


Encouraging pro-environmental behaviour: the role of sustainability-focused events

Judith Mair & Jennifer H. Laing


To cite this article: Judith Mair & Jennifer H. Laing (2013) Encouraging pro-environmental behaviour: the role of sustainability-focused events, Journal of Sustainable Tourism, 21:8, 1113-1128, DOI: [10.1080/09669582.2012.756494](https://doi.org/10.1080/09669582.2012.756494)

To link to this article: <http://dx.doi.org/10.1080/09669582.2012.756494>

 View supplementary material [↗](#)

 Published online: 16 Jan 2013.

 Submit your article to this journal [↗](#)

 Article views: 1371

 View related articles [↗](#)

 Citing articles: 10 View citing articles [↗](#)

Encouraging pro-environmental behaviour: the role of sustainability-focused events

Judith Mair^{a*} and Jennifer H. Laing^b

^a*Department of Management, and Australia and International Tourism Research Unit, Monash University, Melbourne, Australia;* ^b*Department of Marketing and Tourism and Hospitality, La Trobe University, Melbourne, Australia*

(Received 28 March 2012; final version received 21 November 2012)

Tourism is a potential setting for encouraging sustainable behaviour. One popular mechanism is to stage events with a sustainability focus, aimed at fostering behaviour change amongst attendees. This paper reports on a study of a sustainability-focused event in Australia. The Transtheoretical Model (TTM) was used to explore if and how this event could potentially promote pro-environmental behaviour change amongst attendees. TTM provides a five-stage framework, linked to a series of 10 processes of change, with both attitudinal and behavioural dimensions. The stages comprise pre-contemplation, contemplation, preparation, action and maintenance. Findings suggest that this event attracts individuals already significantly committed to sustainable behaviour who are using the event as a source of encouragement and positive feedback for their lifestyle choices. They are not the audience that the organisers need to reach in order to achieve their aim of behaviour change on a broader scale. This event did, however, support the processes of change, particularly for those in the “action” and “maintenance” stages. This paper considers the implications of these findings and TTM as a research tool for the future promotion and marketing of these events to tourists, possible applications to tourism fairs and exhibitions, and to behavioural change in tourism generally.

Keywords: community participation; festivals; behavioural studies

Introduction

Events can be an important element within vibrant communities, attracting visitors, including tourists, from outside the immediate area. Getz and Frisby (1988) referred to them 25 years ago as an “emerging giant” in the tourism industry. Many communities stage at least one, and often several events during a calendar year. Community events have been defined as “small scale, bottom up and run by one or more volunteers for the benefit of the locality” (Huang, Li, & Cai, 2009, p. 254). Research on community events to date has mostly focused on a rural or regional context and can be categorised within two main areas – the impacts (economic and social) of community events and their potential for generating tourism (Huang et al., 2009). Whilst the positive economic gain of holding such events should not be understated, it is important to consider their role more broadly and from a social perspective (Getz & Frisby, 1988). They might, for example, be used as a vehicle for delivering social messages (Laing & Frost, 2010; Sharpe, 2008) or raising awareness of certain issues.

Given the importance to society of increasing levels of sustainability (Font & Harris, 2004; Swarbrooke, 1998; Weaver, 2006), encouraging pro-environmental behaviour

*Corresponding author. Email: judith.mair@monash.edu

is becoming a significant undertaking for local, state and government bodies (Verplanken & Wood, 2006). Questions remain about the most effective ways to achieve this aim. Research has begun to consider how tourism may have an impact upon community development and collective action (Hwang, Stewart, & Ko, 2012), but has yet to fully investigate how tourism, in the form of *events*, may play an important role in encouraging a more sustainable society or the level of environmental awareness of event attendees (Laing & Frost, 2010; Mair & Jago, 2010). This is despite increasing recognition of the environmental impacts and responsibilities of tourism and tourists (Bramwell & Lane, 1999). There are also few, if any, research studies that have attempted to use any existing theories to conceptualise how an event may be used to facilitate behaviour change.

This paper attempts to fill this gap by examining the role of community events in encouraging pro-environmental behaviour of attendees, through the application of the Trans-theoretical Model or TTM (Prochaska, 1979). It considers a new type of community event, the *ecofest* or sustainability-focused event/exhibition. These events have a sustainable or environmental theme, and are often funded and staged by local authorities or municipalities, with the aim of encouraging sustainable behaviour within the community. The majority of attendees are local residents, although those staged in the proximity of tourist attractions might attract a broader spectrum of visitors. These events have not received any attention in the tourism or events literature to date, despite their growing popularity and socially desirable objectives.

Anecdotally, it appears that such events are most likely to attract those already engaged in sustainable behaviour. This paper sets out to examine the audience for these sustainable events and discusses whether they are reaching their potential in terms of acting as a downstream and upstream integrated intervention to encourage pro-environmental behaviour. It also explores the implications of these findings for the organisers, as well as future research opportunities with respect to the use of events as a tool for behaviour change. The research questions asked were: *What is the audience profile for this type of event?* and *Does attendance at an ecofest facilitate an increase in pro-environmental behaviour among attendees?* Quantitative survey data were collected at an “ecofest” in Melbourne, Australia, to explore the efficacy of these events as a tool for behaviour change. The theoretical framework underpinning this paper is the use of social marketing to encourage pro-environmental behaviour, particularly the use of the TTM for this purpose. We begin with a review of the literature in this area, including its limited application to events research.

Encouraging pro-environmental behaviour

Research suggests that changing behaviour to be more environmentally friendly is a complex endeavour. Social psychological theory posits that human behaviour and behaviour change are determined both by the individual and by the external environment (Maio et al., 2007). According to Bamberg and Moser (2007), pro-environmental behaviour is characterised by a mixture of self-interest and pro-social motives. In addition, many contextual factors, such as infrastructure, facilities and availability of products may facilitate or constrain environmental behaviour, and influence individual motivations (Olander & Thøgersen, 1995).

