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Sustainability: Consumer Perceptions and Marketing Strategies

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Abstract

Studies of green consumer behaviour, in particular purchasing and disposal, have largely focused on demographics and/or socio-demographics, with mixed and frequently contradictory results. To move the debate forward, we investigated a wide range of 40 sustainability activities with 78 consumers who placed each activity on a matrix according to perceived effort and perceived difference to the environment. Patterns both across respondents and between certain pairs of activities were identified and we suggest that this model increases our understanding of how consumers view sustainable activities. Marketers can use this information to consider marketing strategies which positively influence consumers' perceptions of such activities.

Introduction

Social issues and concerns such as the environment and corporate social responsibility are again at the forefront of academic research and management thinking (Chan and Lau, 2004). Prakash (2002) suggests that the anticipated surge in green consumer behaviour, predicted for the 1980s

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and 1990s, never really occurred, and that the mass consumer market for green products has yet to develop. Overall, consumer response to green marketing efforts has fallen short of marketers' expectations (Davis, 1993). However, recent emphasis on environmental concerns such as global warming, related aspects like health scares, the pressure on organisations to account for their environmental performance, the labelling of products with environmental claims, and developing technology which allows consumers to investigate issues for themselves, have renewed interest in what is loosely called environmental marketing. Within marketing, the green movement has been viewed as an opportunity to identify and segment new markets, not entirely successfully. In this paper, we discuss previous research on green purchasing and disposal, the problems raised for marketers, and then we draw upon the literature and our own research to suggest an alternative approach to identifying and marketing sustainable activities.

Beyond green segmentation

A common theme across many marketing studies in this area is the attempt to define the characteristics of green consumers for segmentation purposes. This research has 'not always yielded strongly indicative results, and the results produced in one study have been repeatedly contradicted in another' (Wagner, 1997, p.23). The main segmentation tools that have been used include demographics and/or socio-demographics with a view to aligning consumers' characteristics with their propensity to purchase green products and services. Studies have found the green consumer to be educated/not educated, older/younger, female/male, or found no relationship at all between such factors and green consumer behaviour (Straughan and Roberts, 1999).

Marketers have not been alone in this approach to understanding green behaviour, nor in their failure to uncover consistent relationships with demographic variables. Waste management researchers focusing on the other end of the consumption process have encountered similar problems in identifying 'the recycler' (Hines, Hungerford and Tomera, 1987; Barr, 2002). Further, studies in both literatures confirm that although most members of the public seem to be concerned about the environment, and will verbally endorse most schemes or products that seek to conserve or improve it, this is not necessarily an indicator of their purchasing or disposal actions (Vining and Ebreo, 1992; Minton and Rose, 1997).

These issues have been tackled differently in each literature. In the waste management literature there has been a move away from trying to describe the 'recycler' by means of their attitudes and towards identifying them in terms of concrete actions. In the marketing literature, a different approach has been taken. Here, one response to these problems is to focus on consumers' perceptions of green issues, rather than their identifiable characteristics. This is a key point which, if understood, would allow marketers to take a different perspective in segmentation, based less on the mass market approach of demographics and more on consumer beliefs.

One example of such an approach is a study by Straughan and Roberts (1999), who focused on perceived consumer effectiveness (PCE) as an insight into ecologically conscious consumer behaviour (ECCB). PCE was found by Straughan and Roberts to be a key indicator in explaining ECCB. The researchers emphasise that even if a respondent is concerned about the environment, they are unlikely to be proactive unless they have the belief that individuals can be effective.

Consumers may believe they are informed about the environment, and develop perceptions based upon that knowledge, but that belief is not always grounded in objective knowledge. Ellen

(1994) found that people's levels of objective knowledge about the environment were not correlated with their measures of perceived knowledge. In practical terms, objective knowledge was predictive only of recycling, whereas perceived knowledge was an important indicator of recycling, source reduction and political action to reduce waste. In fact, as Ellen (1994) asks, do those who report high levels of perceived knowledge engage in effective environmental behaviours or do they make poor purchasing choices and recycle inappropriately? These issues raise the question of where individuals source their information about the environment, and what can be done by governments, marketers and others to educate consumers and to try to ensure they receive correct information.

