

12-31-2014

Promoting Participation in Sustainable Living Educational Programming Events Among Nonenvironmentally-Motivated Individuals: The Importance of Key Informant Involvement

Brooklynn J. Wynveen
Sam Houston State University, bjw028@shsu.edu

Follow this and additional works at: <https://egrove.olemiss.edu/jrss>



Part of the [Rural Sociology Commons](#)

Recommended Citation

Wynveen, Brooklynn. 2014. "Promoting Participation in Sustainable Living Educational Programming Events Among Nonenvironmentally-Motivated Individuals: The Importance of Key Informant Involvement." *Journal of Rural Social Sciences*, 29(2): Article 1. Available At: <https://egrove.olemiss.edu/jrss/vol29/iss2/1>

This Article is brought to you for free and open access by the Center for Population Studies at eGrove. It has been accepted for inclusion in *Journal of Rural Social Sciences* by an authorized editor of eGrove. For more information, please contact egrove@olemiss.edu.

**PROMOTING PARTICIPATION IN SUSTAINABLE LIVING
EDUCATIONAL PROGRAMMING EVENTS AMONG NON-
ENVIRONMENTALLY-MOTIVATED INDIVIDUALS: THE
IMPORTANCE OF KEY INFORMANT INVOLVEMENT***

BROOKLYNN J. WYNVEEN

SAMHOUSTON STATE UNIVERSITY

ABSTRACT

Many social science researchers agree that overconsumption of resources and consumer goods is a major problem in Western culture today, particularly in the United States. Thus, promoting sustainable behavior among the public in rural and urban areas alike is important. Although existing research offers suggestions for promoting sustainable behaviors among environmentally-motivated audiences, a void remains with respect to encouraging non-environmentally-motivated individuals to adopt more sustainable behaviors. In response, I conducted a formative experiment aimed specifically at: 1) fostering participation among non-environmentally-motivated individuals in sustainable living educational programming events, and 2) promoting subsequent behavior change among those participants in the direction of more sustainable lifestyles. This article focuses on the first goal, and specifically on the role of key informant involvement in achieving increasing levels of participation for each of the four iterations comprising this project. This strategy has the potential to improve participation in similar programming among various target audiences, including those in the rural areas familiar to JRSS readership.

Over the past several decades, consumption of goods and resources in the United States and other Western nations has risen to unsustainable levels (McKenzie-Mohr and Oskamp 1995; Oakley, Chen, and Nisi 2008; Simon-Brown 2004). Such conspicuous consumption has been described by Etzioni (1998) as both addictive and obsessive. These unsustainable levels of consumption lead to many negative impacts. At the environmental level, those include: stresses and strains on natural sinks (Mebratu 1998); pressure on forest, soil, and water resources (Simon-Brown 2004); and climate-change impacts, such as rapid sea level rise, drier climates, and increased “frequency and severity of storms” (McKenzie-Mohr and Oskamp 1995:3). At the individual level, impacts include widespread dissatisfaction (Reisch 2001); health problems such as nutritional inadequacy, chronic disease, and obesity; and unprecedented levels of consumer debt and bankruptcy (Cohen 2005).

*An earlier version of this article was presented at the 2014 annual meeting of the Southern Rural Sociological Association. This manuscript is based on dissertation research conducted at Clemson University, and supervised by Dr. Cliff Ellis. Corresponding author contact information: Brooklynn J. Wynveen, 301 Bonham Drive, Hewitt, TX 76643. (979) 220-9973. (Email: bjw028@shsu.edu)

In response, Fien, Neil, and Bentley (2008) have cited a transition to sustainable consumption as one of today's central challenges. Beyond countering the negative collective impacts associated with unsustainable consumption, *sustainable* consumption carries with it many positive implications for individuals, including improvements in: subjective well-being, happiness, and life satisfaction (Brown and Kasser 2005). This well-being is also positively influenced by increased satisfaction in the realms of family life, friendships, work, and leisure (Etzioni 1998; Zavestoski 2002), which frequently accompanies more sustainable lifestyles. Overall, research supports the suggestion by Oakley, Chen, and Nisi (2008) that sustainable practices contribute to improved quality of life. Thus, the importance of persuading individuals to live more sustainably is clear.

Existing research and social psychological theories (e.g., value-belief-norm theory) offer suggestions for promoting sustainable (or at least pro-environmental) behaviors among individuals who are environmentally motivated. Indeed, even individuals with alternative motivations may be successfully encouraged to participate in *specific* pro-environmental behaviors, through community-based social marketing campaigns. That process, however (according to its proponents), requires the promotion of one behavior at a time. Thus, the extant research does little to provide practical solutions for promoting overall sustainable lifestyles among a broad range of individuals with varying backgrounds, attitudes, and motivations.

In response to this gap in the literature, I conducted a formative experiment designed to promote sustainable behavior specifically among non-environmentally-motivated individuals by: 1) increasing their participation in sustainable living educational programming events; and 2) obtaining behavior change commitments from event participants in the direction of greater sustainability. The analysis presented in this paper specifically explores the role of key informant involvement in achieving the project's first goal by addressing the following research question: "In what ways can key informant involvement be leveraged to promote participation in sustainable living educational programming events among non-environmentally-motivated individuals?"

LITERATURE REVIEW

Value-Belief-Norm (VBN) Theory

VBN theory (Collins and Chambers 2005; Kaiser, Hübner, and Bogner 2005; Stern 2000; Stern et al. 1999) suggests that pro-environmental behavior is the result of a causal chain of values, attitudes, beliefs, and norms (Stern 2000). Values relevant for explaining environmental behaviors represent the first set of constructs

PROMOTING PARTICIPATION IN ED PROGRAMMING

3

in the VBN model, and include: biospheric (concern for nonhuman aspects of the environment), social altruistic (focused on the welfare of others), and egoistic (focused on one's own welfare) (Stern, Dietz, and Kalof 1993).

The second construct within the VBN model, and the second link in the causal chain following personal values, is an individual's environmental worldview (Stern et al. 1995). Typically measured along biocentric and anthropocentric dimensions using the New Ecological Paradigm (NEP) scale (Dunlap et al. 2000), one's environmental worldview is a set of general beliefs about the Earth and human-environment relations (Stern et al. 1999).

Environmental worldview, according to the VBN model, influences an individual's awareness of adverse consequences (AC) resulting from his or her actions (Stern 2000). Related to and following AC in the VBN model is ascription of responsibility (AR), which is an individual's awareness that "actions they could initiate could avert those [adverse] consequences" (Stern 2000:412).

Following AR, the VBN model incorporates an individual's personal norms regarding the environment, that is, the internalized standards that suggest how one should behave in a given context (one's sense of moral obligation). Those personal norms then influence the individual's intention to behave in a given manner, which in turn influences actual behavior (Stern et al. 1999).

