

### Issue: 19, 2011

### The Quest for Eating Right: Advancing Food Well-being

AUTHOR(S): Melissa G. Bublitz<sup>1</sup>, Laura A. Peracchio<sup>2</sup>, Alan R. Andreasen<sup>3</sup>, Jeremy Kees<sup>4</sup>, Blair Kidwell<sup>5</sup>, Elizabeth Gelfand Miller<sup>6</sup>, Carol M. Motley<sup>7</sup>, Paula C. Peter<sup>8</sup>, Priyali Rajagopal<sup>9</sup>, Maura L. Scott<sup>10</sup>, and Beth Vallen<sup>11</sup>.

# ABSTRACT

In this article, we propose five core areas that influence how consumers relate to food social factors, economic issues, food literacy, emotional knowledge, and physical and psychological traits. Our goal is to formulate a vision for developing a comprehensive measure of an individual's level of Food Well-being (FWB) to facilitate investigations of how to motivate consumers to progress along the FWB continuum. With this knowledge, researchers, policymakers, and practitioners may be able to help consumers use deliberative and automatic decision making to respond to environmental food cues and set consumers on a path to advance Food Well-being.

# ARTICLE

How would you describe your relationship with food? For some consumers, food is something needed for survival, acquired when and where it is convenient without tremendous thought or concern. For others, food is love or at least a significant source of pleasure. Perhaps you grew up in a family where every gathering centred on food. Consumers often use food as a reward or to celebrate special occasions. Still others turn to food when they are stressed or bored. Consumers sometimes treat food as a means to achieve health outcomes. However, based on the burgeoning obesity epidemic we may infer that a rapidly growing number of consumers do not have a healthy relationship with food. During the second Transformative Consumer Research (TCR) Conference in 2009. researchers proposed a paradigm shift from the existing "paternalistic, normative model of the relationship of food to health" to a focus on Food Well-being (FWB; Block et al. 2011, p. 5). They defined FWB as "a positive psychological, physical, emotional, and social relationship with food at both the individual and societal levels" (Block et al. 2011, p. 6). Building on this paradigm, researchers participating in the third TCR conference in 2011 set forth a vision to define the scope of a comprehensive measure of FWB at the individual level. While we recognize this is only the beginning of the development work required, we hope to inspire researchers and policymakers to create a comprehensive tool to assess FWB and to motivate progress along the FWB continuum. As research begins to illuminate how both

<sup>&</sup>lt;sup>1</sup> Melissa G. Bublitz - University of Wisconsin Oshkosh, <sup>2</sup> Laura A. Peracchio - University of Wisconsin-Milwaukee, <sup>3</sup> Alan R. Andreasen - Georgetown University, <sup>4</sup> Jeremy Kees - Villanova University, <sup>5</sup> Blair Kidwell - University of Kentucky, <sup>6</sup> Elizabeth Gelfand Miller - University of Massachusetts Amherst, <sup>7</sup> Carol M. Motley - University of Alabama at Birmingham, <sup>8</sup> Paula C. Peter - San Diego State University, <sup>9</sup> Priyali Rajagopal - Southern Methodist University, <sup>10</sup> Maura L. Scott - University of Kentucky, <sup>11</sup> Beth Vallen -Fordham University

automatic and deliberative decision processes may be used strategically to influence more healthful food choices, we propose that developing a tool to measure FWB would help identify which techniques may be used by consumers to promote healthful decision making. The resulting framework can be used by future scholars and policymakers to study the pursuit of FWB.

We begin by examining the need for a comprehensive measure of FWB. It is common to simplify food decision making by dichotomizing choices and behaviours into categories of healthy versus unhealthy or good versus bad. However, reducing food and health-related decisions to black and white choices poses a series of roadblocks for motivating positive outcomes over the long term. One problem is that there is no universal agreement on which foods are healthy and which foods are not. In a world of increasingly complex food choices, foods identified as "healthful" for one group of consumers may not be optimal for another. For example, while diabetics may be more concerned about sugar and carbohydrates, those with hypertension might be more focused on the sodium content of what they eat. Still another danger of dichotomizing food choices stems from packages and labels that trigger healthy product inferences by consumers for less healthy foods (Scott et al. 2008) and license consumers to overeat (Wansink and Chandon 2006). In contrast, we envision Food Wellbeing as a continuum, from low to high levels of FWB. A FWB continuum allows us to acknowledge that even small advances can positively impact consumer well-being and lead to further, more ambitious changes as consumer confidence in their ability to implement change grows. In addition to assessing FWB, we must also understand consumers' readiness to make positive change along the FWB continuum. This idea is central to helping consumers advance FWB. We propose that by assessing where individuals are on the FWB continuum along with their readiness and ability to change, researchers, policymakers, industry professionals, practitioners, and consumers alike will have better information about how consumers relate to food, as well as a better sense of the means to propel progress along the FWB continuum.

