than men to extend emotion-driven decisions to eating for emotional reasons and monitoring their food intake to avoid negative affect. With societal pressures for women to look thin and young, use of restraint in eating (e.g., Gordon, 1990; Friedman & Brownell, 1995) may not be surprising. Men may give less thought to food beyond what is available and tastes pleasing (see also Rozen, *et al.*, 2003).

Certainly this study has its limitations. One is the research design. Even though two separate studies were conducted, both were cross-sectional in design, which may have enhanced associations among variables at the time of assessment. The tentative conclusions inferred from these data are preliminary but generally consistent with prior findings. No inferred causality is reasonable on the present data.

REFERENCES

- ABRAHAM, S. F., & BEAUMONT, P. J. V. (1982) How patients describe bulimia or binge eating. *Psychological Medicine*, 12, 625-635.
- BOOTH-BUTTERFIELD, M., & BOOTH-BUTTERFIELD, S. (1990) Conceptualizing affect as information in communication production. *Human Communication Research*, 16, 451-476.
- BOOTH-BUTTERFIELD, M., & BOOTH-BUTTERFIELD, S. (1994) The affective orientation to communication: conceptual and empirical distinctions. *Communication Quarterly*, 42, 331-344.
- BOOTH-BUTTERFIELD, M., & BOOTH-BUTTERFIELD, S. (1996) Using your emotions: improving the measurement of affective orientation. *Communication Research Reports*, 13, 157-163.
- BOOTH-BUTTERFIELD, M., & BOOTH-BUTTERFIELD, S. (1997) Emotionality and affective orientation. In J. C. McCroskey, J. Daly, & M. Martin (Eds.), *Communication and personality: trait perspectives*. New York: Hampton Press. Pp. 171-189.
- BOOTH-BUTTERFIELD, M., & BOOTH-BUTTERFIELD, S. (2002) The role of affective orientation in the Five Factor Personality structure. *Communication Research Reports*, 19, 301-313.
- BOOTH-BUTTERFIELD, M., & SIDELINGER, R. J. (1997) The relationship between parental traits and open family communication: affective orientation and verbal aggression. *Communication Research Reports*, 14, 408-417.
- BRAET, C., & VAN STRIEN, T. (1997) Assessment of emotional, externally induced and restrained eating behaviour in nine to twelve-year-old obese and non-obese children. *Behavior Research and Therapy*, 35, 863-873.
- BROWN, J., & WALSH-CHILDERS, K. (2002) Effects of media on personal and public health. In J. Bryant & D. Zillman (Eds.), *Media effects: advances in theory and research*. (2nd ed.) Mahwah, NJ: Erlbaum. Pp. 453-488.
- BULLIS, C., & HORN, C. (1995) Get a little closer: further examination of nonverbal comforting strategies. *Communication Reports*, 8, 10-18.
- CANARY, D., & EMMERS-SOMMER, T. (1997) *Sex and gender differences in personal relationships*. New York: Guilford.
- DEWBERRY, C., & USHER, J. M. (1994) Restraint and perception of body weight among British adults. *Journal of Social Psychology*, 134, 609-619.
- DOLIN, D. J., & BOOTH-BUTTERFIELD, M. (1993) Reach out and touch someone: analysis of nonverbal comforting responses. *Communication Quarterly*, 41, 383-393.
- FRIEDMAN, M., & BROWNELL, K. (1995) Psychological correlates of obesity: moving to the next research generation. *Psychological Bulletin*, 117, 3-20.
- GORDON, R. (1990) *Anorexia and bulimia: anatomy of a social epidemic*. Cambridge, UK: Basil Blackwell.
- GROSS, J., & JOHN, O. (2003) Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.
- HEAVEN, P. C. L., MULLIGAN, K., MERRILEES, R., WOODS, T., & FAIROOZ, Y. (2001) Neuroticism

- and conscientiousness as predictors of emotional, external, and restrained eating behaviors. *International Journal of Eating Disorders*, 30, 161-166.
- KELLY, C., RICCIARDELLI, L. A., & CLARKE, J. D. (1999) Problem eating attitudes and behaviors in young children. *International Journal of Eating Disorders*, 25, 281-286.
- METTS, S., & PLANALP, S. (2002) Emotional communication. In M. Knapp & J. Daly (Eds.), *Handbook of interpersonal communication*. (3rd ed.) Thousand Oaks, CA: Sage. Pp. 339-373.
- MOKDAD, A., SERDULA, M., DIETZ, W., BOWMAN, B., MARKS, J., & KOPLAN, J. (1999) The spread of the obesity epidemic in the United States, 1991-1999. *Journal of the American Medical Association*, 282, 1519-1522.
- OAKES, M. E., & SLOTTERBACK, C. S. (2000) Nutritional habits and motivations to eat after a palatable pre-load. *Current Psychology*, 19, 329-338.
- ROZEN, P., BAUER, R., & CATANESE, D. (2003) Food and life, pleasure and worry, among American college students: gender differences and regional similarities. *Journal of Personality and Social Psychology*, 85, 132-141.
- STICE, E., OZER, S., & KEES, M. (1997) Relation of dietary restraint to bulimic symptomatology: the effects of the criterion confounding of the restraint scale. *Behaviour Research and Therapy*, 35, 145-152.
- VAN STRIEN, T., FRIJTERS, J. E. R., BERGERS, G. P. A., & DEFARES, P. B. (1986) The Dutch Eating Behavior Questionnaire (DEBQ) for assessment of restrained, emotional, and external eating behavior. *International Journal of Eating Disorders*, 5, 295-315.
- WARDLE, J. (1987) Eating style: a validation study of the Dutch Eating Behaviour Questionnaire in normal subjects and women with eating disorders. *Journal of Psychosomatic Research*, 31, 161-169.
- YELSMA, P. (1995) Couple's affective orientations and their verbal abusiveness. *Communication Quarterly*, 43, 100-114.

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