Many studies have shown VBN theory to be highly reliable. Thus, it has received a good deal of support, and has been widely used by researchers to better understand individuals' actions regarding the environment. Such studies have provided valuable insight regarding *who* generally participates in various types of environmentally responsible behavior and *why*. In fact, the theory even offers some insight regarding how such behaviors might be promoted and encouraged, particularly among environmentally-motivated audiences.

However, the constructs associated with VBN theory are problematic for practitioners seeking to promote sustainable behavior among alternatively (i.e., socially and/or economically) motivated individuals. Specifically, the VBN causal chain has been summarized as follows: "proenvironmental behaviors stem from acceptance of particular personal values, from beliefs that things important to those values are under threat, and from beliefs that actions initiated by the individual can help alleviate the threat and restore the values" (Oreg and Katz-Gerro 2006:464).

Moreover, regarding personal values, research has typically shown that altruism, openness to change, biocentrism, and ecocentrism are more likely than egoistic values to lead to environmentalism and pro-environmental behavior (Barr 2003). In spite of several exceptions (e.g., Stern and Dietz 1994; Stern et al. 1995),

biospheric and altruistic values and attitudes are generally viewed as necessary to promote the adoption of environmentally-significant behavior. Kurz (2002:274) went as far as to call pro-environmental attitudes “*necessary* but not sufficient in bringing about changes in people’s [environmentally-significant behaviors]” (emphasis added).

Besides this strong emphasis on pro-environmental or prosocial values and attitudes, VBN relies on individuals’ awareness of adverse consequences (AC) and their ascription of responsibility (AR) regarding their behavior (Collins and Chambers 2005; Stern 2000; Stern et al. 1999). Collins and Chambers (2005:640) have suggested that AC includes perceptions of an “environmental threat” associated with individuals’ behavior. Similarly, Stern (2000:412) called AR individuals’ awareness that “actions they could initiate could avert those consequences.” The reliance on AC and AR are problematic because “[b]ehaviour change in response to threat requires that people feel personally vulnerable, feel capable of responding, and feel some degree of responsibility for the problem” (Gardner et al. 2009:28). Individuals who are alternatively (i.e., non-environmentally) motivated may not ascribe to the attitudes and beliefs outlined above. Thus, theories that rely on such attitudes and beliefs would suggest a much greater degree of difficulty in persuading the adoption of environmentally-significant behaviors among such individuals.

Community-based Social Marketing

Despite shortcomings related to the commonly accepted VBN theory, several researchers have identified factors contributing to effective behavior change even among those without environmental motivations, largely based on the principles of community-based social marketing (CBSM; McKenzie-Mohr 2000a, 2000b; Monroe 2003). That process essentially involves five steps: 1) selecting behaviors to target among a particular population (ultimately narrowing potential behaviors down to *one*); 2) identifying both barriers to and benefits of the chosen behavior; 3) developing strategies for fostering that behavior within the chosen population; 4) piloting a program designed to promote the chosen behavior; and 5) broadly implementing successful programs (McKenzie-Mohr and Smith 1999).

As suggested by the first step in the process outlined above, CBSM has been most successfully employed when targeting one behavior at a time. However, changing behaviors one at a time is not always practical or desirable. As De Young (1993:485) has asserted, “Never before have so many behaviors needed to change in so short a time.” Even in situations where the goal is to promote more generally

PROMOTING PARTICIPATION IN ED PROGRAMMING

5

sustainable lifestyles rather than one specific behavior, several steps in the CBSM process suggest its potential relevance as a theoretical framework. First, just as identifying barriers and benefits of behavior change when focusing on one behavior is important, identifying both perceived barriers and valued benefits when seeking to promote more sustainable lifestyles overall is also important (Simon-Brown 2000, 2004). Second, practitioners seeking to promote sustainable lifestyles must develop strategies that are appropriate for their target audiences and populations. Finally, the formative process of piloting and evaluating programs before broad implementation is as applicable when promoting a broad range of behaviors as when targeting only one.

These recommendations contributed to the design of the formative experiment described here. Specifically, I sought to identify perceived barriers to and valued benefits of sustainable living among non-environmentally-motivated individuals, as well as potentially successful strategies for recruiting participants for educational programming events. I did this by using a formative experiment, for which I collaborated with four existing organizations within the study community (a mid-sized metropolitan area in Texas) to plan and conduct sustainable living educational programming events (i.e., workshops) designed to foster sustainable lifestyles among participants.

METHODS

Analytical Approach

As noted above, I conducted this project as a formative experiment, which can be described most simply as an iterative series of pilot tests designed around a chosen intervention (e.g., educational, behavioral). After each iteration, adaptations are made to both improve outcomes for subsequent iterations and provide recommendations for how other practitioners may also do so. This process is designed to overcome the frequent gap that exists “between research findings and the demands of authentic practice” (Reinking and Bradley 2008:20).

Several unique features distinguish formative experiments from other research approaches (described in detail in Reinking and Bradley [2008]). Most relevant to this paper, the formative approach is goal oriented. The goals of a formative experiment are substantive, and often pedagogical. Moreover, formative researchers use their work to effect a change among participants in a study, in contrast with more traditional research goals (i.e., to understand, explain, or predict). In the research presented here, for instance, I did not seek to merely understand, explain, or predict participation in sustainable living educational programming events

among non-environmentally-motivated individuals. Instead, I endeavored to *promote* increasing participation in such events for each of the project's four iterations. Also unique to formative experiments is an emphasis on identifying enhancing and inhibiting factors that emerge during the investigation as contributing to successes and failures encountered. These factors then inform adaptations to interventions and interpretations of findings obtained, as well as recommendations for future work.

Again, for this study I conducted four iterations of my chosen intervention, in collaboration with four existing organizations within the study community. I sought collaboration with organizations that did not exhibit explicitly environmental orientations. For example, the local branch of Keep America Beautiful was not targeted for collaboration. Instead, I communicated with the leadership of organizations (identified through internet searches and recommendations of local residents) whose mission statements, purpose statements, vision statements, activities, and so forth demonstrated more social and/or economic orientations. For instance, the first iteration was conducted in collaboration with an organization consisting of local young professionals and dedicated primarily to promoting social and networking opportunities, as well as professional development, for members. The second iteration was coordinated through a women's organization on the local university campus that espoused not only a commitment to the development of social relationships among the group's members, but also to service—both on campus and in the surrounding community. The third iteration was conducted in collaboration with a local, evangelical, and (according to staff and key informants) decidedly “externally-focused” church. The fourth iteration was conducted among the college-aged population within that same church. While 21 local organizations were contacted and invited to participate in the project, these four were the only organizations whose leaders followed through with participation in the project. As such, they represent a convenience sample.

Furthermore, it should be noted that I am a member of both the second and third organizations. While for some aspects of the larger project, this might pose a risk for bias, the constructs explored for the present analysis are less dependent on my membership in those organizations. Further, I have attempted to provide ample supporting evidence (through rich and thick description) to suggest that my interpretation of the data collected was not unduly influenced by my membership. Finally, I invited all key informants to read initial drafts of my report and to correct or clarify any misrepresentations.