The paper is organized as follows: first, using the FWB concept developed at the 2009 TCR conference (Block et al. 2011) as a starting point, we expand the construct and propose additional factors that define the relationships individual consumers have with food. Initial development of FWB examined both individual and societal influences on FWB (Block et al. 2011). While it is important to understand societal influences on FWB, we focus our discussion on a vision for developing a measure of FWB at the individual level which will provide an opportunity to determine which changes, at the individual or societal level, influence and advance consumer FWB. Second, we discuss how consumer motivation and readiness to change may influence not only where consumers reside on the continuum but also their propensity to move along the FWB continuum. Third, we conceptualize how research on both deliberative and automatic influences on food decision making may help consumers with different motivation levels traverse the path toward FWB. Finally, we present a series of recommendations for how researchers, policymakers, industry professionals, and ultimately consumers can work to motivate and achieve a healthier relationship with food.

# Assessing Food Well-being

To advance FWB, a consumer needs a better understanding of their starting point on the FWB continuum. How might we determine a consumer's current level of FWB? As we work toward a framework for measuring FWB, we build on the individual dimensions presented in Block et al. (2011) and expand the FWB construct to reflect the complexity of a consumer's relationship with food. In this section, we discuss five core areas that influence placement on the FWB continuum: social factors, economic issues, food literacy, emotional knowledge, as well as physical and psychological traits.

# **Social Factors**

Understanding the role of explicit and implicit food socialization of children in both the cultural environment in which they live as well as within the family setting is vital to determining FWB for both children and adults (Block et al. 2011). Within the macro environment, culture, subcultures and the media influence how consumers are socialized to patterns of food consumption. Consumers learn about food from their family and interactions with their peers. The learning that occurs at the family table may extend far beyond acquiring food traditions. Food often provides a medium to transfer cultural and family values, norms, and beliefs from one generation to the next (Motley and Perry 2009). Understanding a broader set of social influences on food comes from examining the differences in how individuals interact with food in the presence or absence of others. In measuring dieting tendencies, researchers often ask consumers if they 'tend to eat sensibly in front of others and splurge when they are alone?' (Herman and Mack 1975). In addition to conscious social influences on food consumption, researchers find that the body type of others, even those we do not know but see as we dine in public settings, may automatically trigger the consumption of smaller or larger portions (McFerran et al. 2010). In measuring the current state of FWB and its determinants, researchers will need to assess cultural, social, and familial influences on food consumption patterns.

### **Economic Issues**

Access to healthy choices is critical to advancing FWB. According to the United States Department of Agriculture "more than 23 million Americans, including 6.5 million children, live in low-income urban and rural neighbourhoods that are more than a mile away from a supermarket" (letsmove.gov 2011). These consumers do not have easy and affordable access to fresh fruits and vegetables, low-fat milk, whole grains, and other nutritious foods that make up a healthy diet. Such environments are often referred to as food deserts. While these communities lack access to fresh food, they are also characterized by a preponderance of fast food restaurants and convenience stores. In impoverished communities, parents may live in economic situations that require they focus on making sure their children eat something, rather than on ensuring their family eats healthy food. A measure of FWB must assess an individual's access to fresh food in their community as well as their ability to afford the costs of incorporating a healthful variety of food into their regular diet. Not surprisingly, research demonstrates that household income is positively correlated with nutrition knowledge and an understanding of the long term consequences of obesity (Andrews et al. 2009). This may mean that families with lower incomes also have less understanding of the long term connection between eating well and overall health and wellbeing. Furthermore, they may have a short term temporal focus that emphasizes meeting more immediate, often unfulfilled, needs due to a lack of resources (Zimbardo and Boyd 1999). In assessing FWB, economic variables may help us understand the role of access and availability of healthy food choices, as well as consumers' current levels of ability and motivation to pursue FWB.

### **Food Literacy**

Beyond access to food, consumers need to understand how to optimize the available food choices and maximize their level of FWB. Food literacy expands traditional measures of nutrition knowledge to include not only what people know about food but also their ability to use that information to facilitate higher levels of FWB (Block et al. 2011). Food literacy ranges from declarative types of knowledge (e.g., knowing what asparagus is and what types of nutrients asparagus might provide) to procedural knowledge (e.g., how to cook this vegetable). Some consumers frequently eat away from home because they have limited knowledge, motivation, or perhaps time, an even more scarce resource, to prepare their own

food. Further, consumers often underestimate the calories, fat, and sodium content of frequently ordered restaurant foods (Burton et al. 2006). Understanding consumers' food literacy levels will not only help identify their starting point on the FWB continuum but may also provide indicators of the critical skills required to move forward on the FWB continuum.

