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**Health, Ethics and Environment: a Qualitative Study of
Vegetarian Motivations**

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Abstract

This qualitative study explored the motivations of vegetarians by means of online ethnographic research with participants in an international message board. The researcher participated in discussions on the board, gathered responses to questions from 33 participants, and conducted follow-up e-mail interviews with eighteen of these participants. Respondents were predominantly from the US, Canada and the UK. Seventy per cent were female, and ages ranged from 14 to 53, with a median of 26 years. Data were analysed using a thematic approach. While this research found that health and the ethical treatment of animals were the main motivators for participants' vegetarianism, participants reported a range of commitments to environmental concerns, although in only one case was environmentalism a primary motivator for becoming a vegetarian. The data indicates that vegetarians may follow a trajectory, in which initial motivations are augmented over time by other reasons for sustaining or further restricting their diet.

Key Words: environmentalism, ethics, food choices, health, vegetarianism

Introduction

Abstinence from the consumption of meat and animal products is an element of some religious practices including Buddhism and Seventh Day Adventism (Fraser 2003). Others choose a secular vegetarianism, grounded in non-religious motivations (Whorton 1994). The Vegetarian Society coined the term ‘vegetarian’ in the mid nineteenth century, and this is used to cover a range of dietary choices that avoid some or all foods with animal origins (Barr and Chapman 2002, Hoek et al. 2004). Vegans avoid all animal products for food, clothing or other purposes, while *lacto-ovo* vegetarians consume dairy produce and eggs, and *semi-* and *pesco-* vegetarians eat poultry and fish respectively (Phillips 2005, Willets 1997).

Studies of vegetarians have identified a variety of non-religious motivations for adopting a meat-free diet (Beardsmore and Keil 1992, Povey et al. 2001). Personal health and animal cruelty figure high on this list (Hoek et al. 2004, 266, Lea and Worsley 2001, 127), while disgust or repugnance with eating flesh (Kenyon and Barker 1998, Rozin et al. 1997, Santos and Booth 1996), association with patriarchy (Adams 1990), food beliefs and peer or family influences (Lea and Worsley 2001, 128) are also noted. Health vegetarians choose to avoid meat in order to derive certain health benefits or lose weight (Key et al. 2006, Kim and Houser 1999, Wilson et al. 2004), while ethical vegetarians consider meat avoidance as a moral imperative not to harm animals for food or other reasons (Fessler et al. 2003, 31, Whorton 1994). Health concerns are also the major reason motivating individuals who are ‘partial vegetarians’, who choose not to eat red meat, limit their consumption of flesh to fish, or select only organic products (American Dietetic Association 2003, Bedford and Barr 2005, Hoek et al. 2004, 266).

In addition to these commitments, vegetarianism has been linked to concerns with the environmental and ecological impact of meat (Gaard 2002, Hoek et al. 2004, 265, Lindeman and Sirelius 2001, 182). In Kalof et al.’s (1999) study of influences on vegetarianism, belief that a vegetarian diet was less harmful to the environment was the only factor significantly differentiating vegetarians and non-vegetarians, while beliefs concerning the health and animal welfare benefits of vegetarianism were non-significant. A range of commercial outlets now offer ‘health foods’, ‘wholefoods’

and most recently 'organic foods' grown without additives, pesticides and artificial fertilisers that increase food productivity at the expense of the environment (Coveney 2000, 141). Hoek et al. (2004) note the emergence of a 'vegetarian-oriented consumerism' that addresses ethical and environmental concerns, while Allen Fox (1999) suggests that a vegetarian economy contributes to 'ecosystem health' by reducing the impact on the environment and economies of pollution, intensive farming and land degradation by grazing, affecting both developed and less-developed countries. Awareness of their contribution to the future of the planet can also support good psychological health among vegetarians, according to Wilson et al. (2004).

Devine et al. (1998) have described the feelings, strategies and actions in relation to food choices that people adopt over their life course as 'trajectories' that demonstrate persistence and continuity as circumstances alter. These trajectories are underpinned by values that determine what foods are chosen (Sobal et al. 2006, 9). Jabs et al. (1998) examined life-course trajectories and the impact of life events on vegetarians' food choices, finding different patterns of adoption among health and ethical vegetarians. Health vegetarians tended to make gradual 'trial adoptions' of food choices, while 'ethical vegetarians' made more sudden changes in their diet to support beliefs such as animal welfare, and create consistency in their lives (see also Hamilton 1993). Both groups may graduate from semi- or ovo-lacto vegetarianism to a vegan diet over time.