Social marketing has been used in a number of different contexts in an attempt to change behaviour (Andreasen, 1994; McKenzie-Mohr & Smith, 1999). Social marketing can be defined as “the design, implementation, and control of programs calculated to influence the acceptability of social ideas” (Kotler & Zaltman, 1971, p. 5). Examples of such “social ideas” include the provision of better education, community health and safety, and environmental protection (Kotler & Zaltman, 1971). Verplanken and Wood

(2006) propose two types of social marketing interventions that may be successful in changing behaviour – *downstream interventions*, which aim to alleviate existing negative outcomes and are generally aimed at the individual, and *upstream interventions*, which target contextual support for desired actions and are often undertaken at a community or societal level. Research suggests that interventions to change behaviour that focus only on the former, such as attempts to change attitudes and beliefs simply by providing information, are unlikely to be successful on their own, necessitating an integrated approach (Verplanken & Wood, 2006).

The Transtheoretical Model

One way of conceptualising how an intervention that includes both downstream and upstream elements might assist in encouraging sustainable behaviour change is the TTM (Halpern, Bates, Beales, & Heathfield, 2004; Prochaska, 1979; Prochaska & DiClemente, 1983). The TTM was originally developed within the psychology discipline and has been utilised extensively in areas of health, including substance abuse, diet and physical activity (Hutchison, Breckon, & Johnston, 2009). The TTM, often referred to as the “Stages of Change” model, suggests that the individual moves through a sequence of five stages as they adopt voluntary changes in their life – pre-contemplation, contemplation, preparation, action and maintenance (Prochaska, 1979). Those in the pre-contemplation stage are not even aware that there is a problem that may need attention and are not thinking of changing their behaviour. Those in the early and late contemplation stages, already motivated to begin to engage in pro-environmental behaviour and consider any costs or barriers, are most likely to be open to persuasive attempts to encourage change. The preparation stage is where an individual is taking steps to make the change possible. Finally, those in the action and maintenance stages are already performing the desired behaviour but still require support and encouragement to continue. The TTM should be viewed as a dynamic framework where people move between stages, and move backwards as well as forwards in the process of change (DiClemente, 2007). There can be points where individuals get “stuck” and remain in one stage for a very long time. The model also recognises the existence of *recidivists* – those who make a change, but then reject that change and return to the pre-contemplation or contemplation stage. Any theory attempting to understand and map out individual behaviour change needs to take note of the emotions, cognitions and motivations of individuals (Velicer, Prochaska, Fava, Norman, & Redding, 1998). As part of this, for each of the stages, there are particular processes that can assist an individual to move forward to the next stage of change.

The TTM also deals with the *processes* of change that an individual goes through. Ten processes are noted and conceptualised as “active ingredients” or “engines of change” (DiClemente, 2007, p. 30). Whereas the stages of change allow us to understand *when* particular shifts in attitude and behaviour occur, the processes allow us to understand *how* these shifts occur (Prochaska et al., 1992). These processes are closely linked with moving from one stage of change to the next. According to Chib, Chiew, Kumar, Lim, and Ale (2009), the first three stages, and therefore the associated processes, can be considered to have an *attitudinal dimension*, focusing on changing attitudes, whilst the latter two stages, and their associated processes, can be conceptualised as having a *behavioural dimension* involving actual behaviour change. These conceptualisations of the dimensions of the TTM also accord with the suggestion that the TTM can be considered to be an integration of both a downstream approach, which focuses on providing information to the individual, and an upstream approach, which targets the context within which the individual operates. Table 1 illustrates the processes and the stages of change with which they are most closely associated.

Table 1. Processes of change.

Dimension	Stage of change	Process of change	Description of process
Attitudinal	Moving from pre-contemplation to contemplation	Consciousness raising Dramatic relief	Becoming aware of a problem Emotional arousal, such as fear of failure or inspiration for change
	Moving from contemplation to preparation	Environmental re-evaluation Self re-evaluation	Appreciating that change will have a positive impact on society Appreciating that change will have a positive impact on one's identity
	Moving from preparation to action	Self-liberation	Believing that change can succeed, and making a commitment to change
Behavioural	Moving to action, and to maintenance	Helping relationships	Seeking and using social support to facilitate change
		Reinforcement management	Finding intrinsic and extrinsic rewards for making the change
		Counter conditioning	Substituting new behaviours and cognitions for previous behaviour
	Maintenance	Stimulus control	Restructuring one's environment to elicit new behaviour and inhibit old habits
	Maintenance	Social liberation	Empowering others, advocating for the behaviour.

Source: adapted from Prochaska et al. (1992); Chib et al. (2009).

Nisbet and Gick (2008) argue that environmental psychologists and policymakers should apply models of health behaviour change to develop more innovative and successful environmental interventions. In addition, according to Hutchison et al. (2009), the processes and stages of change highlighted by the TTM are global in nature and, as a result, are likely to fit with a wide range of behaviour change settings, including environmental behaviour.

The TTM has only been applied to a limited extent in a tourism and events context to date. Sport seems to be the main focus of this largely UK-based research, perhaps reflecting government priorities connected to the London Olympics in 2012. Prest and Partridge (2010) consider how the Games might be used to encourage behaviour change with respect to health and wellbeing. A focus of the 2012 Games bid was the emphasis on *legacy*, including boosting interest in and uptake of sport and physical activity. This study examines the Dorset Challenge, based in the UK's County of Dorset, which is a website aiming to facilitate changes to the everyday lives of local residents, by motivating them to set themselves challenges and try new things. It targets a stage "before most current public health interventions" (Prest & Partridge, 2010, p. 258). The TTM will be used in their study as the theoretical framework, to consider whether individuals move through the various stages of engagement through using the website. This research however is still in progress, and the utility of the TTM yet to be determined.