### Emotional Knowledge

An important benefit of FWB is that "understanding and embracing people's pleasure from food" may help combat the obesity problem (Block et al. 2011, p. 8). Because both positive (Kahn and Isen 1993) and negative (Garg et al. 2007) emotions may increase the amount and type of food intake, understanding the emotional side of consumers' relationship with food may further illuminate their starting point on the FWB continuum. Food marketing messages may help or hinder consumer efforts to make decisions that advance FWB. For example, while nutrition information may help consumers make better choices, food marketers often use emotion-laden descriptions and visual images of hedonic foods designed to stimulate desire for the product. Incorporating measures of consumer emotional intelligence (Kidwell et al. 2008a), as well as consumer confidence in their ability to understand and manage emotional influences on their decision making, is critical to understanding how consumers use emotional knowledge to make food choices (Kidwell et al. 2008b). However, assessing consumers' emotional starting point on the FWB continuum is only a first step in determining change strategies. Recently, researchers have demonstrated that by training consumers in the "perception, understanding, facilitation, and regulation of emotions," one can encourage healthful food decision making (Peter and Brinberg 2012). Thus, understanding emotional influences as part of the FWB assessment and providing tools to help consumers manage their emotions in a way that facilitates healthy decisions may accelerate progress along the FWB continuum.

### Physical and Psychological Traits

Despite our emphasis on a wider array of measures to assess FWB at the individual level, a comprehensive tool to assess FWB must also include traditional measures of health and wellness. Therefore, in addition to measuring cultural lens, family and social influences, individual economic variables, access and availability to fresh food, food literacy, and emotional ability and confidence, a measure of FWB should also include physical and psychological traits. Examples include traditional demographic measures (e.g., age and education), health indicators (e.g., body mass index (BMI)), family medical conditions, dieting history, and current eating habits (e.g., food cravings, impulsive eating). In addition, actual food consumption patterns, as well as how consumers respond to food marketing efforts, are critical to understanding FWB at the individual level (Block et al. 2011). Measures of additional psychological traits that have been found to influence food consumption behaviours should also be included. For example, one such trait is body esteem which appears to interact with the shopping environment (e.g., lighting, décor) to influence shopping motivations and behaviour (Miller 2008). In addition, within specific demographic groups, complex relationships between FWB measures such as obesity and body esteem exist. For example, African American females, relative to Caucasian females, tend to experience relatively higher levels of body esteem despite having relatively higher BMI levels (Molloy and Herzberger 1998). Finally, measures of need for cognition, impulsivity, and level of self-control may also be critical to understanding how consumers relate to food.

A comprehensive measure of FWB that assesses these five dimensions of an individual's relationship with food will provide a starting point on the FWB continuum. However, much more research is needed to develop a comprehensive measurement tool. In some areas, research may begin with established scales as a starting point for each dimension we propose will likely need expanding. For example, assessing food literacy may include Moorman's (1996) nutrition knowledge scale. While researchers agree that a broader set of

measures is needed to assess food literacy in a way that facilitates a healthy relationship with food (Block et al. 2011; Worsley 2002), beginning with an existing framework advances our efforts to measure this dimension of the FWB construct. In the area of emotional knowledge, researchers are using the Consumer Emotional Intelligence Scale (Kidwell et al. 2008a), investigating how emotions influence food and health decision making (Kidwell et al. 2008b; Peter and Brinberg 2012). To build a comprehensive FWB measurement tool, other established measures such as the Body Esteem Scale (Franzoi and Shields 1984), the Household Food Insecurity Scale (Swindale and Bilinskyz 2006), as well as scales that measure dieting tendencies, such as the Restrained Eating Scale (Herman and Mack 1975) or the Dutch Eating Behavior Questionnaire (Van Strien et al. 1986), may provide insight on where to begin. Scales that measure broader personality influences on decision making such as the Brief Self-control Scale (Tagney et al. 2004) may also help identify why some consumers are better at managing impulses than others in a food context. Researchers may also gain a better understanding of how to tackle the complexity of measuring FWB by examining other assessment tools related to health outcomes, quality of life, and mortality (for reviews see Benyamini and Idler 1999; Idler and Benyamini 1997). Developing tools that measure global self-rated health may provide a good model for how to create measures with both clinical use for practitioners as well as practical use for consumers and responsible marketers (Fayers and Sprangers 2002). While developing a tool to measure FWB will be challenging, it is important to understand a consumer's current position on the FWB continuum before we can motivate consumers to advance FWB.

# Motivation and Readiness to Change

Assessing a starting point on the FWB continuum is only the first step in helping consumers advance FWB. Consumers at different points along the path are likely have varying degrees of motivation to advance their own FWB. In addition to motivation, one must also consider consumers' ability and opportunity to implement changes designed to move along the FWB continuum. An existing body of literature can help researchers and policymakers understand how consumers move through the stages of change. As consumers progress through the stages of precontemplation, contemplation, preparation, action, and maintenance (Prochaska and Di Clemente 1982), they display different patterns of behaviour change across a wide array of health behaviours (Prochaska et al. 2008). For example, consumers in the precontemplation stage place more emphasis on the cons of implementing specific changes while consumers in the action or maintenance stages overweight the pros of behaviour change (Prochaska et al. 1994). In the context of FWB this may mean that consumers in the precontemplation stage focus on the barriers or difficulties they will experience when trying to make more healthful food choices. Consideration of the stage of change together with an assessment of FWB may prompt more effective interventions for advancing FWB. In addition, consumer readiness to change may be influenced by life status changes such as marrying, divorcing, having children, transitioning from college to a career, or becoming an empty nester (Andreasen 1984). To help consumers advance FWB, researchers, practitioners, and policymakers need to understand not only consumer readiness to change but also the other life factors that may influence their motivation and ability to make necessary changes.