PROMOTING PARTICIPATION IN ED PROGRAMMING

7

The intervention itself consisted of two phases: 1) interviews with key informants from within chosen organizations (to identify perceived barriers to and valued benefits of sustainable living among non-environmentally-motivated individuals, as well as potentially successful strategies for recruiting participants for educational programming events); and 2) educational programming events (i.e., workshops) designed to promote sustainable behavior among participants (based on an existing curriculum), and tailored to each organization based on key informant responses. After each iteration, I made adaptations informed by the outcomes of the previous iteration(s), and by enhancing and inhibiting factors identified for each.

In this paper, I report on outcomes related to the first of two goals comprising a larger formative experiment: fostering participation in sustainable living educational programming events among non-environmentally-motivated individuals. Specifically, I detail findings related to the following research question: “In what ways can key informant involvement be leveraged to promote participation in sustainable living educational programming events among non-environmentally-motivated individuals?”

Key Informant Interviews

The planning process for each iteration of this project involved key informant interviews, conducted before programming events to gain insight into the needs and preferences of organization members (in terms of perceived barriers, valued benefits, and recruitment recommendations). Those interviews represent the primary data source for findings reported here. I used a purposeful sampling method to select key informants. Organization leaders were asked to identify active and engaged organization members whom they believed to represent the broader group membership and/or be in touch with the values and attitudes of other members. Those members were contacted and invited to participate in one-on-one interviews, which generally lasted 45–60 minutes. For each iteration, interviewees were also asked, in a snowball sampling fashion, to identify other potential participants for the key informant phase of research. The number of key informants interviewed for each organization ranged from three (Iteration 1) to ten (Iterations 2–4), based largely on willingness to participate. Across all iterations, then, a total of 33 key informants participated in interviews.

Constructs and Measures

Key informants for each iteration (referred to using pseudonyms throughout this paper) were asked a series of semi-structured interview questions, responses to which were digitally recorded, transcribed, and thematically analyzed using constant comparative methods (Merriam 1998). Several of those questions measured constructs relevant to the current analysis and are outlined below (the complete interview guide is available from the author upon request). To the degree possible, I sought to achieve data saturation, although that goal was not accomplished for every iteration, due to variability in willingness to participate in key informant interviews across organizations.

Perceived barriers to living sustainably. Several interview questions elicited responses that illuminated perceived barriers to living sustainably among key informants themselves and/or other members of their organizations. While some interview questions were asked specifically to shed light on perceived barriers to living sustainably, others were not. For instance, to gauge existing perceptions and understandings of the terms *sustainability* and *sustainable living*, key informants were asked early in the interview process: 1) “What comes to mind when I say the word *sustainability*?”; and 2) “How would you define *sustainable living*?” Beyond offering their personal responses to those questions, several informants also spoke to their impressions of other organization members’ perceptions of the terms. While this study uses a three-dimensional operational definition of these terms (including economic, social, and environmental dimensions), that definition was not shared with informants until after they had responded to these two questions. Although not included for the explicit purpose of doing so, informants’ responses to these questions revealed important information regarding potential barriers to participation in sustainable living educational programming events among members of informants’ organizations. As such, related themes are included in the analysis reported here.

In contrast to questions that inadvertently led to revealing information, key informants were also explicitly asked to identify potential barriers and obstacles that might prevent themselves and/or their organizations’ members from living more sustainably. The wording of the question(s) used, however, was adapted slightly from one iteration to the next, to improve informant comprehension, as well as to elicit the desired data from informants’ responses. Namely, informants from Iterations 1 through 3 were first asked to share barriers or obstacles to living sustainably that they perceived for themselves or other members based upon their own definition of sustainable living, and were then asked to consider the broader

PROMOTING PARTICIPATION IN ED PROGRAMMING

9

three-dimensional definition provided to them. Informants for Iteration 4 were asked specifically to consider all three dimensions of sustainable living (i.e., economic, social, and environmental) in the initial question.

Values and priorities of organization members. To identify valued benefits that non-environmentally-motivated individuals would seek from sustainable living educational programs, I sought to identify the salient (and less salient) values and priorities of organization members. To do so, I asked key informants to share what they perceived to be the most important values and/or priorities in the lives of their organization's members. In addition, they were asked to rank a given set of priorities, in order of importance, from the perspective of the average member of the organization (to the best of their ability). Those priorities were: time, money, family relationships, social relationships, health, community, faith (for Iterations 2-4), and the environment (for Iterations 3 and 4). Ranks were summed across key informants within each iteration to obtain cumulative scores used to assess the overall importance of each priority for that organization's members. With this ranking question, informants were asked to elaborate upon their responses by indicating why they answered in the ways that they did. Thematic qualitative analysis of those comments (again using constant comparative techniques) was used to triangulate findings from the ranking question and the open-ended question regarding values and priorities. That is, themes that emerged from the comments were used to either corroborate or qualify the quantitative findings obtained through the ranking question.

Recruitment strategies. Potentially effective strategies for recruiting organization members (i.e., non-environmentally-motivated individuals) to participate in sustainable living educational programming events were identified through two specific questions. Informants for Iterations 1 through 3 were first asked, "What do you see as effective ways in which members could be recruited to participate in a seminar designed to promote sustainable living?" This question's wording was changed for Iteration 4 to, "How do you think [your organization's members] could be effectively encouraged to make more sustainable choices?" Readers will note that these questions do not have the same inherent meaning, and therefore do not necessarily reflect the same construct. The change was deemed necessary for the purposes of gaining other important information, but as a result, informants from Iteration 4 were slightly less instrumental in the identification of effective recruitment strategies. However, some recruitment strategies were identified throughout those interviews in response to other interview questions.

Besides asking informants about recruitment strategies directly, I asked them to gauge potential interest in sustainable living educational programming among organization members. Responses to that question augmented their other responses, and provided even more suggestions for effective recruitment. Namely, respondents often expressed various conditions under which organization members might be interested in participating in such programming.

Participation in programming events. For this investigation, participation was measured as a count variable. That is, the number of participants at each event was recorded to determine increases in participation across iterations. For iterations wherein multiple programming events were conducted, the number of participants was summed across events for a total participation count.

To analyze key informant interview data, I treated each iteration as one case in a multiple-case case study (Yin 2009). As such, I first analyzed each case separately (identifying prominent themes that emerged in relation to the constructs of interest). Then, after all iterations were completed, I conducted a cross-case analysis to compare similarities and differences across cases. In the following section, I present findings from the cross-case analysis, noting the extent to which themes were consistent across cases.

ANALYSIS AND FINDINGS

In this section, I present themes that emerged from informant responses to key questions related to: perceived barriers to living sustainably; organization members' values and priorities; and suggested recruitment strategies. In addition, I report outcomes in terms of participation among organization members in programming events. Then, in the Discussion and Conclusions section, I detail the contributions of key informant involvement to the achievement of this project's goals, along with the project's implications for future research and current practice.