A more recent study conducted by Ramchandani and Coleman (2012) also examines how attending sports events might lead to a greater participation in sporting or recreational activity. They found that these events might change attitudes through providing a sense of inspiration, which moves individuals from the pre-contemplation stage to the contemplation stage (see Table 1).

However, this may not necessarily lead to an increase in participation. The authors suggest that further research be carried out into the translation of inspiration into behaviour change, triggered by event attendance. They do, however, note that “major events can play an important role at the start of what is a complex process, sparking people’s desire to participate or participate more frequently, and sign posting them towards the next stage of that journey” (Ramchandani & Coleman, 2012, p. 269).

The limitation or weakness of the model, as applied to an events context, is that it is usually applied to something occurring or re-occurring over time, rather than a one-off, short duration event or activity. Examples of its application in the literature include the experiences of smokers quitting without formalised treatments (Prochaska & DiClemente, 1983) and a social campaign to encourage responsible use of plastic (Chib et al., 2009). The Prest and Partridge (2010) study focuses on a website, rather than attendance at the Olympic Games, as the change agent, which allows for multiple viewings and exposure. The Ramchandani and Coleman (2012) study suggests that major events might act as a catalyst for change, but that something else needs to occur for the journey towards change to continue. The current study follows the work of Ramchandani and Coleman (2012), in exploring how events might *support* the processes of change, thus forming a useful support tool in behaviour change strategy, and one that might be applied to sustainable tourism.

The use of a sustainability-focused event to support the processes of change

Staging a sustainability-focused event might help to facilitate the processes of change. This reflects a number of unique attributes of events. Their carnivalesque and relaxed atmosphere may put attendees in the mood for learning about something new (Anderton, 2009; Laing & Frost, 2010; Sharpe, 2008), whilst the often eclectic attendee population, combining locals and tourists (Getz & Frisby, 1988), might allow a broad swathe of the population to be targeted. The blend of different exhibitors and exhibits across a consistent theme in one location and the potential for interaction between attendees and the exhibitors (Rosson & Serringhaus, 1995) could also assist this process.

In terms of the attitudinal dimension (see Table 1 for details), a sustainable event can provide a platform to raise awareness about environmental issues and provide information on which individual behaviour changes can be made, which is a form of *consciousness raising*. It can also be conceptualised as *dramatic relief*, through acting as a stimulus or inspiration for an individual to consider changing their behaviour. *Environmental re-evaluation* might occur by the event publicising and demonstrating that pro-environmental behaviour can have a positive impact on society. Further, a sustainable event can encourage *self-evaluation*, a belief that a change to more pro-environmental behaviour would have a positive impact on the life and lifestyle of an individual and *self-liberation*, by providing evidence and encouragement that pro-environmental behaviour is possible and achievable for any individual.

With regard to the behavioural dimension, sustainability-focused events can facilitate *helping relationships* through providing easy access to exhibitors such as support organisations and services. Exhibitors can demonstrate or provide evidence of the intrinsic and extrinsic rewards that may come from increased pro-environmental behaviour, a form of *reinforcement management*, and provide products and services to help make pro-environmental behaviour changes easier and more routine, which might be conceptualised as *counter-conditioning* and *stimulus control*.

It is not suggested that every process of change can be facilitated at any given event. Nonetheless, arguably, sustainability-focused event organisers are in a position to be able

to support most processes of change. It may be reasonable to suggest that an intervention in the form of staging a sustainable event may well support people in all of the stages of change. Within the pre-contemplation, contemplation and preparation stages, a sustainable event might assist in raising awareness and providing information about sustainability issues and stressing their importance, as well as offering easy access for participants to green businesses and their practices, which help to make engaging in pro-environmental behaviour seem less challenging. For those in the action and maintenance stages, a sustainability-focused event might offer support, assistance and encouragement to help individuals continue to act in a sustainable manner.

Method

This research commenced with a pilot study, which aimed to investigate the audience profile of a sustainable event. A qualitative approach was chosen for this phase, due to the exploratory nature of the research. It was felt to be appropriate where little is known about a subject or phenomenon (Jordan & Gibson, 2004). Interviews were conducted with 42 attendees of the Nelson Ecofest on the first day of the two-day event. The Nelson Ecofest is one of the largest events showcasing environmentally friendly products, services and messages in New Zealand (Ecofest, 2012). It includes over 120 exhibitors showcasing environmentally friendly products and services, along with seminars and workshops on sustainability, covering topics such as “greening your home”, “becoming more sustainable in your business” and “growing organic food at home” (Ecofest, 2012).

Attendees at Ecofest were randomly approached by the researchers and asked to answer a few questions relating to: (1) their expectations and satisfaction levels with the event; (2) their current levels of sustainable behaviour, using an established measure of sustainable practices and facilities implemented originally by Bergin-Seers and Mair, 2009; (3) their perceptions of what they had learned as a result of attending the event; (4) whether they intended to make any behavioural changes following the event; and (5) their attitudes towards sustainability and climate change. The researchers also conducted site observations, focusing on the messages that the event was sending to attendees and the range of organisations and businesses involved in the event. They watched attendees at the event, to observe their typical activities and how they reacted to the activities on offer and products being showcased.

The researchers subsequently tested the dimensions of sustainable event attendance at a large sustainable living event held in Federation Square in Melbourne, Australia. This two-week festival has been running annually since 1998 and regularly attracts over 100,000 visitors in the centre of the city, including residents and international and domestic tourists. Federation Square is in the heart of the city, and a popular place for visitors, with its plethora of restaurants and cafes, several museums and galleries and a “big screen”, which is used to broadcast high-profile local and international sporting events. Federation Square attracts approximately eight million visitors per year, over half of whom are visitors to Melbourne (Tourism Victoria, 2012).