When examining consumer readiness, motivation and ability to change, we must also consider the reality that some consumers do not possess the desire or motivation to advance their own FWB. Simply providing access to a healthful selection of foods does little to advance FWB if consumers are not motivated to regularly incorporate these foods into their diets. Following an examination of a consumer's starting point on the FWB continuum together with their readiness and motivation to change, it is important to think about how to make changes that advance FWB. We as a society can create an environment where more healthful food decisions become more automatic. While much of this article focuses on the

FWB of individuals, creating opportunities to change may also require system-level changes such as modifying educational environments or neighbourhood commercial structures. How consumers respond to these types of macro level changes may be influenced by demographic and other variables such as developmental stage. For example, school programs that offer incentives and competitions appear to motivate children to choose more fruits and vegetables across elementary and middle school ages (Raju et al. 2010). However, obtaining pledges or commitments to increase fruit and vegetable consumption is less effective with younger age groups (Raju et al. 2010). Next, we discuss how policymakers and practitioners can draw upon a growing body of research investigating the deliberative and automatic influences on food decision making to promote positive changes in specific dimensions of FWB.

# **Deliberative and Automatic Influences on Food Decision Making**

Our ability to engage in complex thought for problem solving and decision making is a defining human characteristic. We know that human decision making involves an intricate web of both intentional cognitive thought as well as nonconscious processes. Much consumer research has been devoted to understanding how these deliberative and automatic processes influence food decision making. However, when we explore these influences in isolation from each other, we gain an understanding of the mechanism behind the influence but risk missing an opportunity to explore interactions that underlie such complex decisions. For example, consumers are susceptible to a wide array of perceptual biases that influence their ability to accurately estimate portion sizes, calories consumed, and the healthfulness of a food choice. However, not all consumers respond in the same way. To illustrate, packages designed to help one group of consumers curb consumption may actually license another group of consumers to overeat (Scott et al. 2008). Once a starting point on the FWB continuum is identified, research on how consumers respond to deliberative and automatic influences on consumption may help identify a set of tools consumers can use to advance their own FWB. For example, some consumers can be encouraged to deliberate more on their food choices which may, over time, encourage the development of more positive eating habits. These consumers may benefit from nutrition education that links eating decisions to dimensions of health and well-being. Other consumers can become more mindful of the automatic influences that lead to overconsumption and use their cognitive resources to combat the tendency to overeat (Wansink 2010). Once consumers know their FWB starting point and are motivated to make positive changes, customized subsets of tools to curb the consumption of less healthy foods and promote consumption of more healthy foods may be used in combination to propel specific consumers to advance FWB.

### Automatic Influences

Automatic influences on consumer decisions of what and how much to eat include both internal and external cues. Internal cues can include implicit associations with food such as the "tasty = unhealthy heuristic" (Raghunathan et al. 2006) or feelings activated by what consumers perceive as comfort foods (Wood 2010). External cues can include the tendency for underestimating the amount of calories in food consumed from larger bowls, plates, and serving utensils, resulting in increased food consumption (Wansink and Sobal 2007). Package claims such as "low fat" (Wansink and Chandon 2006) as well as the name of a food product such as "fruit" versus "candy chews" (Irmak et al. 2011) can prompt inferences about product healthfulness that license diet conscious consumers to eat more. Most consumers are not aware of the role automatic influences play in not only what they eat, but also how much they eat (Vartanian et al. 2008). On the other hand, automatic influences on eating can be invoked to help consumers make better choices. Consumers can be provided smaller plates to encourage smaller portions and less consumption or offered a fruit bowl

rather than a cookie jar as dessert (Wansink 2010). Mental simulation and visual imagery may be used to influence the perceived tastiness or desirability for healthy foods such as fruits and vegetables (Bernstein and Loftus 2009). By strategically using automatic influences on consumption, consumers, institutions, and policymakers can alter the eating environment to encourage decisions that advance FWB.