Our research among vegetarian participants in an online forum (Fox and Ward, submitted) has found a distinct fault-line between these two perspectives. Health vegetarians emphasised personal reasons for their diet above concern for animals, and were accused by some ethical vegetarians of being selfish and interested only in improving their own quality of life. Ethical vegetarians considered that their own practices were fundamentally altruistic, and involved personal sacrifice in order to prevent cruelty to animals. Lindeman and Sirelius (2001, 182) have suggested these perspectives have different ideological bases, with ethical vegetarianism broadly associated with humanistic commitments and health vegetarianism with conservative and normative values.

While initial motivation to adopt a vegetarian diet may thus be divergent, resulting in animosity between health and ethical vegetarians on occasions (Fox and Ward, submitted), there may also be convergence among those who have adopted a vegetarian diet, possibly to provide further cognitive support for a difficult life choice (Santos and Booth 1996, 204), or as a consequence of exposure to other vegetarians' motivations, beliefs and practices (Bisogni et al 2002). In this paper we report data that explores this convergence, and specifically the emergence of environmentalist concerns among vegetarians whose motivations initially derived from personal health or animal welfare. We examine, by means of online ethnographic methods, vegetarians' own perspectives on how health, ethical and environmental beliefs motivate their food choices, to investigate the interactions between beliefs over health, animal cruelty and the environment, and how these may contribute to food choice trajectory.

Methods

Design and Setting

The data reported here are drawn from 'online ethnographic' research carried out in a web-based forum concerned with secular vegetarianism, which will be referred to here as the *VegForum*. The forum was selected because it attracted a high volume of users who posted regularly to the message boards, creating a lively website with a heavy flow of 'traffic'. The forum had a number of message boards, which included the provision of advice to new vegetarians, health, animal rights and ecology. Participants were an eclectic mix, from vegans who avoided all animal products for food or clothing, to those who ate dairy products or even fish. The language of communication was English, and participants were predominantly from North America, the UK and Australasia. Our research was largely confined to one discussion board that was intended to provide support to new vegetarians.

There is a growing body of research using Internet-mediated ethnographic methods, and there are various advantages and limitations. Internet interviewing is appropriate for sensitive subjects not amenable to face-to-face interviews (Illingworth 2001), and Glaser et al. (2002, 189-190) suggest that the anonymity of the Internet permits

research into marginal groups for whom self-disclosure may have costs, and where participants may be suspicious of researchers and outsiders. The Internet provides a cost-effective way to access small or hard to find groups who interact in specialist fora (Nosek et al. 2002, Illingworth 2001).

On the other hand, there are issues of validity in Internet-based research. Anonymity increases the potential for intentional or unintentional deception (Glaser et al. 2002: 198) and for identity manipulation (Hewson et al. 2003, 115, Nosek et al. 2002, 172). Internet samples will under-represent poor and minority groups (Nosek et al. 2002, 168). Hewson et al. (2003, 32) consider that this bias is disappearing with the rapid spread of Internet access, although research (Henning 2005) indicates that Internet-based social networking is a predominantly youthful activity. Participants need access to hardware, skills in typing and motivation to participate in what can be lengthy online interviews (Chen and Hinton 1999). Thomsen et al. (1998) suggest that multi-method triangulation using textual analysis, prolonged participant observation and qualitative interviews can provide valid and reliable data, and we have used this approach in past studies (Fox and Ward 2006). In this study, observation of forum interactions, and active participation were triangulated with survey and online interview methods. As with most qualitative approaches, we did not claim to be establishing a 'representative' sample, but did apply a range of methods to gather data broadly and gain data saturation through follow-up questioning.

Data Collection

All interviews were conducted by KW. To access the field of study, KW subscribed to the *VegForum*, announced her 'presence', and explained that she was researching attitudes and beliefs among vegetarians. The research was carried out between August 2005 and February 2006 and consisted of three stages:

- Participation in discussion within the *VegForum*. Permission was gained from participants to reproduce relevant posts from discussions.
- KW posted a survey to one of the message boards within *VegForum*, to which there were 33 responses. Respondents were predominantly from the US and Canada, with some UK members. Seventy per cent were female, and ages

ranged from 14 to 53, with a median of 26 years. The survey contained open-ended questions designed to elicit participants' motivations for vegetarianism, attitudes to meat-eating, health and animal welfare, and related life-style choices. Respondents were also asked for their age and nationality.