A quantitative survey instrument was designed to gain information about attendees in relation to (1) demographics, (2) knowledge of sustainability, (3) what they felt they had learned as a result of attending, (4) how encouraged they felt about sustainable behaviour as a result of attending, and (5) their current lifestyle and sustainability behaviours. With regard to current lifestyle and sustainability behaviours, a list of 26 items was developed, grouped in six categories – transportation, energy, water use, waste management, consumption practices and household/personal behaviour.

Items for the questionnaire were developed from the findings of the pilot phase of this research, from existing literature on sustainable behaviour (Bergin-Seers & Mair, 2009) that presented a scale of environmental behaviours and in consultation with the festival organisers (a copy of the questionnaire can be found as a supplementary file on the web-based version of this paper at www.tandfonline.com/JOST). It should be acknowledged that these were self-reported measures, and thus may vary in their accuracy. Nonetheless, for exploratory research taking place within the time and place confines of a single festival, self-reported items were considered to be the most pragmatic way to collect this data. Further, this study did not measure behaviour changes that occurred as a result of attendance, but rather measured intention to make changes. It is acknowledged that there are gaps between behavioural intention and actual behaviour (Kollmuss & Agyeman, 2002), and that this has a bearing on the interpretation of the results.

The main component of the festival where this research was carried out is the flagship Big Weekend, which includes an exhibition of sustainable products, services and practices with over 100 stallholders, and seminars, workshops and presentations on a range of topics including gardening, water conservation, green building techniques, ethical shopping and sustainable art and design. The stated aim of the festival was “raising awareness and providing tools for change”, thus appearing to target all stages of change. The population for this study was all attendees at the festival. A non-probability sampling technique was used (De Vaus, 2002). Attendees were intercepted on a “next person to pass basis” by a team of interviewers who either completed the questionnaires on their behalf, or provided assistance to the attendee to complete the questionnaire if required.

A total of 196 completed surveys were collected from attendees on Saturday and Sunday, 21 and 22 February 2011. Accurate attendance figures for a festival staged in a city centre are difficult to ascertain, and therefore it is not possible to define the response rate with any certainty. However, as the research aim for this project was exploratory rather than confirmatory, the sample size was deemed sufficient. The respondents were 40% male and 60% female, and the most common age group (36%) was 18–29 years. The smallest age group was 65+ years. In total, 55% of respondents stated that this was their first visit to the festival, whilst 20% had attended once before, and 25% had visited twice or more times.

Analysis

Current sustainable practices

Respondents were asked to indicate on a scale of 1 to 5 (where 1 = Never, and 5 = Always) how often they carried out certain sustainable behaviours (see Appendix in the online version of this paper at www.tandfonline.com/jost). The full list produced a low Cronbach's alpha score and therefore three items were removed (“install double glazing”, “install insulation” and “purchase green energy” were removed to improve the reliability of the scale). This brought the Cronbach's alpha for this scale up to 0.881. Alphas over 0.7 indicate a reliable score (De Vaus, 2002) and therefore this scale can be considered reliable. The most commonly carried out practices, according to their mean ratings, were: “separating waste and recycling” (mean rating of 4.63); “using a clothesline/airer” (mean of 4.28); and “reducing frequency of laundry loads/only washing full loads” (mean of 4.10). The highest rated category of behaviours was “waste management practices” with a mean rating of 4.16. The lowest rated category, and therefore the category of practices being carried out least often by attendees, was “transport practices” with a mean of 2.84. This included taking public transport, walking, cycling and using a car pool.

Stages of change of attendees

In order to get some sense of the TTM stage that attendees had reached, responses to the lifestyle and sustainable behaviour questions were evaluated. A total score for all behaviours was calculated for each individual, with the lowest scores to be found amongst those currently carrying out the fewest sustainable practices, and the highest scores amongst those currently carrying out a significant number of sustainable practices. The minimum score possible was 26, achieved by responding “Never” to all items, and the maximum possible score was 130, achieved by responding “Always” to all items. Respondents in this study had a range of scores, from 39 to 117, with a mean score of 90. Respondents were placed in Stages of Change groups for further analysis. Those scoring 52 or less (i.e. scoring 2 or less on all items “Never” or “Sometimes”), were considered to be those in the pre-contemplation stage – broadly speaking, they were not engaged in many sustainable practices at all. Scores from 53 to 78 (those who responded mostly 2 and 3 – “Sometimes” and “Often”) were considered to be those in the contemplation stage, although as they were carrying out some practices often, they may also be in the preparation for further action stage, and hence these two stages were grouped together for further analysis. Scores from 79 to 104 (achieved by responding mostly 3 and 4 – “Often” and “Regularly”) were those firmly in the action stage, and finally, those scoring above 104 (mostly 5 – “always”) were those who appeared to be fully engaged with sustainability and in the maintenance stage. A demographic profile of the Stages of Change groups is shown in Table 2. Interestingly, females outnumbered males substantially in both the action and maintenance stage. This is similar to other research that suggests that females are more likely to engage with sustainability than males (Johnson, Bowker, & Cordell, 2004). Also of note is a trend towards participation in environmentally friendly behaviours amongst the younger age groups (particularly 18–39), and the lower participation rates amongst the older groups, with notably low percentages in the 60+ group in both action and maintenance.

It can clearly be seen that the majority of respondents were in the “action” group. This suggests that the event is predominantly attended by people already significantly involved with sustainability. There were only 15% of attendees who could be considered to be in the pre-contemplation stage, i.e. not really carrying out much sustainable behaviour at all. However, there were a significant number of respondents (51 out of a total of 196) who could be considered to be in the contemplation or early action stage – showing willingness to be involved in some level of sustainable behaviour, but not yet fully committed. Those in this group may offer the best potential for behaviour change, and therefore represent the target audience for this festival.