# Deliberative Influences

Educating consumers on health conscious eating typically involves encouraging consumers to become more mindful of their food choices. While frequently seen as a key path for improving FWB, turning food choices into a more deliberative process can also lead consumers astray. Obsessive thinking about food – to eat or not to eat, what to eat, and when to eat - centres thoughts on food and may make some consumers more likely to experience food cravings and overindulge (Bublitz et al. 2010). Consumers with specific eating intentions or diet goals may also experience guilt and regret when they violate these intentions (Herman and Polivy 1980). Such negative feelings toward overconsumption experiences may undermine motivation and future intentions to make healthy food choices. For some vulnerable populations, for example children, encouraging more conscious dieting behaviours may actually be detrimental to promoting a healthy relationship with food, and may also negatively influence their self and body esteem (Ricciardelli and McCabe 2001). Deliberative thinking about food choices is important, but too much emphasis on diet-focused thoughts may not promote a healthy relationship with food.

While much of the existing research focuses on a single aspect of food decision making, deliberative and automatic processes may simultaneously influence how consumers use and interpret nutrition information. One example of how deliberative and automatic processes may interact to influence food decisions comes from the increasingly complex food packaging environment consumers face each day. Deciphering nutritional information is a challenging task that even knowledgeable consumers, such as doctors and nutritionists, sometimes fail (Block and Peracchio 2006). The way nutrition information is structured and presented can influence consumers' ability to estimate calories accurately and may automatically influence consumption norms. For example, Antonuk and Block (2006) found that non-dieters exposed to both single serving and entire package nutrition information in a dual column format eat less than those exposed to the single serving label format alone. In this way, consumers become more aware of the recommended portion size and use deliberative processes to become mindful of how much they consume. Similarly, non-dieters eat less from portion controlled packages of snack foods than they do from larger package sizes (Scott et al. 2008). Armed with this knowledge, consumers may use this information strategically to form habits that reduce consumption and advance FWB. Beyond nutrition and package size information, consumers utilize a wide array of food and environmental cues to decide what, when, and how much to eat. Understanding the automatic and deliberative influences on consumption will help motivate the redesign of environments that encourage mindful choices as well as the development of habits that advance, rather than undermine. FWB.

# Conclusions

Throughout this paper, we sketch our vision for advancing Food Well-being (FWB), proposing five core areas that influence consumers' relationship with food including social factors, economic issues, food literacy, emotional knowledge, and other physical and psychological traits. We propose that measuring FWB in a way that can guide proactive interventions must also incorporate an assessment of consumer motivation, opportunity, and ability to change. Once a starting point on the FWB continuum is identified, policymakers, practitioners, and consumers can use the wealth of research on deliberative and automatic influences on food consumption to advance FWB. Within the conceptual framework for the

management of public health and social issue behaviours, researchers propose that education, marketing, and law can be used as strategic tools to tackle complex social problems in a way that will advance health at the individual level and combat the growing social costs (Rothschild 1999). For example, consumers motivated to advance FWB may benefit from educational efforts to better understand the short- and long-term health consequences of consuming sugary beverages such as soda and energy drinks. A well-designed public health campaign developed to persuade consumers to replace some of their beverage consumption each day with water may also advance FWB. Finally, laws that prohibit access to sugary beverages in school may be used to promote macro level changes in the environment that enhance our collective FWB. At different points on the FWB continuum, policymakers and consumers may rely on different combinations of these tools to move toward higher levels of Food Well-being. Figure 1 demonstrates how the process of assessment, motivation, and intervention might empower consumers to advance Food Well-being.

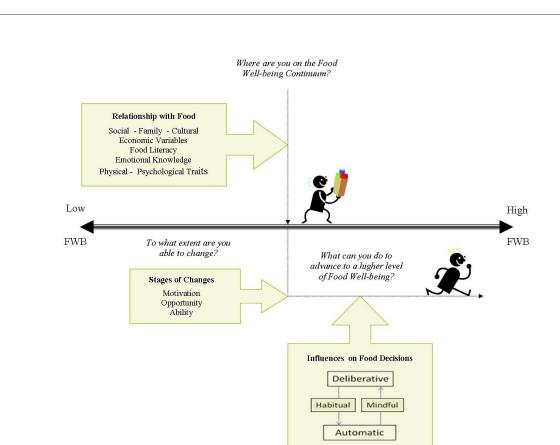


Figure 1: The Path to Food Well-being

Though we have made strides toward understanding the key elements that underscore FWB, more work is needed to identify the specific measures required to reliably assess FWB at the individual level. Researchers should work to develop a tool that will identify consumers' starting point on the FWB continuum as well as their motivation, opportunity, and ability to make changes to advance along the path. In the technologically advanced society in which we live, a well-designed tool delivered via the Internet, social media, and mobile devices might provide instant access for individual consumers, as well as industry and practitioners, to assess and monitor progress along the FWB continuum. Once a tool is developed,

additional work is needed to understand how deliberative and automatic factors interact to influence movement along the FWB continuum. Connecting an Internet assessment tool to current reliable health resources on the web might help consumers navigate the plethora of information available. In addition, research to understand the FWB of a variety of consumer segments, as well as to shed light on those consumers who may not have a realistic picture of their own relationship with food, will inform interventions designed to promote FWB for specific groups of consumers.