The importance of environmental knowledge, attitudes and behaviour in pro-environmental purchasing is also studied by Schlegelmilch, Bohlen and Diamantopoulos (1996). They illustrate that consumers' environmental consciousness can impact on their purchasing decisions, with attitudes the most consistent predictor of such decisions. However, they step back to query how these environmental attitudes are actually formed, suggesting that sources of information (e.g. personal [family, friends] and impersonal [media]) could be the basis for preliminary investigations.

Zimmer, Stafford and Stafford (1994), although essentially looking to characterise the 'green consumer' and segment what they see as a growing green market, take an approach which first identifies those green issues which consumers perceive as important. Beginning with a list of 57 distinct environmental concerns, reduced to seven factors after statistical analysis, Zimmer et al suggest that marketers can realistically focus on a particular factor, with certain elements more important to consumers within each of the dimensions. For example, in factor one ('concern for

waste'), recycling and energy conservation were perceived as major issues by the study's respondents.

Peattie (1998) cites a number of reasons why relying on socio-demographics to describe the green consumer is misconceived and goes on to suggest that marketers should therefore be exploring situational factors present in the act of purchase itself. He moves the focus of research from the individual consumer to the individual purchase. This view is based on Kardash's (1974) observation that all consumers are potentially green consumers because if two products were identical in every way but one was less damaging to the environment, then most consumers would select the least damaging product. Peattie (1998) asserts that understanding environmental purchasing behaviour (and often the lack of it), is assisted by looking at the extent to which other things are not 'equal'. Two of the factors which Peattie has identified as making a significant impact on how 'equal' green and non-green (or 'grey') purchases are perceived are:

The degree of compromise

This can take a variety of forms such as having to pay more, or travel further in order to purchase a green product. It can also mean that purchasing a green equivalent might involve a sacrifice in the performance of the product.

The degree of confidence

This is how sure the consumer is that the product addresses a genuine issue and that it represents an environmental benefit. This concept is essentially the same as Straughan and Roberts' (1999) notion of perceived consumer effectiveness (PCE).

Peattie considers these factors to be continua on which green purchases might be located and thus constructs a green purchase perception matrix offering a way of classifying individual green

purchases rather than the people who make them. Each category contains examples of purchases that embody one of the four possible combinations (See Figure 1).

Peattie’s matrix implies an attractive concept of purchases which are stable and exist in particular categories according to perceived confidence and compromise. Being able to identify purchases in this way lends itself to clear marketing strategies, for example using communications to emphasise difference to the environment, or reducing perceived compromise by making a product more effective.

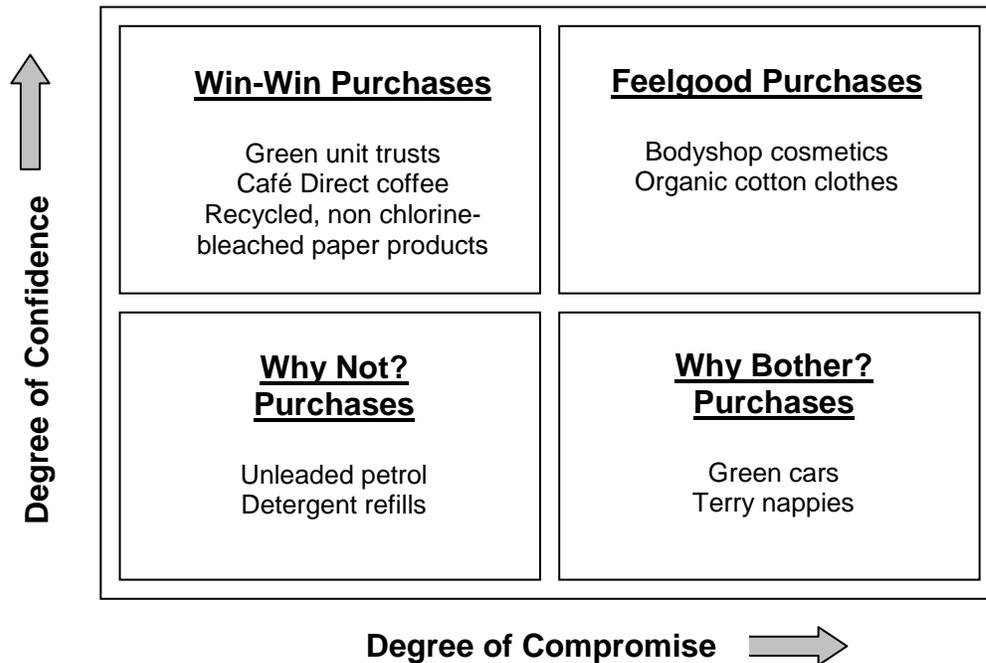


Figure 1: Green purchase perception matrix (Peattie 1998)