Table 2. Demographic profiles of the Stages of Change groups.

	Total sample	Pre-contemplators (<i>n</i> = 31)	Contemplators/early action (<i>n</i> = 51)	Action (<i>n</i> = 89)	Maintenance (<i>n</i> = 25)
Gender					
Male	40%	39%	49%	36%	40%
Female	60%	61%	51%	64%	60%
Age group (in years)					
18–29	36%	32%	49%	28%	36%
30–39	28%	39%	14%	34%	28%
40–49	17%	11%	16%	21%	12%
50–59	11%	9%	7%	13%	16%
60+	8%	9%	14%	4%	8%

Table 3. ANOVA – mean ratings for importance of sustainability.

Stages of Change group	Pre-contemplators (<i>n</i> = 31)	Contemplators/preparation (<i>n</i> = 51)	Action (<i>n</i> = 89)	Maintenance (<i>n</i> = 25)
Pre-contemplation	2.00*			
Contemplation		3.60*		
Action			4.67*	
Maintenance				4.79

*Significant at $p = .000$.

As a way to test the efficacy of these groupings, respondents were also asked to indicate how important sustainability was to them. It is argued that those for whom sustainability is an important issue are most likely to be undertaking sustainable behaviour already. Conversely, those for whom sustainability is of little importance are likely to be disengaged from sustainable behaviour. The results of the ANOVA ($F = 26.447$, $df = 3$, $p = .000$) clearly show that respondents from different stages of change groups rate the importance of sustainability and sustainable living very differently. Further investigation of the Tukey's HSD, using an α of .05, was undertaken to reveal where the statistical differences lie, whilst an investigation of the mean scores was performed, indicating that there were significant differences between all groups, except between the action and maintenance groups. The post hoc comparisons using the Tukey HSD test indicated that the mean score for the pre-contemplators ($M = 2.00$) was significantly lower than the mean scores for the contemplators (3.60), the action stage (4.57) and the maintenance stage (4.79). The results are shown in Table 3.

The pattern appears to be clear – the more the sustainable behaviours that are being undertaken by an individual, the higher the rating they give for the importance of sustainability. This provides further evidence for placing respondents into groups associated with the stages of change model.

To seek significant differences between the Stages of Change groups, one-way analyses of variance (ANOVA) were completed using the following variables: “How would you rate your knowledge of sustainability before attending the event?”; “How enthused/encouraged do you feel about sustainable living as a result of attending the event?”; “Have you learned anything about sustainable living as a result of your visit?”; and “Will you make any changes to live more sustainably as a result of your visit?”

There were no significant differences between the groups in terms of how they rated their knowledge of sustainability before attending the festival. This is an interesting finding as it appears clear that respondents did have different knowledge levels, but were not aware of this fact. It is of particular relevance to those in the pre-contemplation and contemplation stages, as it suggests that they are not aware of a knowledge gap. The TTM suggests that in order to move individuals from pre-contemplation to the contemplation stage, they need to become aware of the problem in the first place. They also need to experience environmental re-evaluation – an appreciation that change will have a positive effect on society. It is worth noting at this point that environmental re-evaluation may not be the only motivation for change. For example, an individual may decide to take public transport to save money rather than for environmental benefits. However, awareness of these environmental benefits may be an important part of the decision to change behaviour. Further, in order to move from contemplation to action, the individual needs to appreciate that change will have a positive impact on their identity. Given that these individuals are not aware of their own lack of knowledge, it is clear that the event is not offering support to those attendees in these stages

Table 4. ANOVA – mean ratings for how encouraged/enthused do you feel?

Stages of Change group	Pre-contemplators (<i>n</i> = 31)	Contemplators/preparation (<i>n</i> = 51)	Action (<i>n</i> = 89)	Maintenance (<i>n</i> = 25)
Pre-contemplation	3.50			
Contemplation		3.10*		
Action			3.77*	
Maintenance				3.93*

*Significant at $p = .005$.

of change. In addition, since these two groups made up 81 of the 196 respondents, it seems that the festival is not truly attracting those whose behaviour it set out to change.

With regard to the issue of how encouraged or enthused respondents felt as a result of attending, a significant difference between groups was found. The ANOVA results illustrate that there was a small but significant difference ($F = 7.293$, $df = 3$, $p = .000$) between those in the contemplation stage and those in the action and the maintenance stages. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the contemplators ($M = 3.10$) was significantly lower than those of the pre-contemplators ($M = 3.50$), those in the action stage ($M = 3.77$) and those in the maintenance stage ($M = 3.93$). Table 4 shows the results.

Whilst reinforcement management is an important process for those in the action and maintenance stages, and it is clear that the event is providing encouragement and enthusiasm for these attendees, the lower rating given by those in the contemplation/early action stage suggests that the event is not stimulating them sufficiently to encourage consciousness raising or dramatic relief. These are processes outlined in the TTM as being required to help to move people towards action. Again, the event appears to be most successful in providing support to those *already engaged* in sustainable behaviour, rather than in encouraging conversions to a more sustainable lifestyle.

When asked about whether they felt that they had learned anything as a result of attending the festival, the results indicate again that there were clear differences between the various stages of change groups. Table 5 illustrates these results. The more engaged with sustainability the respondent was, the more they felt that they had learned something. Whilst those that were not at all interested in sustainability did not feel that they had learned anything – they may simply have seen the event whilst passing by, particularly tourists visiting Federation Square, and attended briefly out of curiosity – over 90% of those in the maintenance stage and 82% of those in the action stage did feel that they had learned something as a result of their visit. The TTM suggests that for those in the action stage, the processes required are *helping relationships*, referring to seeking and using social support to facilitate change, *reinforcement management* or finding intrinsic and extrinsic

Table 5. Have you learned anything about sustainable living as a result of your visit?