- Respondents were invited to participate in online follow-up interviews, and 18 agreed to this. These were conducted using the *VegForum*'s own messaging system. These were unstructured interviews based on cues in respondents' answers to the survey questions, to enable respondents to enlarge on their responses concerning their beliefs and attitudes, triggers and other factors that had led them to become vegetarian, and the effects of being vegetarian on their lives.

Data Analysis

Data were analysed using the framework methodology for qualitative analysis. This is an approach to analysis that is appropriate to deductive research that addresses pre-set aims and objectives (Pope et al 2000), and enables data to be systematically collated and displayed within a spreadsheet or other software package, in order to address specific topic areas. Collated data can then be indexed and key findings extracted. The topic areas then form the basis for the structure of the report, within which data extracts may be used to illustrate key findings from the ethnography. All data from the case study have been reported in the ethnographic past tense, participants have been fully anonymised, and spellings have been corrected to aid reading.

Results

Health and the Vegetarian Diet

Many participants in our study associated positive health and well-being with dietary choice. Diet was perceived as central to good health and longevity, with poor diet associated with lower levels of health and even specific diseases. Will argued that 'nothing affects your mind and quality of life as much as nutrition'

while Ruby suggested that ‘you can’t expect your body to treat you right if you fill it full of crap all the time’. Participants offered evidence for this link

When eating a vegan diet my symptoms go away and I feel great. I never call myself a vegan or vegetarian. I tell people that I have food allergies and I have to eat like this for my health. I feel so much healthier when I eat vegan meals. (Mark)

Participants contrasted their current healthy diets with previous or childhood food intakes that they perceived as unhealthy. The change to vegetarian diet was associated directly with an improvement in health.

I was overweight as a kid, I ate junk food, no veggies, and did not drink water. All of my liquid came from sodas. It was a long process to get out of that dietary sinkhole, and sometimes I am surprised that I did. Nowadays typical dinners for me are home-cooked with plenty of whole foods. I’m not 100% whole foods and I don’t strive to be. I like white basmati rice way too much. But taken as a whole, my diet is full of fibre from other whole grain and legume sources. (Vinny)

Respondents reported a range of health issues that motivated them, from an effort to ‘cut down on my dairy for cholesterol reasons’ or ‘to avoid high blood pressure and kidney stones’.

My family has a history of breast/ovarian cancer and high cholesterol and I figured that eating the best possible diet of the most healthful foods (combined with exercise) would be the best thing I could do to prevent myself from developing these diseases as much as possible. Also most of my family is lactose-intolerant and though I didn’t get sick when I ate dairy, I’ve noticed that when I don’t eat it I feel better overall. (Lucy)

While health reasons were an initial motivator, it was also a justification for continuing a meat-free diet. Jane supported her ideological claims with personal experiences, which she suggested justified the decision.

If you want to live a longer life, then eating healthy is key. Eating unhealthy foods can really change your personality. When you switch to a healthy diet from an unhealthy diet you get this sudden spring in your step, so to speak. Every day that I wake up, I feel so much healthier and alive than I used to. It's so awesome to feel awake and alive.

Animal Welfare and the Vegetarian Diet

The desire to avoid killing animals for human consumption was the other main reason offered for becoming vegetarian. At the heart of this perspective lies a view that animals should not be mistreated for human benefit. Not consuming meat was thus a sacrifice to be made by individuals as part of an ethical commitment.

I still use dairy and infertile egg sometimes because full veganism is hard for me. But the early death of male chickens and cattle is evidently a usual part of egg production- as a rule, they aren't needed where they are born. This, coupled with the bad conditions many laying hens are kept in, has driven me to almost completely eliminate those foods from my diet. (Tom)

Often a specific incident had been a trigger.