We found that Peattie’s (1998) work had resonance with concepts and problems identified in the waste management literature. Confidence, which is sometimes referred to as efficacy (Oskamp *et al.*, 1991) and compromise, often termed convenience (Gamba and Oskamp, 1994; Perrin and Barton, 2001) were issues already discussed by recycling scholars. We therefore sought to apply

Peattie's (1998) approach of viewing green purchasing as a portfolio of activities to the disposal of household waste. This led to the development of the green disposal perception matrix (McDonald and Oates, 1999).

Despite Peattie's (1999) radical reconceptualisation of green purchasing, it is our view that the matrix does not go far enough. In his 1999 article, Peattie embeds his green purchase perception matrix in a discourse about the relationship between marketing and sustainability. He looks at the assumptions underpinning marketing as a discipline and as a practice and shows how the inheritance of tenets from classical economics has given rise to some of the paradoxes and difficulties which are to be found in green marketing. Whilst this wider debate about sustainability is an important contribution to the marketing literature, the green purchase perception matrix itself is only concerned with green purchasing which represents a fraction of the issues contained within the notion of sustainability. This 'green' focus is not unusual in the field. Straughan and Roberts (1999) for example also focus exclusively on environmental elements of sustainability through their study of ecologically conscious consumer behaviour (ECCB). A concentration on green purchasing falls short of the mark in two respects. Firstly, an act of purchase represents only a fraction of the process of consumption. To address consumption we must additionally understand product use and product disposal. Secondly, environmental, ecological or 'green' issues only relate to one thread of sustainability and need to be considered alongside social and ethical issues in order to form a fuller picture of these inter-related concerns. These criticisms are equally true of the green disposal perception matrix (McDonald and Oates, 1999).

These matrices represent an important step forward in thinking for both the marketing and waste management fields. They have moved away from trying to characterise green individuals in

terms of demographics or psychographics, to a view of the individual as making a range of different purchase or disposal choices which will vary in their greenness depending on the perceived ease of the act itself and the perceived difference that it will make. However they still fall short of addressing sustainability because their focus is too narrow and bounded.

A recent project on recycling highlighted this issue from another perspective. When asked to talk about reuse and recycling activities in their households, a number of consumers mentioned the fact that they buy organic foods (Oates and McDonald, 2002). We initially saw this as the respondents' attention wandering from the issue in hand, but the truth is much simpler: there is no distinction in consumer minds between purchasing and disposal, this is a false dichotomy imposed by the traditional scope of academic disciplines.

We contend therefore that it is not meaningful to distinguish between behaviours which are concerned with green purchasing and green disposal. Instead we suggest that if sustainability is to be achieved then we must look at these issues in a holistic way. In academic terms, this means integrating and synthesising the concerns of a number of literatures of which waste management and marketing are just two. We therefore propose a third matrix which combines the concerns of the previous two and extends its scope to include transport, water, energy, ethical purchasing and community related activities. The aim of this study is to determine which sustainability related activities consumers perceive to fall into each of the four categories on the matrix, in order to draw out the implications for marketing practices and sustainability policy. The importance of consumer perceptions, established in the literature, gives support to our notion of using such perceptions to look at sustainability and marketing. In the next section, we present the development of our sustainability matrix followed by findings and marketing implications.

Methods

We have made a number of changes to Peattie's (1999) matrix in order to operationalise it as a research instrument. These changes fall into two main categories: those which were made in order to broaden the matrix and those that simplify it for use with interviewees.