Barriers to Living Sustainably

Regarding barriers to sustainable living, several themes surfaced across the last three iterations especially. Those included: cultural barriers; infrastructural barriers; barriers related to time, effort, and inconvenience; barriers related to knowledge, awareness, and education; financial costs; and spiritual or philosophical barriers.

Cultural barriers. The idea of *cultural barriers* was expressed across iterations, although the themes were labeled differently for each iteration, based on the focus of informants' comments. For the first iteration, the theme was labeled, simply,

PROMOTING PARTICIPATION IN ED PROGRAMMING

11

societal barriers. According to Carl, such barriers included media pressure and incentives to consume and be fiscally irresponsible. In addition key informants believed that organization members may feel the need to project a certain image through the clothes they wear, the cars they drive, and so forth. Adam (an informant with a lesser understanding of concepts related to sustainability and sustainable living) added the absence of group norms as a barrier that might also be seen as societal. He suggested that if the organization would adopt an initiative in support of sustainability (i.e., picking up trash around the neighborhood), that might provide the needed incentive.

For the second iteration, the cultural theme was labeled *expectations, comfort, and social norms*. As Elaine confessed, “We’ve become so accustomed to getting what we want, when we want it, no matter how much it costs. . . . It’s also entitlement, like, ‘it’s there, I want it, I should have it.’” Jackie echoed Elaine, stating that “we’re very spoiled. . . . Just taking life for granted, I guess, as Americans. . . . We kind of want what we want when we want it. And, without much regard to the future.” Deborah (also from Iteration2) qualified these comments on cultural influence by claiming that “stigma would not be a barrier to living sustainably.” Indeed, she thought that well-educated people, especially, “would be in favor of efforts in that direction.” However, based on the perceptions of the other informants, it might be more accurate to say that people would favor such efforts only to the extent that they did not interfere with more firmly held, pre-existing expectations. Laura described those expectations as such:

It’s the keeping up with the Joneses, it’s people looking at you funny when you say ‘don’t throw that can in the trash, throw it in the recycling bin’ . . . when you say I’m gonna leave and not be in the office for two days a week because I’ll be at home with my family—it’s the looks that you get for that.

For the third iteration, the theme labeled *culture*, and the related theme of *image, social norms, and peer pressure*, comprised the most commonly-cited barriers to living sustainably. Informants talked about how “keeping up with the Joneses” is an ongoing temptation, especially when you consider the influence of social media and marketing, which, according to Renee, constantly “make you want to live beyond your means.” Penny also talked about people’s willingness to go into debt to have “the nice, new, fancy thing.” Xavier called the work-earn-spend cycle a “vicious

circle,” but also noted people’s desire to blend in and “not be looked upon as different.”

Just as image, social norms, and peer pressure can be a barrier to living more sustainably, a lack of social norms and positive peer pressure can also fail to promote sustainable living. Informants described the culture of our society, as a whole, as one of: impatience, immediate gratification, excess, and consumerism. Technology, according to Quincy, plays a significant role here. He mentioned specifically that:

The ability to communicate instantaneously...has driven some professions...to crazy paces of work. And so, because we can always get everything done at all times from anywhere, there’s an expectation among clients and customers that we should and, frankly, must be doing that. So that’s an obstacle to having balance.

Other Iteration 3 informants spoke of easy access to credit, and how that plays into our, “I want it, I want it now, in the easiest way possible” mentality (supporting comments made by Iteration 2 informants). Xavier commented, “culture’s got us eat up with the consumerism. It’s buy, buy, buy.” Several informants also talked about the influence of culture at a smaller scale, that is, “how you were raised . . . brought up—the important things to your family.” Tom offered the example of the small Texas town where he grew up, and how, there, “you’re looked down upon if you’re green.” He added that “there’s not a person there who gives a flying crap about recycling a can.”

As with Iteration 3, informants for Iteration 4 identified the theme labeled *peer pressure, society, and culture* as the most prominent barrier to living sustainably. Cultural factors, according to informants, influence the money that students feel they need to have, and how they handle that money; how they allocate their time; the view that they have of themselves and of the value of fitting in; and the convenience they seek. Finn observed that “you just really don’t see a lot of other people . . . being that prudent with their money, or that modest with how they’re living.” Elizabeth shared her view of how society encourages students to think of themselves: “we’re told to look out for ourselves, and build the best life possible for ourselves . . . having the most stuff.” Regarding time allocation, Hale talked about how, among a group of friends, the majority often rules regarding the activities in which the group will participate and about how groupthink and peer pressure are factors in the decision-making process. Always, informants were clearly aware of

PROMOTING PARTICIPATION IN ED PROGRAMMING

13

the influence that the broader society, or culture, has on individual behavior; and on individual ideas of what is acceptable and/or sustainable.

Infrastructural barriers. *Infrastructural barriers* were identified by key informants in Iterations 1, 2, and 4. Some major concerns across iterations in this regard were: the layout of the city and surrounding communities (urban sprawl); the availability and safety of public transportation; the lack of local sustainable purchasing options (i.e., for local, organic, sustainable foods; for sustainably created and packaged goods); and logistical and policy concerns related to local recycling programs.

Regarding barriers related to recycling, Bridgette (Iteration 1) stated that recycling is available, but that “you just have to find it, it’s not readily available or made public to you.” Informants from other iterations echoed this concern (except one informant who specifically referred to the *ease* of recycling, both in the local area and overall). The logistical concerns associated with local recycling programs are important in that a lack of ready availability would likely be a problem for someone like Adam (also Iteration 1), who stated that “when it comes to recycling, I’ll kind of take what people give me and I’ll go with it. I don’t mind doing it, but I don’t know if I’m one that has that self-initiative.”

Knowledge, awareness, information, and education. According to key informants, incomplete *knowledge, awareness, information, and education* in relation to sustainability and sustainable living would likely comprise a significant barrier to behavior change among organization members. Within the second iteration, for instance, 7 of the 10 informants identified this barrier. Many perceived it to apply especially to older members, but also to the group’s broader membership, as well as to the public. Maria thought that “people may not understand what sustainable living means,” whereas Heidi wondered “where to find [information] resources that help us make better decisions, and even knowing what are better decisions.” Francis pointed to a lack of “role models that take [individuals] from where they are today,” suggesting that the public might benefit from knowing what sustainable living might look like for people at different income levels, life stages, and so forth.

Four of ten informants from Iteration 3 also noted barriers related to knowledge, education, and awareness. For instance, Quincy thought that “most people would have a pretty narrow understanding of sustainable living.” William spoke from his position in upper-level industry management, specifically discussing a lack of awareness among consumers regarding where products are made, and how that affects human rights issues, for example. He credited consumers with having much potential influence over how companies behave, but questioned the extent to which they were aware of that influence or of how to wield it effectively.