Once policymakers have a tool to assess FWB, as well as a better understanding of how to motivate consumers to advance their own FWB, specific segments of consumers will likely require different types of interventions. For example, consumers who possess the motivation to change, but lack the ability or opportunity due to economic conditions need policymakers to implement changes to improve access to healthy food choices and address food deserts. Groups of consumers who are not motivated to make positive changes may still advance along the FWB continuum if policymakers make changes in schools, communities, and commercial environments that automatically encourage healthy choices. For example, as behavioural economists have suggested, changing the structure of the lunchroom environment, the names of food choices, and the order of exposure to specific foods may increase healthy choices by children in an automatic manner (smarterlunchrooms.org 2011). An examination of how society rewards consumers who make positive changes may help us understand how to motivate those consumers who have become discouraged or complacent about their ability to advance their own FWB. While we focus our discussion on how to assess FWB at the individual level, it is important to think about how these measures might be assembled to assess and then track FWB within a broader population. For example, it may be revealing to look at a country level analysis of FWB and compare those findings to the prevalence of obesity within that country. Similarly, aggregating individual level data for specific consumer segments would allow us to compare how well-defined portions of a population (e.g., young children, diabetics, a defined geographic community) interact with food. Just as individual level measures give consumers a starting point along the FWB continuum, aggregating population and group level analyses can facilitate measures of progress as policymakers implement system changes designed to advance FWB. Finally, policymakers will also benefit from understanding research on how to motivate consumers using interventions that combine automatic and deliberative influences to keep consumers moving on the FWB path. In short, research to better understand FWB will likely provide an innovative set of new tools policymakers can use to create impactful change.

Many benefits outlined to assist policymakers may also help private industry and health practitioners motivate consumers to make positive changes. For example, a FWB assessment tool may be the starting point for a dialog about FWB between a doctor and a patient. Armed with research to better understand which types of changes and interventions might work best depending on the FWB starting point and consumer motivation to change, realistic goals can be set and small improvements measured as consumers advance their own FWB. One important concern for the health provider community is how a self-reported assessment of FWB compares to more objective and traditional measures of health and wellness. Individuals may not always have a realistic picture of their relationship with food. For example, consumers may identify their relationship with food as healthy when in fact objective measures of health status, such as BMI or the presence of specific disease conditions, should prompt a less optimistic assessment. The reverse may also be true. Specifically, someone who is quite healthful by all outward objective measures (e.g., average BMI) may be extremely pessimistic in their assessment of their starting point on the FWB continuum. The difference between objective and subjective FWB measures is important to address because it can impact consumers' motivation and readiness to change.

In addition to the constituent groups discussed—researchers, policymakers, practitioners and ultimately consumers—other types of organizations stand to benefit from a development of a

tool to assess and track FWB. Companies who provide health assessments and implement systemic changes to work environments may experience cost savings over the long term by helping their employees advance on the FWB continuum. At the same time, there are currently many companies in the health promotion industry as well as in the food packaging and restaurant industries striving to not only encourage consumers to make healthy choices but also develop profitable commercial products that advance health initiatives. Providing opportunities for consumers to collaborate with professionals in the health community, their employers, and commercial entities may provide the additional support needed to advance FWB.

More research is needed to achieve the vision for measuring and advancing FWB. It is likely that development work on a comprehensive measurement tool will generate additional questions that must be resolved along the way. For example, will all dimensions carry the same weight in an overall FWB score? How will subjective and objective measures be compared and used? It is also important to recognize that not all consumers or segments of consumers have the same FWB end state goals. Future research is needed to better understand how to set objective measures to assess progress should differ for different groups of consumers. In addition, researchers need to better understand the unique needs of consumers for whom there is a large discrepancy between subjective and objective measures of FWB.

In this article, we have considered how FWB should be assessed at the individual level. To advance along the FWB continuum, consumers will need a comprehensive and integrated tool that will not only provide feedback about their current state of FWB, but will also motivate and empower them to advance their own FWB. Consumers may benefit from assistance in setting small, measurable, and attainable goals. Once consumers see how these changes can influence their FWB, they may feel motivated to, as well as capable of, implementing other changes that advance their health goals. Experiencing and celebrating successes along the FWB continuum is critical to motivating consumers to achieve Food Well-being.