Broadening the matrix

To uncover the perceptions of interviewees of the same range of activities, we constructed a list of activities for them to consider. We began this process with a list of activities generated both from the literature and discussions with colleagues. Our aim was to incorporate as wide a range of issues relating to sustainability as possible. From this list we identified distinct groups of activities which related to purchase, disposal, utilities, travel, household, workplace and community. Using these seven categories as a way to ensure a broad coverage of issues, we refined our original list by cutting out similar or overlapping items. The outcome of this process was a list of 40 activities that we could use with participants. We made sure that the list contained some activities that many people would undertake (such as 'Donating things to charity shops') as well as some unusual ones that only very committed individuals might consider (such as 'Being part of a LETS scheme'). The activity lists for each interview were randomised to minimise association biases. A complete activity list can be obtained by contacting the authors.

Simplifying the matrix

So that participants could work directly on the matrix, we developed a more user-friendly version. We began by simplifying the language used on the original matrix in order to make it more accessible. We have taken Peattie's (1999) concepts 'degree of compromise' and 'degree of confidence' (see Figure 1) and operationalised them using the straightforward questions: 'how

much effort does it take?’ and ‘how much difference does it make?’ respectively (see Figure 2). In this way, we have retained the original meaning of these concepts but made them more suitable for empirical work by translating them into less academic language. We did not reproduce the names of the four perception categories (e.g. ‘Win-Win’) on the matrix that we showed to interviewees so that we would not bias their answers. The resulting Sustainability Perception Matrix, as used with participants can be seen in Figure 2.

		Not much effort	A lot of effort		
How much difference does it make?	A lot of difference			A lot of difference	
	Not much difference			Not much difference	
		Not much effort	A lot of effort		
		How much effort does it take?			

Figure 2: Sustainability Perception Matrix

To help the participants remember what we meant by ‘effort’ and ‘difference’ we supplied them with a card with definitions on it for them to use as an *aide memoire* and consult during the course of the interview. This also cited the Brundtland definition of sustainability (WCED, 1987, p.43) for reference. For further discussion of these research instruments, see Oates and McDonald (2003).

Interview process

The interview was conducted using a three-stage process:

1. Each participant went through the activity list and ticked all the activities that they themselves 'usually did' or 'had recently done';
2. We then asked participants to consider how much 'effort' and 'difference' was associated with each activity (whether they had ticked them or not) and place it on the matrix accordingly;
3. At the end of the interview, we completed a basic classification questionnaire.

This research design was tested using 10 pilot interviews, after which some minor adjustments were made to the instruments. Each interview lasted approximately 30 minutes. In total we carried out 78 interviews. Since we planned to analyse the data using both qualitative and quantitative techniques, it was important that our sample fulfilled quality criteria for both processes. Therefore the classification section of the questionnaire was used to ensure that our sample included a range of ages, genders and occupations. Our sample was drawn from the adult population of Sheffield, a large city in the UK during 2003. People were recruited initially through personal contacts and thereafter through a process of snowballing. Our final sample contained 33 men (42%) and 45 (58%) women, compared with the Sheffield population which has 49% men and 51% women (Office for National Statistics, 2001). The sample was roughly comparable to the Sheffield population in terms of age profile except in the 30-39 age bracket where we have a larger proportion of respondents than the Sheffield population as a whole (Office for National Statistics, 2001). Also, following a qualitative theoretical sampling methodology we continued to interview until we reached theoretical saturation (Gummesson, 1991).

Data analysis

The interview data has been analysed in two different ways. For each interviewee, the activities were entered into a spreadsheet, recording whether or not they were undertaken as well as which quadrant they were perceived to be in. These frequency data were analysed statistically using Chi-squared tests to see whether any of the activities could be considered to be consistent with a particular cell of the matrix.

The completed matrices were also subjected to a qualitative analysis which sought to uncover patterns of perception within and across individuals. This analysis considered both the overall allocation of activities across the matrix as well as the relative perceptions of activities which the individual did and did not personally do. A further qualitative analysis was carried out looking for pairs or groups of activities which appear together on the matrices, whichever cell they are in.

Findings

When we began this empirical work we believed that we would find, as Peattie (1998; 1999) suggested, a range of activities which were commonly perceived to belong to one of the cells on the matrix. In fact we were surprised by how few activities were perceived in a similar way by our interviewees. For example, ethical banking was regarded as making a lot of difference and being little effort by 18 (23%) respondents, making a lot of difference but being a lot of effort by 22 (28%) respondents, making little difference and being little effort by 18 (23%) of respondents and making little difference but being a lot of effort by the remaining 20 (26%).