Stages of Change group	Yes	No
Pre-contemplation	0	100%
Contemplation	64%	36%
Action	82%	18%
Maintenance	94%	6%
<i>n</i> = 196		

rewards for making change, *counter-conditioning*, which refers to the substituting of new behaviours for previous behaviours and *stimulus control* or restructuring one's environment to elicit new behaviour and inhibit old habits. For those in the maintenance stage, the most important process is *social liberation*, which refers to empowering others and advocating for the desired behaviour.

In order to get a better picture of *what* respondents felt they had learned, an open question was posed. Responses indicate that, by and large, those in the contemplation stage felt that (1) they had learned more about the importance of sustainability, (2) there are many companies that are supportive of sustainable behaviour, and (3) it is not as difficult to change as they might have originally thought. These statements are very reflective of environmental re-evaluation, self re-evaluation and self-liberation. Those in the action stage were more likely to mention specifics that they had learned – new products, new ideas and the range of options available to them. As one respondent put it: *more detailed "hows", not just overarching themes*. These seem to reflect the processes of helping relationships, counter conditioning and stimulus control. Finally, those in the maintenance stage felt that they needed to spread the word – *be more active to see real change and get more exposure for sustainability*. These seem to be similar to the process of change identified by the TTM as social liberation – empowering others and advocating for change.

Discussion

The findings suggest that this event attracted individuals who were already significantly committed to sustainable behaviour. Although expectation levels were high and attendees were broadly satisfied with the event, many attendees appear to be leading highly sustainable lifestyles and were using the event as a source of encouragement and positive feedback for their lifestyle choices. A few attendees were building or renovating their houses and needed advice on the latest developments on green technology and sustainable building. They indicated that the lectures and demonstrations on offer were extremely useful in increasing their understanding of sustainability issues, mostly concerning gardening and growing food. Most attendees indicated that they regularly carry out sustainable practices such as monitoring energy use, separating waste and recycling. They have also invested in a number of different sustainable facilities/practices, such as energy efficient appliances, loft insulation and a compost bin.

It appears that rather than representing the pre-contemplators and contemplators, these attendees are almost certainly in the preparation, action and/or maintenance stages. The event is providing valuable encouragement and resources for attendees and, as responses from attendees show, is playing an important role in helping them to continue with their sustainable behaviour. The event is supporting the processes of change of "helping relationships", "counter-conditioning" and "stimulus control". It also provides a validation of their lifestyle choices, which contributes to "reinforcement management".

However, the event does not appear to attract as many of those individuals who are not already living a highly sustainable lifestyle – those who are in the pre-contemplation and contemplation stages. As such, they are not the audience that the organisers needed to reach to in order to achieve their aim of behaviour change at a broader scale. The event does provide opportunities for the processes of change required – consciousness – raising, self and environmental re-evaluation – but those individuals for whom these processes would be most useful are not forming a large part of the event audience.

These findings have important implications for environmental education and future promotion and marketing of these events and highlight the potential utility of using the

TTM in the pro-environmental behaviour context. Events could play an important role in facilitating environmental behaviour change, provided that the right audience mix is attracted. Whilst encouraging the *converted*, the “maintenance stage” in the TTM, is vital to ensure that positive behaviours are reinforced and continued, these events also need to attract people within the other stages of change, particularly those at the “pre-contemplation” and “contemplation” stages. This might involve innovative approaches to persuade “non-believers” to attend these kinds of events or may involve a change in the way that the event is marketed, to stress other benefits of pro-environmental behaviour change, for example cost savings or increased efficiencies. It is also important to note that various emotions, cognitions and motivations remain unexplored in this particular study, and it is acknowledged that further study of the internal and external contexts of individuals considering pro-environmental behaviour change is required.

Organisers of these events could offer rewards and incentives to encourage attendance, such as the opportunity to meet celebrities with a high sustainability profile. Marketing collateral could emphasise or arouse concern about the current status quo or pique interest in sustainability issues through appeals to self-interest. The name of these events, often involving terms like *eco*, might not interest a wide audience, who might see them as overly serious or even pretentious rather than fun or entertaining. Given that tourists may be one of the prime market segments for events in destinations such as central Melbourne, keeping the emphasis on entertainment might have greater appeal. In addition, the term *eco* may not resonate with businesses, which may view that term as implying frivolity or lacking in gravitas. Renaming them might be a way to encourage attendance by people with a more mainstream view of the environment.

The implications for practitioners include the fact that recognising that people go through stages of change, and that behaviour change is a journey, means that event organisers aiming to encourage sustainable behaviour change can focus their efforts on those in a particular stage of change, if they choose, or alternatively may include a variety of options during their events to appeal to those in a number of different stages. Practitioners may also be able to use this information to secure further funding for their events, particularly where an event has been accused of simply “preaching to the converted”. More broadly, tourism operators may also be able to use the findings of this research to better understand the diversity of the audience in terms of readiness for behaviour change.

Conclusions and further research

This paper has revealed three key findings through a study aimed at exploring whether attendance at a community sustainability-focused event could play a role in changing pro-environmental behaviour amongst attendees. Firstly, the findings suggest that this event did provide opportunities for facilitating the processes of environmental behaviour change, as identified in the TTM model. This is particularly important for those in the later stages of change, as the event supports “helping relationships”, “counter-conditioning” and “stimulus control”, all processes that support the action/maintenance stages. However, the event also supports those processes that are vital in encouraging people who have not yet changed their behaviour, including “consciousness raising”, “self re-evaluation” and “environmental re-evaluation”. Therefore, it is argued that events have the potential to support the processes of change at all stages of change within the TTM, thus underlining the importance of the integrated downstream and upstream approach.