Penny (Iteration 4) stated, “sustainable is an intimidating word for a lot of people, I think,” but also asserted that education is “the biggest thing . . . the more educated you are, the more you know about sustainable living, and the better you would be at practicing it.” Some informants from that same iteration made comments suggesting a qualification of that assertion, however. Specifically, Elizabeth argued that “the whole green campaign is really out there. I feel like a lot of people are becoming more aware; so awareness is not a barrier—at least in terms of the environmental aspect.” She acknowledged that there might be a greater shortage of information and awareness regarding the social and economic dimensions of sustainable living.

Barriers related to knowledge, awareness, information, and education were evident even among key informants themselves, and are best illustrated by a particular theme that persisted across iterations regarding perceptions of *sustainability* and *sustainable living*. Namely, environmental connotations were perceived for the terms across all iterations (e.g., “green,” “eco-friendly,” “good for the environment,” and “environmentally conscious”). Several informants also highlighted the resource aspect of the terms—their use, depletion, conservation, and reuse. Within Iteration 4, Alice equated sustainability and sustainable living with the “green movement,” and Elizabeth summed the terms up as, “not tearing apart [God’s] beautiful creation.” A consciousness of the environmental impacts of behaviors and practices (and acting on that consciousness) was also a common subtheme, particularly among Iteration 4 informants.

Within the first two iterations, the environmental dimension was emphasized to the exclusion of the other dimensions of the terms. That is, none of the informants referenced either the social or economic dimensions of the terms in the definitions they offered. In contrast, while many informants in the last two iterations *focused* on the environmental dimension, several of them also acknowledged the non-environmental dimensions. In fact, about half the informants for each of those two iterations considered dimensions other than the environmental when asked to define sustainability-related terms. For example, Olivia (Iteration 3) stressed the importance of “living within your means . . . not spending more than what you take in . . . [not] being extravagant . . . paying off our credit cards.” Likewise, Nancy (Iteration 3) described a sustainable lifestyle as one in which “you don’t spend more than you make . . . try to be responsible . . . don’t waste.” Tom (Iteration 3) spoke of sustainable living as having one’s basic needs (food, shelter, income, and resources) met, and being debt-free. Greg echoed Tom’s definition, describing sustainable living as, “Being able to maintain. . . a level of satisfaction.

PROMOTING PARTICIPATION IN ED PROGRAMMING

15

. . . Being able to provide home, food, stuff; like, the needs that we have for a decent life . . . [that is] just being able to have three meals a day, a home to live in—so, basic needs.” In spite of these acknowledgments, the environmental emphasis was perceived strongly among all organizations’ key informants.

While informants demonstrated a wide range of knowledge and awareness of the terms *sustainability* and *sustainable living* (ranging from limited to advanced), the comments shared here demonstrate that understanding of the meaning and scope of the terms is not ubiquitous in our society, although the term sustainability has become a popular buzzword. Thus, barriers related to knowledge, awareness, information, and education are important considerations for sustainable living practitioners.

Time, effort, and inconvenience. *Time, effort, and inconvenience* comprised another common theme, again expressed by informants in Iterations 2–4. Deborah (Iteration 2) lamented, “we’re pulled in so many different directions;” and Penny (Iteration 3) identified a “hassle mindset” among her peers. Heidi (Iteration 2) talked about how much more time it takes to fix dinner from fresh ingredients than using packaged and processed foods, although she knew that it would be better for her family’s health and the environment. She also gave an example of riding a bike to work, rather than driving, but then what about the distance to work, the time it would take, and her need to drop her son off at day care? Other informants, from across iterations, talked about recycling, arguing that, while the infrastructure is in place, recycling is not made very easy either in the local area or in their workplaces. So, there is a certain level of inconvenience associated with having to seek out or go pick up a recycling container, or with having to cart recyclables from home if one’s apartment complex does not offer recycling, for example. These concerns are consistent with those raised by informants in Iteration 1, although then, they were classified within the theme of *infrastructural barriers*. Regarding the effort required to live sustainably, Laura (Iteration 2) stated that she wanted to start composting, but added that you get “so little yield for the effort.” As Dana (Iteration 4) summed it up, “to live sustainably isn’t necessarily the easy way.”

Financial costs. *Financial costs* emerged as a theme in Iterations 2 and 3, but not 1 and 4 (although one informant from Iteration 1 did suggest that the sustainable practice of using alternative energy might be cost prohibitive to some). Half the informants in Iterations 2 and 3 identified financial costs as a barrier to living sustainably. For instance, Elaine (Iteration 2) commented that “a lot of times it’s more expensive” to buy recycled or organic products, for example. Nancy (Iteration 3) even described the cost as her “biggest barrier” to living sustainably. Several

informants, however, acknowledged that living sustainably can sometimes be *less* expensive. Specifically, Elaine's (Iteration 2) family has a garden at home—which serves an environmental and a health purpose, but also an economic purpose, in that she saves money by not buying as much produce at the store. Deborah (Iteration 2) agreed with Elaine, in that she had to think for a few moments about whether or not it would be more expensive to live sustainably. Her conclusion (and that of many other informants), however, was that at least some sustainable behaviors (i.e., eating organic food) would present added financial costs.

Spiritual/philosophical barriers. *Spiritual* and/or *philosophical barriers* were noted among key informants in Iterations 1, 3, and 4. Two of those iterations (3 and 4) involved members of two subpopulations within one faith-based organization (a local Protestant church). The concerns expressed in those two iterations centered primarily on a dissonance that seems present within particular Christian denominations between faith and the environment. Tom (Iteration 3) suggested this dissonance stemmed from “a warped sense of biblical perspective; that abundant resources mean that we don't have to be good stewards of our resources,” and added that some of his family members would think that “being a good steward of those resources, or looking after this environment that's with us, is just bunk.” Stacy (Iteration 3) commented that, “for me [it] boils down to, ‘God made the Earth, and He's in control.’ I really don't know that we're so powerful that we can break the world that He made.” Penny (Iteration 4) further suggested that there might be a “tension” for Christians, because they see scriptural guidance not to worry about tomorrow (Matthew 6:31-34) as conflicting with the idea of good stewardship of our resources. The key informants themselves seemed to have reconciled that dissonance, predominantly through the lens of biblical stewardship, as described by Alice (Iteration 4): “When I was growing up, I feel like there was a division between being Christian and being against the green movement almost. And kind of criticizing that. . . versus now, I think I've grown in awareness that I'm called to be a good steward.” Yet many acknowledged that other church members may still see a disconnect between faith and the environment.

For Iteration 1, this theme involved a more philosophical than spiritual barrier. Namely, informants identified a resistance to change, particularly in terms of environmental sustainability. That resistance was framed in several different ways. In some accounts, it was presented as a matter of lifestyle and habits of consumption, which were seen as subject to the potential for complacency. In others, it was seen in perceived resistance to governmental control and regulation. For example, Adam talked about a drought being experienced in the local area, and

how some nearby communities had therefore instituted water use restrictions, regarding which he commented that “that wouldn’t fly too well” in his town.