In fact there were only five activities that had statistically significant (at a confidence level of 95%) consistent positions on the matrix. These are shown on Figure 3. It is interesting to note that all the stable activities fall into the high difference/low effort category. Further, they are all

resource related, the first two being drawn from our group of waste activities and the rest being from utilities.

		Not much effort	A lot of effort		
Not much difference	A lot of difference	Kerbside recycling (92%) Paper banks next to a photocopier (82%) Switch off lights (73%) Don't fill the kettle (71%) Turn down the heating (62%)		A lot of difference	
	Not much difference			Not much difference	
		Not much effort	A lot of effort		

Figure 3: Activities which are stable in terms of **both** effort and difference

What we did find was a much higher degree of uniformity as to whether people regarded activities as high or low effort or making a little or a lot of difference. In other words, some activities were more consistently assigned to the top, bottom, right or left of the matrix than they were to individual cells. Figure 4 highlights the activities which were associated with one of our axes (i.e. difference or effort) by more than 75% of respondents. For clarity, we have not included the activities which are associated with both axes as they are already described in Figure 3.

Most of the agreement in our data centres on high difference and low effort with the notable exception of being part of a LETS scheme which is regarded by many as high effort.

		Not much effort	A lot of effort
A lot of difference	Insulation (95%) Walk or cycle rather than drive (95%) Recycling banks (92%) Use public transport (88%) Car sharing (86%) Donating to charity shops (86%) Support environmental charities (81%) Reduce packaging (79%) Use greener fuels (79%) Buy low-energy light bulbs (78%) Green car decisions (78%) Refill containers (77%)	Low temp washes (88%) Hand-me-downs (85%) Buy Body Shop (82%) Bottle in cistern (82%) Reuse items (77%)	LETS scheme (77%)
Not much difference			

Figure 4: Activities which are stable in terms of **either** effort or difference

What Figure 4 highlights is that there are more activities which are consistently positioned on one of our axes than there are activities which are stable in terms of both axes. If we disregard the five activities which we have already established are associated with a *single cell*, (shown in Figure 3) we can see that there are a further eighteen activities that are linked with a *pair of cells* by over three quarters of respondents.

We have also discovered a group of activities which are equally associated with each of the four cells (statistically significant at 5%). These activities (Buying organic food or clothes; Boycotting companies due to human rights or environmental concerns; Ethical banking; Composting; Using hankies rather than tissues and; Reading on screen rather than printing out) have no stable perception profile amongst our respondents at all. This finding translates into a significant problem for marketers wishing to raise the uptake of some of these activities.

Even though our analysis has only uncovered a few stable activities, a more qualitative approach has picked up a number of perception patterns which individuals display. Taking each matrix as a whole, we have noted some common arrangements of activities across the matrices. These patterns have been surfaced through a process of analytic induction (Johnson, 2004) which involved many cycles of comparing and contrasting the spread of activities across the 78 matrices. This was both done independently by each author and through discussion with each other and with colleagues. Figure 5 gives a summary of the number of occurrences of each pattern found in our data as well as an indication of the shape of each of the patterns.

By far the most common pattern in responses is people who perceive most (or in some extreme cases, all) of the activities to make a lot of difference. This group, who we have termed ‘optimists’, are distinguished by their noticeably top heavy matrices (see Figure 5). This group perceive most of the activities to make a lot of difference independently of whether they actually do them or not. We also found a small number of matrices which were the mirror image of the ‘optimists’. These respondents saw hardly any of the activities as making much difference. We have labelled this group ‘pessimists’.

In the same way that there are top and bottom heavy matrices, we have also observed a number of matrices which record most of the activities on the left or right of the matrix. The first of these two groups, the ‘no trouble’ respondents regard most of the activities as involving little effort and therefore record most activities on the two left hand cells of the matrix (see Figure 5). The other group regard most of the activities as entailing a lot of effort and we have characterised these interviewees as the ‘too much trouble’ group.