Secondly, it would appear that the event studied in this research did not attract a fully inclusive audience mix; it appealed mainly to those already engaged in sustainable

behaviour. This is important, in that it provides these individuals with the encouragement and support they need, to ensure that they remain in the maintenance stage in terms of pro-environmental behaviour. However, they are not the prime target market for this type of event. If the individual in the pre-contemplation or contemplation stage is sought, then more work needs to be done in the promotion and marketing of these events. The results of this research provide further evidence for the contention that an integrated upstream and downstream approach is required in order to effect behaviour change (Chib et. al. 2009) and that appealing both to those already carrying out the desired behaviour and to those who have not yet engaged with the desired behaviour is vital (Verplanken & Wood, 2006).

Thirdly, this paper demonstrates the value of the TTM in the pro-environmental behaviour context, particularly when considering the potential of events to encourage behaviour change. This applies equally to local residents and tourists. It appears that individuals considering and practising pro-environmental behaviour do work through the same stages of change (pre-contemplation, contemplation, preparation, action and maintenance) as individuals making changes in other areas of their lives. This knowledge allows us to evaluate the processes of change outlined in the TTM to assess their usefulness in encouraging pro-environmental behaviour change. It appears that these processes are present and required in the pro-environmental behaviour change context, as they have been found to be in other behaviour change contexts (Hutchison et al., 2009; Prochaska & DiClemente, 1983).

This research was conducted on a small sample: further research is required into the role these types of events are currently playing in encouraging and facilitating pro-environmental behaviour, as well as to identify the potential for green events to take a more substantive role in fostering sustainable behaviour in the future. Care should be taken if attempting to generalise these findings to other ecofests, and particularly to other types of events. In addition, the TTM was originally conceived as a theory of individual behaviour change, and whilst this applies in the event context discussed (in terms of the individual attendees), it should be noted that the theory might not help to explain any *group* behaviour change. Further, arguably some pro-environmental behaviours are considerably easier to carry out than others (for example, separating waste in a household is much easier and cheaper than installing solar hot water systems or rain water tanks). Thogerson and Crompton (2009, p. 143) note that encouraging the “simple and painless” behaviours may not translate into the uptake of more significant yet more difficult pro-environmental behaviours. Whilst the TTM may help to explain how an individual engages in the process of adopting a particular behaviour, it does not help to explain how individuals may be encouraged to move from easy pro-environmental behaviours to more difficult ones. It should also be borne in mind that tracking the movements of attendees from one stage of change into the next was beyond the scope of this research, although this would be a logical next step for future studies.

Further opportunities for future research can also be identified. The results could be compared with other types of green events, including those that are not themed as sustainable, but which encourage or promote pro-environmental behaviour. Examples include open-air music festivals, a number of which have won awards for sustainability such as A Greener Festival or Banksia Awards (Laing & Frost, 2010). It might also be instructive to undertake cross-cultural comparisons, to see whether these events attract a different profile in other countries or whether more people are within the higher or lower stages of change in a different cultural context. More work is also needed to explore the different ways of attracting those within the pre-contemplation or contemplation stages, through innovative or creative marketing tools or techniques. Social media might play a role here, by creating virtual communities and encouraging people to attend these events. It is, however, important not to ignore the role of these events in supporting the “true believers”. Research could also

examine how to encourage these people to attend these events, even if they feel they have nothing much to gain from attendance, so as to reinforce this behaviour into the future.

What do the techniques used and findings revealed here have to offer behaviour change advocates for and practitioners in sustainable tourism? The types of sustainable behaviours that have been considered in this paper may be potentially less significant when the big picture is taken into account. For example, and of particular relevance in the tourism context, long haul flights and two-car families are examples of a western affluent lifestyle, which are likely to have a far greater contribution to our levels of unsustainability than some of the smaller scale behaviours raised by a sustainability-focused event. This could be argued to constitute a further limitation of this study. However, some of these big picture behaviours might be the result of incremental change, and it is important to start somewhere rather than expecting people to change their behaviours overnight. Our study demonstrates the value of recognising that people might be in different stages of behaviour change, and suggests that practitioners, through running sustainability-focused events, might influence people to move from stage to stage. The TTM appears to be a useful tool or framework for this type of research, as it acknowledges these different stages of change, as well as conceptualising the processes of change undergone by individuals.

A further application of the TTM is to consider behaviour change in the context of tourism fairs or travel shows that are staged for the trade as well as the general public. Examples include the London TNT Travel Show and the Melbourne Adventure Travel Expo. In a similar way to sustainability-focused events, they might act as a setting for promoting changes in behaviour – in this case travel decision-making behaviour – and have a varying effect on individuals at different stages of change. Future research might explore how these events might encourage sustainable behaviour amongst tourists and the industry alike, including highlighting and promoting the big picture behaviours outlined above.

Notes on contributors

Judith Mair is senior lecturer in tourism at the Department of Management, and tourism researcher in the Australia and International Tourism Research Unit, Monash University, Melbourne, Australia. Her research interests include pro-environmental behaviour both in tourism and events, tourism and climate change, consumer behaviour in tourism, and business and major events.

Jennifer Laing is a senior lecturer in events marketing at La Trobe University, Melbourne, Australia. Her research interests include travel narratives, social impacts of events, extraordinary tourist experiences, and marketing and interpretation of heritage tourism.