In sum, informants in all iterations identified several barriers that might prevent their organizations’ members, and non-environmentally-motivated individuals more generally, from living sustainably. While the qualitative analysis presented here does not give concrete quantitative evidence regarding the degree of their *prevalence* among the informants or their peers, the quotations and descriptions provided here demonstrate the likely *presence* of those barriers within target audiences of interest.

Values and Priorities of Organization Members

Several themes emerged throughout the key informant interviews regarding organization members’ values and priorities. The one overarching finding was that organization members, in the estimation of the key informants, were seen as influenced by multiple, and sometimes conflicting, values and priorities.

Social relationships and *spirituality/faith*. For the organizations studied in this project, the most commonly cited values and priorities were those of social relationships and spirituality, or faith. *Social relationships* were a clear value and priority across all iterations. That value was expressed via terms such as: relationship, friendship, and community building; social interaction; shared experience; fellowship; commitment to one another; social influence; and social capital. Such social relationships were ranked *first* in importance by informants in Iterations 1 and 4, which were conducted among younger cohorts (i.e., young professionals and college students). Even for the other two iterations, however, social relationships were ranked third in importance.

Spirituality, or *faith* (expressed by informants as church involvement, a relationship with Christ, Christian missions, Christian values [i.e., social justice, kindness, and hospitality], Christian encouragement, and so forth), was an important value within three of the iterations (2-4). As stated previously, Iterations 3 and 4 were conducted among two subpopulations of the same local church. For Iteration 2, I collaborated with an organization that was not faith-based, *per se*, but was one in which many members did profess a common commitment to spirituality. Thus, all three of those iterations were conducted among groups with a clear spiritual foundation, which likely influenced the priority placed upon spirituality/faith among the key informants interviewed.

Family. *Family* was a highly-ranked priority for informants in Iterations 2 and 3, in particular. For instance, according to Iteration 2 informants, family was seen as the most important value among organization members. Half the informants

suggested family as an important value in response to the open-ended interview question. In response to the related ranking question, all Iteration 2 informants ranked family as either the number one (by seven informants) or the number two (by three informants) priority among members.

Iteration 3 informants identified family as the second most important value to members. Six different informants suggested it in their responses to the open-ended question, referring to important aspects of family like marriage and parenting. Quincy shared that several church members had left lucrative positions in bigger cities, or passed up job opportunities, to make more time for their families. Vera pointed out the number of young families that attend the church, and how “family is a big thing.” As for the ranking question, most of the informants ranked family as either first (by three informants) or second (by five informants) in priority. One informant disagreed with this high ranking of family, arguing that “we have a lot of young married couples who isolate their kids away from themselves at every opportunity that presents itself, instead of engaging their kids in that.” That observation represents a negative case perspective that was important to acknowledge and consider when planning and promoting educational programming events. However, most of the informants expressed family as an important value among organization members.

These two organizations (Iterations 2 and 3) consist of individuals who, for the most part, represent a different life stage than the members of the other two organizations (Iterations 1 and 4). Many members of these organizations, for example, are married and have children and/or grandchildren. Thus, it is intuitive that their values and priorities would be influenced by their life stage. The potential for that influence is also reflected in the comments of informants for Iterations 1 and 4. Several (college-aged) informants in Iteration 4 described a tension between a dedication to family, on one hand, and a need to seek personal independence, on the other. Additionally, several of those informants talked about not being far enough removed from their families, in terms of time or space, to have yet developed an appreciation or fondness that often comes with prolonged absence. This idea was also reflected in Adam’s (Iteration 1) comment that “at this point in life, we’re young, we’ve been with family for 18 years and maybe haven’t gotten to that point of cherishing the family concept.”

The environment. Several priorities were consistently ranked low, across iterations. The most apparent was *the environment*. The environment was only included in the closed-ended ranking question for the third and fourth iterations (added as an adaptive improvement), but was ranked last in importance by most of

PROMOTING PARTICIPATION IN ED PROGRAMMING

19

the informants within those iterations. Also, for several informants, the assignment of the environment as last in importance appeared to be the easiest ranking to assign, taking very little thought or deliberation. Dana (Iteration 4), for instance, stated that “in the midst of all these [other priorities], like, it’s just an afterthought to people. . . . it’s just definitely last.” In fact, William (Iteration 3) failed to assign the environment any rank at all, instead opting to leave that space blank. Furthermore, in *none* of the iterations did any of the informants suggest the environment as a value or priority of organization members in response to the open-ended question on that subject.

Health. Another value that was consistently ranked as less important than some others was *health*—although *fitness* was ranked higher, reportedly in relation to its impact on image and social relationships. When questioned, informants acknowledged the importance of health to longevity and quality of life, but also asserted that it is something that people do not necessarily think about until it is placed in jeopardy (e.g., “unless someone has a health issue or problem, it’s not a concern” [Yvonne, Iteration 4]).

Time and money. *Time and money* were ranked second and third in importance, respectively, for informants in the first iteration, but were not ranked as highly for the other iterations. When asked, informants from the other iterations acknowledged the importance of the two priorities (e.g., “time is something [members] have to balance and juggle” [Deborah, Iteration 2]; “unless you have a ton of [money], this is always a struggling point for people” [Vera, Iteration 3]), but still ranked them lower in importance than several other priorities. It is possible that informants’ and organization members’ placement of so many other priorities ahead of time contributes, in part, to the time management struggles acknowledged by many informants (e.g., “everybody’s so busy these days” [Renee, Iteration 3]). As for money, the organizations with which I collaborated on this project consist primarily of individuals with higher-than-average incomes (as reported by key informants and organization leadership). This demographic characteristic may have influenced informants’ ranking of money.

The overall sentiment among informants across iterations was that all of the values and priorities presented were important to members of their organizations. However, being forced to rank them in order of importance led to some being ranked lower than might be reflective of their true importance. This was evidenced by one informant’s comment that his ranking of the environment as last in importance (i.e., “[the environment] will be like, obviously eight”) was an indication of it as the eighth *most* important value, rather than the *least* important value. These

findings suggest that, across organizations, key informants and organization members have many values and priorities that vie for their attention and that they must consider in the decisions that they make.

Recruitment Strategies for Participation in Programming Events

In light of both the barriers and values detailed above, informants offered several suggestions for potentially effective recruitment strategies that might improve participation in sustainable living educational programming events. Several prominent themes emerged across iterations, including: the need to emphasize the three-dimensional definition of sustainable living, the need to remove potential barriers to participation in programming events, and the need to highlight the benefits of participation (in programming events and in sustainable behavior).