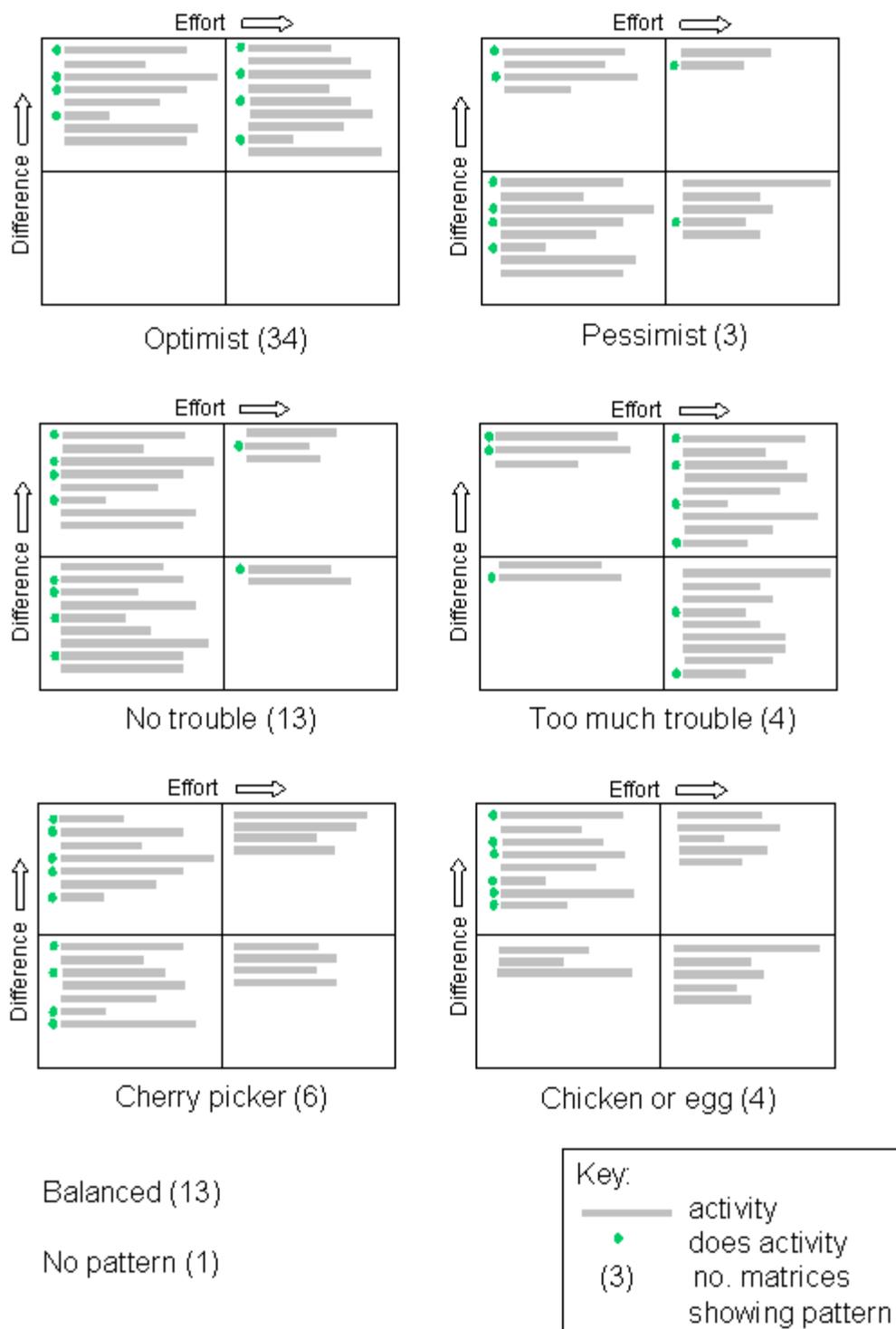


Figure 5: Perception archetypes

Another layer of analysis can be added to the search for patterns by considering the distributions of the activities which interviewees say that they do themselves and comparing this with the ones which they do not do. One pattern that is evident in the matrices is that people tend to have more activities that they actually do themselves in the high difference/low effort box than in any of the other three. This pattern is most extreme in the group that we have named ‘chicken or egg?’. These respondents only do activities which they perceive to make a big difference and take little effort (see Figure 5). This begs the question: do they only take on tasks which they see in this way, or do they perceive all of the tasks that they currently do as high difference/low effort because they are habitual? A related pattern is that of the ‘cherry pickers’ who tend to record a reasonably even spread of activities across the matrix, but only actually do those that they perceive to be little effort (see Figure 5).