I went vegetarian after dissecting a chicken in seventh grade science class, and noticing that chickens were similar in build up to humans. I went vegan shortly after, because of animal rights, and because I felt that I was being hypocritical to be vegetarian in order to stop animal abuse, but still support it in other major ways. (Jane)

I became a lacto-ovo vegetarian when I was 13 years old, because I was sitting in my living room eating an Italian sub, and the thought came to me that an animal is not being honoured by sitting between two slices of bread. It made me so very sad that the reason that animal was born was to die. Three months ago I adopted a vegan diet because I think too much about where things come

from, and was tired of feeling grossed out every time I ate dairy or eggs. The guilt was too much. (Victoria)

While many health vegetarians offered experiential reasons for adopting and sustaining a meat-free diet, ethical vegetarians often cast their motivations within a philosophical, ideological or spiritual framework. Billy's commitment was initially to animal rights, before adopting vegetarianism.

I saw the 'Meet Your Meat' video and began to research animal rights/ways vegetarianism can help the environment. I realized that I love animals dearly and couldn't call myself an animal rights supporter and eat meat. It seemed so contradictory. So, one day I just decided to become vegetarian.

For Cath, her ethical choices were associated with a perspective on her place in relation to the world and to her spirituality.

I try to grow as much of my own food and buy organic when I can because most farming practices are disrespectful to the Earth. I don't consume meat because it is disrespectful to the animals. I choose not to buy meat, leather, or eggs ... because I believe that the torture and enslavement of feeling beings it is the ultimate form of disrespect to the creator.

Some of our ethical vegetarian respondents indicated that avoiding meat was not just a dietary choice, but a way of life.

Veg*ism [an abbreviation used on *VegForum* to cover both vegetarianism and veganism] is a lifestyle for me, because instead of just trying to not eat animals, I try to live my life with the least harm to animals. I buy products not tested on animals or have animal products. I don't buy leather, silk, etc. It isn't just about what I eat, but how I live my life. (Ricki)

Being vegan I made the basic vegan changes, using products that I know have not been tested on animals, boycotting companies that do still test. I have also become more environmentally aware. ... I'm not much of a dieting person, in

fact I hate diets, I don't think of my veganism as a diet, it's more a lifestyle.
(Millie)

Elsewhere we have differentiated these reasons for a vegetarian diet in terms of identity (Fox and Ward, submitted). The focus within health vegetarianism is internal, addressing desires to sustain good health and avoid illness. For ethical vegetarians, by contrast, the focus is outward, towards other living creatures. Often for the latter, their own health and well-being came second to the welfare of other creatures, with strict vegans suffering poor health as a result of their diet (ibid.). This major difference led to conflict among the participants in the *VegForum*, with ethical vegetarians critical of perceived selfishness by health vegetarians.

Now, about health vegans. I certainly don't jump for joy just because 'one less animal is killed'. If people only care about themselves and their health, that shows they are selfish and egoistical I find their motivations for being vegan boring and selfish. There's nothing wrong with wanting to stay healthy. Obviously, that goes without saying. But there are lots and lots of healthy people who eat meat and/or fish every day of their lives and they live till they're 100. (Diana)

Stephen considered health vegetarians insufficiently radical, while Ruby saw ethical vegetarianism as superior to health vegetarianism, but still contributing to her overarching objective of preventing harm to animals.

In any group, there are people who are going to play the 'holier than thou' card. This includes veg*ns, of course. Some people believe the only 'true path to veg*nism' is through the ethical abstaining of animal products. Then there are some who believe that any reduction in harm to animals is good, regardless of the reasons behind them. I personally would be happy if members of my family or my [boyfriend] gave up meat because it was better for their health ... even if they didn't care about the animals. I can't quite put myself into the mindset of not caring about killing animals and eating their flesh, but obviously plenty of people can, whether they eat animals or not.

In our research we found surprisingly few respondents who genuinely straddled the two motivations of health and ethical commitments. However, in one specific area, environmental concerns, we did find common ground between those who identified either as health or ethical vegetarians.

Environmental Commitments among Vegetarians

Among our sample of 33 participants in the *VegForum*, only one respondent, 29 year old Canadian Simon, had become vegan for explicitly environmental motivations, in order to ‘do something to maintain the planet’. At the same time as his adoption of a vegetarian diet, he also ‘went back to biking, walking, and trying not to travel by automobile’. However, other respondents in the study whose initial motivations were for health or ethical reasons, described a range of environmental commitments. Sometimes concern with the wider environment emerged directly from a perspective related to the impact of meat consumption for human or animal health.