Emphasis on the three-dimensional definition of sustainable living. Informants' varying levels of understanding regarding sustainability-related terminology, and their impressions of other members' understanding of those terms, suggested the need to highlight the three-dimensional definition of sustainable living to recruit participants for educational programming events. For instance, informants suggested that the name of the workshop (Living Sustainably: It's Your Choice), and the use of the terms *sustainability* and *sustainable living*, might be misunderstood and therefore present a prominent challenge in participant recruitment. In response to that challenge, informants suggested that I clearly communicate the three-dimensional definition (with a focus on the aspects of balance, simplicity, and stewardship) commenting on the appeal of such a holistic approach. Below are just two examples from among many:

I think they'll find it surprising. I think the definition of sustainability tends to be environmentally oriented. So I think that thinking about the social and social justice aspects—I think they'll be interested in it, yes. I think they would find it surprising, pleasing, and challenging. And I think that will be a really unique aspect. I think that people are looking for ways to improve the world that they live in. (Karen, Iteration 2)

I like that! I think everyone ought to hear that definition of sustainable living, because it's kind of eye-opening. I've never heard it that way. . . . I think folks—if they understood how broad the definition is—I think they would find it interesting and it would be applicable to them. . . . I think that

PROMOTING PARTICIPATION IN ED PROGRAMMING 21

everybody would love to have more balance; to live more simply. (Quincy, Iteration 3)

Removal of potential barriers to participation. Informants' suggestions for effective recruitment strategies made clear that removing as many potential barriers to attendance as possible would be important. For example, across iterations, informants noted the importance of keeping events to a "reasonable" or "palatable" length (around two hours). Informants for Iterations 3 and 4 also suggested that events be scheduled during regularly scheduled small-group meetings, so that participants would not have to carve out additional time in their busy schedules. An added benefit for Iteration 3 participants then would be the availability of regularly scheduled childcare. Thus, by identifying the salient barriers among organization members, informants could aid in overcoming those barriers, through their recruitment recommendations.

A focus on the benefits of participation. Informants across iterations noted the importance of providing incentives to participate in educational programming events. While some related suggestions were mundane (e.g., providing refreshments), many others addressed the need to emphasize the reasons for, and benefits of, living more sustainably. For instance, Adam (Iteration 1) viewed organization members as constantly asking, "What's in it for me?" Values and priorities perceived by key informants to be strong within that organization suggested that I should appeal to benefits related to saving money and time. Valued benefits for members of the three other organizations included primarily social relationships, spirituality/faith, and family.

Participation in Programming Events

Participation in sustainable living educational programming events improved substantially over the four iterations comprising this study. Specifically, the number of participants increased with each iteration—from 0 for Iteration 1, to 8 for Iteration 2, to 25 for Iteration 3, and 38 for Iteration 4. Thus, a total of 71 individuals participated in the programming events conducted throughout this project. Furthermore, while participants exhibited a combination of motivations, social and economic motivations outweighed environmental motivations (for more detail on measurement of motivations, see Wynveen 2013), indicating that the participants were largely non-environmentally-motivated, in keeping with the study's goals.

DISCUSSION AND CONCLUSIONS

Contributions of Key Informant Involvement

Key informant responses contributed to several adaptations in terms of recruitment for educational programming events. For instance, I attempted to remove as many barriers to participation as possible, based on recruitment recommendations made by key informants. As I incorporated those strategies (i.e., emphasizing the three-dimensional definition of sustainable living; scheduling events at more convenient times, with childcare options available; ensuring that event durations remained manageable, etc.), participation levels improved. Those improvements demonstrate the value of key informant involvement during planning and promoting sustainable living educational programming events.

Likewise, although valued benefits differed among iterations (based on the values, priorities, and motivations of the members), the insight provided by informants suggested several strategies for improving participation. For example, while many benefits of living sustainably involve improved physical, psychological, and emotional health and well-being, findings presented here indicated that those may not be the most compelling benefits for the target audiences in this study. Instead, I highlighted benefits related to values such as money and time for Iteration 1, and those related to social relationships, spirituality/faith, and family for the other three iterations.

The project described here utilized many features geared toward improving participation in sustainable living educational programming among non-environmentally-motivated individuals. Therefore, the findings highlighted in this report are not meant to represent an exhaustive account of *all* factors influencing improvements in goal achievement. The goal here has been to demonstrate the added value afforded by the inclusion of key informant involvement as one enhancing factor to promote non-environmentally-motivated individuals' participation in educational programming events aimed at fostering sustainable living.

Broader Impact

Recommendations for practitioners. Findings presented here speak to the need for sustainable living educators to identify potential barriers to participation in sustainable living educational programming among target audience members. More important, they must use that information to proactively seek to overcome those barriers. In addition, they will benefit from efforts to appeal to existing values and motivations of the audiences they hope to reach, and to focus on the benefits of

sustainable living that relate to those values, priorities, and motivations. Several findings observed in this study are unique to non-environmentally-motivated individuals, and some are unique even to the organizations that I studied. For instance, I studied four organizations, all located within a single community. Moreover, as already noted, three of those four had faith affiliations. On one hand, that focus allows for conclusions, comments, and recommendations to be put forth in relation to audiences with the kinds of spiritual motivations evidenced among participants in this project. On the other hand, however, it also limits the scope of some findings to faith-based and/or faith-affiliated audiences.

In spite of these limitations, the research presented here suggests that sustainable living educators may be able to more successfully promote sustainable behavior within their target audiences by incorporating a key informant phase into their programming efforts. Key informant involvement was shown here to provide insight into several constructs of interest related to the promotion of sustainable behavior, including: perceived barriers to, valued benefits of, and potentially profitable strategies for attaining sustainable behavior among non-environmentally-motivated individuals. In keeping with the principles of CBSM outlined in the Literature Review, understanding these constructs is an important step in fostering sustainable behavior.

The inclusion of a key informant phase is likely to be especially feasible within the rural settings familiar to the readership of the *Journal of Rural Social Sciences*. Whereas in larger cities and more urban areas, the possibility of canvassing the various stakeholder groups of interest may represent an excessively daunting task, the smaller scale at which practitioners in rural areas operate may allow for a more thorough assessment of the needs and desires represented among target audiences of interest.

Recommendations for research. The principles of CBSM have been demonstrated as effective in promoting singular target behaviors at the community level. However, promoting one behavior at a time is not always sufficient. Furthermore, any given community is likely to consist of individuals with widely varying characteristics, making it difficult to identify barriers that are uniformly salient for all of them. Thus, there is a need for further research identifying the extent to which, and the conditions under which, the CBSM process might be successfully employed by practitioners interested in promoting a wide range of sustainable behaviors at once, particularly among subpopulations within communities.

The present study represents a first step in this direction, and a jumping off point for future efforts to better understand the applicability of CBSM principles to

the promotion of widespread sustainable lifestyles among variously motivated individuals. Specifically, while this analysis explored key informant contributions in terms of promoting participation in sustainable living educational programming events, a more thorough understanding of their contributions will require an examination of the impact of their involvement in achieving the second goal of the study. Participation in this type of educational programming is of little consequence if those participants fail to subsequently change their behaviors in the direction of greater sustainability. Thus, determining the extent to which key informant involvement contributed to behavior change commitments made following non-environmentally-motivated individuals' participation in educational programming events as well as to actual behavior change, in both the short and the long term will be important.