Where we have matrices which show a more equal distribution of activities across all four quadrants of the matrix, we have recorded them as ‘balanced’ respondents. This group tends to undertake activities in each of the four cells as well as seeing the activities as evenly split between the four categories.

As noted in Figure 5, only one matrix did not make a convincing fit with any of the patterns described above. The allocation of the pattern to an archetype in any marginal cases was done by counting the activities in the boxes.

The final analysis began as a qualitative process of matching activities in order to see whether, even if they were not placed in the same quadrant by different respondents, they were nevertheless placed in the same part of the grid as each other. No strong patterns were found by

this process, so a systematic comparison of the categorisation of every activity with every other activity was undertaken. The results are shown in Table 1.

	Paper banks next to a photocopier	Don't fill the kettle every time you boil it	Switch off lights/ don't leave on standby	Hand-me-downs	Use public transport rather than drive	Turn down heating/ put on a jumper	Donate to charity shops	Refill containers
Kerbside Recycling	78%	69%	68%			59%	58%	
Paper banks next to a photocopier		64%	69%	56%			55%	55%
Don't fill the kettle every time you boil it			63%	63%				55%
Switch off lights/don't leave on standby						55%		
Walk or cycle rather than drive					63%			

Table 1: Activities which are placed together on the matrix by more than half of the respondents

Unsurprisingly the activities which we have already noted as stable members of the high difference/low effort cell can be seen to have a high association with each other. There are also some activities which are always perceived in the same way by individuals although there is not a high level of agreement across individuals about which quadrant of the matrix they belong to. The association of walking or cycling rather than driving and using public transport rather than driving is a good example of this. Although they vacillate between the high difference/low effort

and high difference/high effort boxes, they are placed together 63% of the time. In other words, however they are viewed, they are viewed as similar.

Discussion

The results of our study move beyond the development of a sustainability matrix to more wide-ranging implications for marketing. Initially, our expectations for the matrix included stable patterns of activities within particular categories. The significance of such stable activities is that they can be marketed according to their perceived effort and difference, for example an activity which is perceived as high effort might either be promoted in terms of how easy and straightforward it is (in order to change the consumer perception of effort), or alternatively in terms of how big a difference it makes (in order to emphasise that although it involves effort, it is worth it). Another strategy might be to reduce the actual amount of effort involved, for example by increasing distribution, or by improving performance.

Our most important and interesting finding has been how few of the activities on our list have been consistently placed in the same boxes on the matrix by participants. This might explain the lack of success of previous academic studies and marketing campaigns that have attempted to identify and target environmental consumers respectively. Activities are perceived so differently by individuals that it is difficult to implement a general marketing strategy to encourage such activities. This is a very difficult problem for marketers.

Notable exceptions to this rule are kerbside recycling schemes, paper banks placed next to a photocopier, switching off the lights, turning down the heating and only boiling the amount of water needed which are always placed in the high difference/low effort category. Since there is general agreement in our data that these activities are regarded as not taking much effort but

making a lot of difference, these activities can be marketed according to their easy, possibly habitual, nature.

Another interesting finding from our empirical testing of the matrix is that while there are few activities which are consistently placed in one cell, there are many which can be associated with a pair of cells. What these data suggest is that although both effort and difference are important issues in understanding the perception of these activities, they are not necessarily inter-related. This means that our data does give us insights into how to market activities in terms of *either* effort or difference. For example, Figure 4 shows that whilst our respondents do not agree on whether using recycling banks is high or low effort, 92% of them perceive it to make a lot of difference. It follows that the promotion of recycling banks could, for example, make use of consumer testimonies that describe how easy it has been for them to incorporate the use of recycling banks into their shopping routines in order to tackle the ambivalence that our results show the public feel about their ease of use.

In terms of highlighting difference (or confidence) as an important factor in perceptions of sustainability, our findings are in line with previous research (e.g. Straughan and Roberts, 1999; Oskamp *et al.*, 1991). However it is not a straightforward concept to research. Our interviewees found the level of difference hard to judge, unlike effort which was viewed as relatively straightforward (although effort does encompass several possible elements such as performance, distribution and cost). The role of perceived effort (or compromise) is well researched in the waste management literature (Perrin and Barton, 2001) and we suggest it is an equally important aspect for sustainability as a whole.