I try and only eat organic egg and milk products, for the animal and human population health and well being. Non organic farming of animals are breeding grounds for antibiotic resistant bacteria and viruses, which can spread to humans. As well as not being very nice for the animal. I try and be environmentally friendly as I can. (Bryn)

The availability of organic foodstuffs that avoid the use of pesticides and artificial fertilisers provided a direct link to the dietary concerns for some health vegetarians.

I try to eat primarily organic. Being where I live the cost of organic food isn't really an issue. I try to eat as few processed foods as possible and eliminate added sugars. For the most part all of the above are working. (Will)

If I get the choice, I like to get organic vegetables, but it's not a high priority. I do try to be environmentally friendly - I recycle, try not to be wasteful. (June)

Tom started his vegetarian diet because of animal welfare. However, this broadened subsequently, linking environmental reasons for his diet to other ecological concerns.

I've found there are health and environmental benefits to vegetarianism, as well as lessened injury to animals. It's all good. I'm also environmentalist: I avoid wasting energy and making solid waste. I also make sure my diet is healthy: I keep track of my intake of calories, trans and/or saturated fats, and refined carbohydrates.

Tim had been raised as a vegetarian, but said his move to veganism was a way to 'do more for the environment. I just want to be as green as I can'. Michael told us that his original motivation was 'for health reasons, but now also for environmental reasons, as well as wanting to reduce animal suffering'. For Andy, his reason for becoming vegetarian was

ethics, at first. I wanted others to stop dying so that I could eat. The environmental and health motivations followed.

For other respondents, the 'alternative' lifestyle choices concerning diet co-existed with a range of other environmental behaviours. For example, Michael regarded vegetarianism as one amongst a number of 'deviant' behaviours he had adopted.

I try and get organic food mostly and put a considerable amount of effort into being as environmentally friendly as possible: I recycle, try and cut down on waste, conserve energy, cycling instead of driving etc. Most of my friends think I'm weird because in addition to the above I also refuse to eat anything with E numbers or hydrogenated oils and also boycott animal-testing companies.

Environmentalism was part of the lifestyle choices of many of our respondents, who indicated a number of commitments including saving energy, using public transport, re-cycling, composting, tree-planting and picking up litter. Naomi commented that she was 'the recycle queen, totally obsessed - reduce, reuse, recycle', while Babs had '... recycled for years, and volunteer to pick up trash. I walk everywhere I can instead of driving'. As noted earlier, Andy had become an ethical vegetarian but had subsequently linked this to environmental concerns and a variety of energy-reduction behaviours.

I tend to choose glass packaging over plastic for greater recyclability, though glass does consume more resources to transport. I telecommute, so I'm not burning gas sitting in rush hour traffic every day. I bought a less luxurious car than my previous one because it gets 50% better mileage. I keep my thermostat at 65 during the cold season and don't heat rooms that aren't used much, including my guest bedroom.

These data suggest that for both health and ethical vegetarians, environmental concerns had become important, even though they were not the initial motivation for their dietary choices. Particularly for vegan participants, both human and animal health became located within a nexus of efforts to lead a lifestyle that contributed positively to the environment. The 'environmentally-friendly' aspects of vegetarianism also often linked implicitly with a range of other non-diet behaviours concerning environmental protection.

Discussion

Among the 33 respondents in this study, two distinct initial motivations for vegetarianism have been identified: personal health and animal welfare. Our qualitative study used purposive sampling, so we cannot generalise the proportions in these categories from our data. However a recent straw poll of members of the *VegForum* concerning initial motivations indicated that out of 67 respondents, 45 per cent had originally become vegetarian for ethical reasons, 27 per cent for health reasons, one per cent for environment reasons, and the remainder for reasons including aesthetics (look, taste or smell of meat) and religion. Our data provide qualitative support for these trends. First, health is a significant motivator, both in terms of reducing symptoms of illness or discomfort, and as a preventive measure to avoid a range of minor and major illnesses. Second, ethical reasons concerning animal welfare motivate a further proportion of vegetarians, based both upon affective and philosophical reasons. Only one of our respondents (Simon) indicated environmentalism as a primary motivation.

Importantly, this study provides direct access to vegetarians' own descriptions of their routes into vegetarianism using qualitative responses to the original questions and the open-ended follow-up interviews. These data provide insights into how vegetarians think about their dietary choices and allow them to reflect on the reasoning that led them to their decisions. The lack of respondents citing environmental concerns as a primary motivation for vegetarianism, both in our data and in the *VegForum* straw poll helps refine findings from previous studies. For example, Kalof et al.'s (1999) quantitative study of 22 vegetarians found that belief that a vegetarian diet was better for the environment was the only significant variable predicting whether a respondent was vegetarian. Our data would suggest that these views concerning the environmental benefits of vegetarianism may be subsequent to, and a consequence of, a decision to avoid meat, rather than the cause of this dietary choice.