References

- Anderton, C. (2009). Commercializing the carnivalesque: The V festival and image/risk management. *Event Management*, 12(1), 39–51.
- Andreasen, A. R. (1994). Social marketing: Its definition and domain. *Journal of Public Policy and Marketing*, 13(1), 108–114.
- Bamberg, S., & Moser, G. (2007). Twenty years after Hines, Hungerford and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, 27, 14–25.
- Bergin-Seers, S., & Mair, J. (2009). Emerging green tourists: Their behaviours and attitudes. *Tourism and Hospitality Research*, 9(2), 109–119.
- Bramwell, B., & Lane, B. (1999). Collaboration and partnerships for sustainable tourism. *Journal of Sustainable Tourism*, 7(3–4), 179–181.
- Chib, A., Chiew, H. J., Kumar, C., Lim, G. C., & Ale, K. (2009). [Minus]plastic: Influencing pro-environmental attitudes among Singaporean youth. *Environmental Education Research*, 15(6), 679–696.

- De Vaus, D. (2002). *Surveys in social research* (5th ed.). London: Routledge.
- DiClemente, C. C. (2007). The transtheoretical model of intentional behaviour change. *Drugs and Alcohol Today*, 7(1), 29–33.
- Ecofest. (2012). Green is the new green [online]. Retrieved February 12, 2012, from <http://www.ecofestnelsonstasman.co.nz/>
- Font, X., & Harris, C. (2004). Rethinking standards from green to sustainable. *Annals of Tourism Research*, 31(4), 986–1007.
- Getz, D., & Frisby, W. (1988). Evaluating management effectiveness in community-run festivals. *Journal of Travel Research*, 27, 22–27.
- Halpern, D., Bates, C., Beales, G., & Heathfield, A. (2004). *Personal responsibility and changing behaviour: The state of knowledge and its implications for public policy*. London: Cabinet Office.
- Huang, J. Z., Li, M., & Cai, L. A. (2009). A model of community-based festival image. *International Journal of Hospitality Management*, 29(2), 254–260.
- Hutchison, A. J., Breckon, J. D., & Johnston, L. H. (2009). Physical activity behaviour change interventions based on the transtheoretical model: A systematic review. *Health Education and Behaviour*, 36, 829–845.
- Hwang, D., Stewart, W. P., & Ko, D. (2012). Community behaviour and sustainable rural tourism development. *Journal of Travel Research*, 51(3), 328–341.
- Johnson, C. Y., Bowker, J. M., & Cordell, H. K. (2004). Ethnic variation in environmental belief and behaviour: An examination of the new ecological paradigm in a social psychological context. *Environment and Behaviour*, 36, 157–165.
- Jordan, F., & Gibson, H. (2004). Let your data do the talking: Researching the solo travel experiences of British and American women. In J. Phillimore & L. Goodsen (Eds.), *Qualitative research in tourism: Ontologies, epistemologies and methodologies* (pp. 215–235). London: Routledge.
- Kollmuss, A., & Agyeman, J. (2002). Mind the gap. Why do people act environmentally and what are the barriers? *Environmental Education Research*, 8(3), 239–260.
- Kotler, P., & Zaltman, G. (1971). Social marketing: An approach to planned social change. *Journal of Marketing*, 35(3), 3–12.
- Laing, J., & Frost, W. (2010). How green was my festival: Exploring challenges and opportunities associated with staging green events. *International Journal of Hospitality Management*, 29(2), 261–267.
- Maio, G. R., Verplanken, B., Manstead, A. S. R., Stroebe, W., Abraham, C., Sheeran, P., & Conner, M. (2007). Social psychological factors in lifestyle change and their relevance to policy. *Social Issues and Policy Review*, 1(1), 99–137.
- Mair, J., & Jago, L. (2010). The development of a conceptual model of greening in the business events sector. *Journal of Sustainable Tourism*, 18(1), 77–94.
- McKenzie-Mohr, D., & Smith, W. A. (1999). *Fostering sustainable behaviour: An introduction to community-based social marketing*. Gabriola Island, Canada: New Society Publishers.
- Nisbet, E. K. L., & Gick, M. L. (2008). Can health psychology help the planet? Applying theory and models of health behaviour to environmental actions. *Canadian Psychology*, 49(4), 296–303.
- Olander, F., & Thøgersen, J. (1995). Understanding of consumer behaviour as a prerequisite for environmental protection. *Journal of Consumer Policy*, 18, 345–385.
- Prent, S., & Partridge, R. (2010). 2012 Olympics: A catalyst for behaviour change? *Perspectives in Public Health*, 130(6), 257–258.
- Prochaska, J. O. (1979). *Systems of psychotherapy: A transtheoretical analysis*. Homewood, IL: Dorsey Press.
- Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51(3), 390–395.
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist*, 47(9), 1102–1114.
- Ramchandani, G., & Coleman, R. J. (2012). The inspirational effects of three major sports events. *International Journal of Event and Festival Management*, 3(3), 257–171.
- Rosson, P. J., & Seringhaus, F. H. R. (1995). Visitor and exhibitor interaction at industrial trade fairs. *Journal of Business Research*, 32(1), 81–90.
- Sharpe, E. K. (2008). Festivals and social change: Intersections of pleasure and politics at a community music festival. *Leisure Sciences*, 30, 217–234.
- Swarbrooke, J. (1998). *Sustainable tourism management*. Wallingford: CAB International.

- Thogerson, J., & Crompton, T. (2009). Simple and painless? The limitations of spillover in environmental campaigning. *Journal of Consumer Policy*, 32, 141–163.
- Tourism Victoria. (2012). Understanding visitor needs and expectations – Federation Square [online]. Retrieved November 12, 2012, from http://www.tourismexcellence.com.au/images/stories/pdf/module1/1Fed_Square_Revised.pdf
- Velicer, W. F., Prochaska, J. O., Fava, J. L., Norman, G. J., & Redding, C. A. (1998). Smoking cessation and stress management: Applications of the transtheoretical model of behavior change. *Homeostasis*, 38, 216–233.
- Verplanken, B., & Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy and Marketing*, 25(1), 90–103.
- Weaver, D. (2006). *Sustainable tourism*. Oxford: Butterworth Heinemann.