We have also identified activities which are paired or grouped i.e. whichever category they are in, they are always found together. Like the stable activities, many of the activity pairs are centred on the high difference/low effort category. Uncovering such associations allows the comparison of marketing activities. For example, what is successful for one of these activities might also benefit the other. Further, these associations give marketers the potential for ‘piggy backing’ their promotional strategies for increased effect. This could mean joint campaigns for associated activities. It could even mean promotion of one in the context of the other, such as campaigns aimed at increasing walking or cycling to work centred on buses or tram shelters.

Another type of pattern that we uncovered was in terms of how participants distribute activities across the matrix. Again, these patterns are centred on pairs of cells rather than individual categories. These distributions of activities suggest consumer ‘archetypes’ of perception patterns. For example, some participants are much more optimistic about the difference activities might make than other participants, giving a top-heavy matrix. Equally, we have found pessimistic consumers who feel that nothing they do can make a difference. Other archetypes in the data include people who cherry pick all the activities that they perceive to be ‘easy’ (or perhaps they consider the activities they already do to be easy because they are habitual), and people who see nothing as too much trouble. These perception archetypes offer marketers a new way to approach the marketing of sustainability by identifying their consumer base accordingly. For example, marketers might concentrate on designing convincing appeals to encourage pessimists to perceive activities differently.

Within our data there appears to be a bias towards more ‘positive’ answers. For example there are more ‘optimists’ than ‘pessimists’ and more ‘no trouble’ than ‘too much trouble’ matrices found in our analysis of perception archetypes (see Figure 5). As well as being more common,

the patterns belonging to the more positive archetypes are much more distinct. Equally, as Figures 3 and 4 show, we have found stronger and more frequent associations with the ‘low effort’ and ‘high difference’ cells than with ‘high effort’ or ‘low difference’ ones. These findings are in line with the outcomes of many other studies on environmental issues which have found that green activities, such as recycling, are seen in an extremely positive light by the public (Oskamp *et al.*, 1991). Unfortunately this strong endorsement does not necessarily translate into environmental actions, causing some to conclude that people are giving environmental researchers what they feel will be regarded as the ‘right’ answer to questions (Barr, 2002; Perrin and Barton, 2001). This affirmative view of activities relating to sustainability is therefore a limitation of all studies in the field.

Conclusions

In this study we set out to broaden Peattie’s (1999) green purchase perception matrix and to test it empirically. Using complementary quantitative and qualitative analyses has allowed us to examine the data from different perspectives. Both our qualitative and quantitative analyses have strongly confirmed Peattie’s (1999) assertion that both effort (compromise) and difference (confidence) are important elements in how activities are perceived by the public. Our findings contribute to the understanding of a number of facets of the consumption process, including those traditionally investigated by the marketing and waste management literatures.

The perception archetypes that we have outlined suggest that individuals have different outlooks which have a propensity to colour the way in which they perceive activities overall. These outlooks can be biased either in terms of perception of the effort involved, or the perception of the amount of difference they might make. Further, the data presented in Figure 4 suggest that

there is a relatively high level of agreement about which activities are less effort and make a big difference. Both of these sets of results indicate that effort and difference are important concepts which have the potential to provide marketers with valuable insights for the future of sustainability marketing.

We suggest that these issues need further examination. To do this, academics may need to step outside the traditional boundaries of their specialisms and integrate the knowledge of several broad fields of work. Qualitative research will be needed to understand the reasons for the associations that we have uncovered between different activities. More research will be needed to unpack the perceptions of effort and difference that are held by the public if the findings presented here are to be fully translated into effective marketing practices.

Finally, having verified that effort and difference are both important variables for understanding consumer perceptions of different activities, we would suggest that more work is needed to discover whether these are the only two possible continua that are relevant to understanding consumer perceptions of sustainability. It is possible that there are other concepts which we have not considered here which also impact on the adoption of sustainable consumption practices. Studies taking a grounded approach to the perception of sustainability activities will be crucial in uncovering any other factors which similarly affect the consumption process.

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