### References

- Andreasen, Alan A. (1984), "Life Status Changes and Changes in Consumer Preferences and Satisfaction," *Journal of Consumer Research*, 11 (3), 784-794.
- Andrews, J. Craig, Richard G. Netemeyer, and Scot Burton (2009), "The Nutrition Elite: Do Only the Highest Levels of Caloric Knowledge, Obesity Knowledge, and Motivation Matter in Processing Nutrition Ad Claims and Disclosures?" *Journal of Public Policy & Marketing*, 28 (1), 41-55.
- Antonuk, Beth and Lauren G. Block (2006), "The Effect of Single Serving Versus Entire Package Nutritional Information on Consumption Norms and Actual Consumption of a Snack Food," *Journal of Nutrition Education & Behavior*, 38 (6), 365-370.
- Benyamini, Yael and Ellen L. Idler (1999), "Community Studies Reporting Association Between Self-Rated Health and Mortality: Additional Studies, 1995–1998," *Research on Aging*, 21 (3), 392-401.
- Bernstein, Daniel M. and Elizabeth F. Loftus (2009), "The Consequences of False Memories for Food Preferences and Choices," *Perspectives on Psychological Science*, 4 (2), 135-139.
- Block, Lauren G., Sonya A. Grier, Terry L. Childers, Brennan Davis, Jane E. J. Ebert, Shiriki Kumanyika, Russell N. Laczniak, Jane E. Machin, Carol M. Motley, Laura Peracchio, Simone Pettigrew, Maura Scott, and Mirjam N. G. van Ginkel Bieshaar (2011), "From Nutrients to Nurturance: A Conceptual Introduction to Food Well-being," *Journal of Public Policy & Marketing*, 30 (1), 5-13.

Block, Lauren G. and Laura A. Peracchio (2006), "The Calcium Quandary: How Consumers Use Nutrition Labels," *Journal of Public Policy & Marketing*, 25 (2), 188-196.

- Bublitz, Melissa G., Laura A. Peracchio, and Lauren G. Block (2010), "Why Did I Eat That? Perspectives on Food Decision Making and Dietary Restraint," *Journal of Consumer Psychology*, 20 (3), 239-258.
- Burton, Scot, Elizabeth H. Creyer, Jeremy Kees, and Kyle Huggins (2006), "Attacking the Obesity Epidemic: The Potential Health Benefits of Providing Nutrition Information in Restaurants," *American Journal of Public Health*, 96 (9), 1669-1675.
- Fayers, Peter M. and Mirjam A. G. Sprangers (2002), "Understanding Self-Rated Health," *Lancet*, 359 (9302), 187-188.
- Franzoi, Stephen L and Stephanie A. Shields (1984), "The Body Esteem Scale: Multidimensional Structure and Sex Differences in a College Population," *Journal of Personality Assessment*, 48 (2), 173-178.
- Garg, Nitika, Brian Wansink, and J. Jeffrey Inman (2007), "The Influence of Incidental Affect on Consumers' Food Intake," *Journal of Marketing*, 71 (1), 194-206.
- Herman, C. Peter and Deborah Mack (1975), "Restrained and Unrestrained Eating," *Journal* of *Personality*, 43 (4), 647-660.
- Herman, C. Peter and Janet Polivy (1980), "Restrained Eating," In A. J. Stunkard ed. *Obesity*, London: W.B. Saunders, 208-225.
- Idler, Ellen L. and Yael Benyamini (1997), "Self-Rated Health and Mortality: A Review of Twenty-Seven Community Studies," *Journal of Health and Social Behavior*, 38 (1), 21–37.
- Irmak, Caglar, Beth Vallen, and Stefanie Rosen Robinson (2011), "The Impact of Product Name on Dieters' and Nondieters' Food Evaluations and Consumption," *Journal of Consumer Research*, 38 (2), 390-405.
- Kahn, Barbara E. and Alice M. Isen (1993), "The Influence of Positive Affect on Variety Seeking among Safe, Enjoyable Products," *Journal of Consumer Research*, 20 (2), 257-270.
- Kidwell, Blair, David M. Hardesty, and Terry L. Childers (2008a), "Consumer Emotional Intelligence: Conceptualization, Measurement, and the Prediction of Consumer Decision Making," *Journal of Consumer Research*, 35 (2), 154-66.
- Kidwell, Blair, David M. Hardesty, and Terry L. Childers (2008b), "Emotional Calibration Effects on Consumer Choice," *Journal of Consumer Research*, 35 (4), 611-621.
- Letsmove.gov (2011), Healthy Communities, Accessed June 30, 2011. Available at http://www.letsmove.gov/healthy-communities.
- McFerran, Brent, Darren W. Dahl, Gavan J. Fitzsimons, and Andrea C. Morales (2010), "I'll Have What She's Having: Effects of Social Influence and Body Type on the Food Choices of Others," *Journal of Consumer Research*, 36 (6), 915-929.
- Miller, Elizabeth Gelfand (2008), "Real Consumers Have Curves: The Effects of Body Esteem and Weight on Consumer Responses to Marketing Stimuli," *Advances in Consumer Research*, North American Conference Proceedings, 35, 205-208.
- Molloy, Beth L. and Sharon D. Herzberger (1998), "Body Image and Self-Esteem: A Comparison of African-American and Caucasian Women," *Sex Roles*, 38 (7-8), 631-643.
- Moorman, Christine (1996), "A Quasi Experiment to Assess the Consumer and Informational Determinants of Nutrition Information Processing Activities: The Case of the Nutrition Labeling and Education Act," *Journal of Public Policy & Marketing*, 15 (1), 28-44.
- Motley, Carol M., and Vanessa Gail Perry (2009), "Home for Dinner: Exploring Family Food Traditions," in C. David Shepherd, ed. *Enriching Theoretical and Practical Understanding of Marketing*, Proceedings of the 2009 Annual Association for Marketing Theory and Practice Conference, Georgia Southern University: Statesburo, GA, 18, 125.
- Peter, Paula C. and David Brinberg (2012), "Learning Emotional Intelligence: An Exploratory Study in The Domain of Health," forthcoming in *Journal of Applied Social Psychology*.