Our data also provides support to, and extends the notion of food choice trajectories developed by Devine et al. (1998) and discussed in relation to vegetarianism by Jabs et al. (1998). Our findings suggest that the trajectories that vegetarians follow show both continuity and development over time. Dietary choices may develop from eating organic food to partial vegetarianism, through ovo-lacto vegetarianism to veganism, and this was true for both health and ethical vegetarians in our study.

However, an initial health or ethical motivation may often be a starting point for a conceptual generalisation. Michael, a health vegetarian, subsequently adopted a wide range of environmentalist behaviours that had distanced him from his friends. Tom, on the other hand, began his trajectory as an ethical vegetarian but subsequently added health and the environment to his list of reasons. These subsequent commitments may be cognitive or affective strategies to bolster an initial decision, or may be a consequence of research or discussions with other vegetarians. In some instance, these build into a 'life-style' in which behaviour is a manifestation of an underpinning philosophy that may encompass various 'alternative' commitments within which vegetarianism is embedded. A number of our respondents (for example Naomi and Michael) self-consciously acknowledged that the totality of their beliefs and practices constituted a significant deviancy from mainstream behaviours.

Our findings indicate that an important element of the vegetarian trajectory is the incorporation into the practice and beliefs of respondents of a number of broader environmental commitments. While the non-representative nature of the sample precludes absolute assessments of what proportion of vegetarians hold such views, the data suggests these are not uncommon. For both ethical and health vegetarians, these commitments ranged from the use of organic food (which we may conjecture is at least in part motivated by health concerns) through to a variety of activities that contribute to an 'environmentally-friendly' lifestyle. Some of these are not directly associated with diet or even with animal welfare, but appear to indicate a general concern for how human beings impact upon their environment. In this context, vegetarianism may become part of a wider perspective in which humans are detrimentally affecting life on the planet: the dietary choice is one element of a wider concern to redress this negative impact. Although this environmentalism is not a primary motivator for vegetarianism, it may emerge as part of a generalisation of a narrower original focus, perhaps as a consequence of rationalisations of behaviour, as adoptees of a minority dietary choice seek additional reasons for their decision, or as they are exposed to the views of others within a vegetarian 'community of practice' (Bisogni et al. 2002, Jabs et al 1998). There may also be convergence between the 'deviant' behaviour of avoiding meat (Kenyon and Barker 1998, Lea and Worsley 2001) and other lifestyle commitments including energy conservation and waste reduction, which have until been recently regarded as radical or alternative.

A qualitative study of this sort has some limitations in terms of its representativeness, and this is compounded by the sampling technique: the online forum is likely to over-represent younger vegetarians, and will not adequately sample non-English speakers. Nor is it possible to quantify proportions, for example of health and ethical vegetarians that adopt behaviours in relation to environmental concerns. Quantitative research is required to establish whether there is a link between specific initial motivation and subsequent environment elaboration of motivations and behaviours. Despite these limitations, the study identifies links between dietary choices and the wider commitments that people hold, and this finding suggests that research on dietary choice can benefit from exploring the related beliefs and behaviours of respondents.

We can conclude that motivations for vegetarianism are complex, following trajectories that broaden, both in terms of behaviours but also values, outlook or lifestyle. This finding refines Lindeman and Sirelius' (2001) argument that health and ethical vegetarians have dissimilar ideological underpinning. While this may be true to an extent (and our research confirms the divergences between these groups), many of the 'health vegetarians' in our study also adopted ethical and environmental commitments subsequently. Convergence between these groups may thus be more common than indicated in previous studies, and suggests that not only do values and beliefs affect behaviour, as noted by previous researchers (Jabs et al 1998, Kenyon and Barker 1998, Lindeman and Sirelius 2001, Willetts 1997), but that behaviour may subsequently influence attitudes and beliefs, in turn leading to further behavioural changes. As environmental concerns become more pervasive in society, vegetarianism may become increasingly embedded within such commitments, even if environmentalism does not itself become a prime motivation for a meat-free diet.

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