AUTHOR BIOGRAPHY

Dr. Brooklynn Wynveen is a graduate of Clemson University's interdisciplinary program in Planning, Design, and the Built Environment. She is currently an interim instructor at Sam Houston State University in the Department of Sociology. Her research interests have focused on the human dimensions of sustainability (e.g., the social impacts of unconventional energy development and the effectiveness of sustainable living education). The present article draws from her dissertation research. (E-mail: bjw028@shsu.edu)

REFERENCES

- Barr, Stewart. 2003. "Strategies for Sustainability: Citizens and Responsible Environmental Behavior." *Area* 35(3):227-40.
- Brown, Kirk Warren and Tim Kasser. 2005. "Are Psychological and Ecological Well-being Compatible? The Role of Values, Mindfulness, and Lifestyle." *Social Indicators Research* 74:349-68.
- Cohen, Maurie J. 2005. "Sustainable Consumption American Style: Nutrition Education, Active Living, and Financial Literacy. Pp. 133-8 in *Proceedings of Sustainable Consumption: The Contribution of Research Workshop*, edited by E. Hertwich, T. Briceno, P. Hofstetter, and A. Inaba. February 10-12, 2005, Gabels Hus, Oslo.
- Collins, Christy M. and Susan M. Chambers. 2005. "Psychological and Situational Influences on Commuter Transport-mode Choice." *Environment and Behavior* 37(5):640-61.

- DeYoung, Raymond. 1993. "Changing Behavior and Making it Stick: The Conceptualization and Management of Conservation Behavior." *Environment and Behavior* 25(4):485–505.
- Dunlap, Riley E., Kent D. Van Liere, Angela G. Mertig, and Robert Emmet Jones. 2000. "Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale." *Journal of Social Issues* 56(3):425–42.
- Etzioni, Amitai. 1998. "Voluntary Simplicity: Characterization, Select Psychological Implications, and Societal Consequences." *Journal of Economic Psychology* 19:619–43.
- Fien, John, Cameron Neil, and Matthew Bentley. 2008. "Youth Can Lead the Way to Sustainable Consumption." *Journal of Education for Sustainable Development* 2(1):51–60.
- Gardner, John, Toshi Szatow, Mark Horn, and George Quezada. 2009. "Sustainable Living: A Review of Behavioural Influences and Policy Options for Australia." Report number P2009/1726. Victoria, Australia: Commonwealth Scientific and Industrial Research Organisation (CSIRO).
- Kaiser, Florian G., Gundula Hübner, and Franz X. Bogner. 2005. "Contrasting the Theory of Planned Behavior with the Value-Belief-Norm Model in Explaining Conservation Behavior." *Journal of Applied Social Psychology* 35(10):2150–70.
- Kurz, Tim. 2002. "The Psychology of Environmentally Sustainable Behavior: Fitting Together Pieces of the Puzzle." *Analyses of Social Issues and Public Policy* 2(1):257–78.
- McKenzie-Mohr, Doug. 2000a. "Fostering Sustainable Behavior through Community-based Social Marketing." *American Psychologist* 55(5):531–7.
- _____. 2000b. "Promoting Sustainable Behavior: An Introduction to Community-based Social Marketing." *Journal of Social Issues* 56(3):543–54.
- McKenzie-Mohr, Doug and Stuart Oskamp. 1995. "Psychology and Sustainability: An Introduction." *Journal of Social Issues* 51(4):1–14.
- McKenzie-Mohr, Doug and William Smith. 1999. *Fostering Sustainable Behavior: An Introduction to Community-based Social Marketing*. Gabriola Island, BC: New Society Publishers.
- Mebratu, Desta. 1998. "Sustainability and Sustainable Development: Historical and Conceptual Review." *Environmental Impact Assessment Review* 18:493–520.
- Merriam, Sharan B. 1998. *Qualitative Research and Case Study Applications in Education*. San Francisco, CA: Jossey-Bass.
- Monroe, Martha C. 2003. "Two Avenues for Encouraging Conservation Behaviors." *Human Ecology Review* 10(2):113–25.

- Oakley, Ian, Monchu Chen, and Valentina Nisi. 2008. "Motivating Sustainable Behavior." UbiComp Workshop Proceedings, 21–24 September, Seoul, South Korea.
- Oreg, Shaul and Tally Katz-Gerro. 2006. "Predicting Proenvironmental Behavior Cross-nationally: Values, the Theory of Planned Behavior, and Value-Belief-Norm Theory." *Environment and Behavior* 38:462–83.
- Reinking, David and Barbara Bradley. 2008. *On Formative and Design Experiments*. New York, NY: Teachers College Press.
- Reisch, Lucia A. 2001. "Time and Wealth: The Role of Time and Temporalities for Sustainable Patterns of Consumption." *Time and Society* 10(2/3):367–85.
- Simon-Brown, Viviane. 2000. "Sustainable Living—Strategies for Breaking the Cycle of Work and Spend." *International Journal of Sustainability in Higher Education* 1(3):290–7.
- Simon-Brown, Viviane. 2004. "Intelligent Consumption: Addressing Consumer Responsibilities for Natural Resources—and Beyond." *Journal of Extension* 42(5):1–9.
- Stern, Paul C. 2000. "Toward a Coherent Theory of Environmentally Significant Behavior." *Journal of Social Issues* 56(3):407–24.
- Stern, Paul C. and Thomas Dietz. 1994. "The Value Basis of Environmental Concern." *Journal of Social Issues* 50(3):65–84.
- Stern, Paul C., Linda Kalof, Thomas Dietz, and Gregory A. Guagnano. 1995. "Values, Beliefs, and Proenvironmental Action: Attitude Formation toward Emergent Attitude Objects." *Journal of Applied Social Psychology* 25(18):1611–36.
- Stern, Paul C., Thomas Dietz, Troy Abel, Gregory A. Guagnano, and Linda Kalof. 1999. "A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism." *Human Ecology Review* 6(2):81–97.
- Stern, Paul C., Thomas Dietz, and Linda Kalof. 1993. "Value Orientations, Gender, and Environmental Concern." *Environment and Behavior* 25:322–48.
- Wynveen, Brooklynn J. 2013. "Attaining Sustainable Behavior among Non-environmentally-motivated individuals: A Formative Experiment." PhD Dissertation. Program in Planning, Design, and the Built Environment, Clemson University, Clemson, SC.
- Yin, Robert K. (2009). *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage Publications, Inc.
- Zavestoski, Stephen. 2002. "The Social-psychological Bases of Anticonsumption Attitudes." *Psychology and Marketing* 19(2):149–65.