- Prochaska, James O. and Carlo C. Di Clemente (1982), "Transtheoretical Therapy: Toward a more Integrative Model of Change," *Psychotherapy: Theory, Research & Practice*, 19 (3), 276-288.
- Prochaska, James O., Wayne F. Velicer, Joseph S. Rossi, Michael G. Goldstein, Bess H. Marcus, William Rakowski, Christine Fiore, Lisa L. Harlow, Colleen A. Redding, Dena Rosenbloom, and Susan R. Rossi (1994), "Stages of Change and Decisional Balance for Twelve Problem Behaviors," *Health Psychology*, 13 (1), 39-46.
- Prochaska, James O., Julie A. Wright, and Wayne F. Velicer (2008), "Evaluating Theories of Health Behavior Change: A Hierarchy of Criteria Applied to the Transtheoretical Model," *Applied Psychology*, 57 (4), 561-588.
- Raghunathan, Rajagopal, Rebecca Walker Naylor, and Wayne D. Hoyer (2006), "The Unhealthy = Tasty Intuition and Its Effects on Taste Inferences, Enjoyment, and Choice of Food Products," *Journal of Marketing*, 70 (4), 170-184.
- Raju, Sekar, Priyali Rajagopal, and Timothy J. Gilbride (2010), "Marketing Healthful Eating to Children: The Effectiveness of Incentives, Pledges, and Competitions," *Journal of Marketing*, 74 (3), 93-106.
- Ricciardelli, Lina A. and Marita P. McCabe (2001), "Children's Body Image Concerns and Eating Disturbance: A Review of the Literature," *Clinical Psychology Review*, 21 (3), 325-344.
- Rothschild, Michael L. (1999), "Carrots, Sticks, and Promises: A Conceptual Framework for the Management of Public Health and Social Issue Behaviors," *Journal of Marketing*, 63 (4), 24-37.
- Scott, Maura L., Stephen M. Nowlis, Naomi Mandel, and Andrea C. Morales (2008), "The Effects of Reduced Food Size and Package Size on the Consumption Behavior of Restrained and Unrestrained Eaters," *Journal of Consumer Research*, 35 (3), 391-405.
- Smarterlunchrooms.org (2011), Case Studies, Accessed July 7, 2011. Available at http://smarterlunchrooms.org/index.html.
- Swindale, Anne and Paula Bilinskyz (2006), "Development of a Universally Applicable Household Food Insecurity Measurement Tool: Process, Current Status, and Outstanding Issues," *Journal of Nutrition*, 136 (5), 1449S-1452S.
- Tangney, June P., Roy F. Baumeister, and Angie Luzio Boone (2004), "High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success," *Journal of Personality*, 72 (2), 272-322.
- van Strien, Tatjana, Jan E. R. Frijters, Gerard P. A. Bergers, and Peter G. Defares (1986), "Dutch Eating Behavior Questionnaire for Assessment of Restrained, Emotional, and External Eating Behavior in Healthy Young Women," *International Journal of Eating Disorders*, 5 (2), 295-315.
- Vartanian, Lenny R., C. Peter Herman, and Brian Wansink (2008), "Are We Aware of the External Factors that Influence our Food Intake?" *Health Psychology*, 27 (5), 533-538.
- Wansink, Brian (2010), "From Mindless Eating to Mindlessly Eating Better," *Physiology & Behavior*, 100 (5), 454-463.
- Wansink, Brian and Pierre Chandon (2006), "Can "Low-Fat" Nutrition Labels Lead to Obesity?" *Journal of Marketing Research*, 43 (4), 605-617.
- Wansink, Brian and Jeffery Sobal (2007), "Mindless Eating: The 200 Daily Food Decisions We Overlook," *Environment & Behavior*, 39 (1), 106-123.
- Worsley, Geneva A. (2002), "Nutrition Knowledge and Food Consumption: Can Nutrition Knowledge Change Food Behavior?" *Asia Pacific Journal of Clinical Nutrition*, 11:Suppl. S, S579-S585.
- Wood, Stacy (2010), "The Comfort Food Fallacy: Avoiding Old Favorites in Times of Change," *Journal of Consumer Research*, 36 (6), 950-963.
- Zimbardo, Philip G. and John N. Boyd (1999), "Putting Time in Perspective: A Valid, Reliable Individual-Difference Metric," *Journal of Personality and Social Psychology*, 77 (6) 1271-1288.