

Eating 'Green': Motivations Behind Organic Food Consumption in Australia

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The popularity of organic food is booming. Supermarkets all over the 'post-industrial' world are competing with each other to offer more food guaranteed to have been produced, stored and processed without the addition of synthetically produced fertilisers and chemicals (Burch et al. 2001). The value of the industry worldwide is estimated to be in the vicinity of US\$15 billion, growing to US\$100 billion by the year 2010 (Segger, 1997).

The diets of European consumers could be 30 percent organically-produced by the end of this decade. In Australia, the value of organic production doubled during the six years to 2000; now standing at \$A250 million, of which some \$80 million is exported (Palaszczuk 2000). This increase in value reflects a rapid growth in the amount of land under certified organic production (now standing at 7.6 million hectares in Australia compared with 1.3 million hectares in the US and 3 million hectares in Europe). It also reflects rapid growth in consumer demand, with growth in Australian domestic demand alone estimated at between 20 and 30 percent per annum (Acres July 2000, p.1).

The contemporary face of organic regulation, production, distribution and retailing is changing dramatically in concert with increasing consumer demand (Lyons 2001). In contrast with the early days of organic production—which often saw organic producers unable to label and sell their produce as 'organic' due to a lack of recognised and credible labelling schemes, marketing channels and consumer demand—demand is now outstripping supply in a number of domestic and export markets. The opportunities created by growing demand have been recognised by a host of farmers, processors and retailers who until recently demonstrated little interest in either the ideological commitments of early organic producers or the niche markets they supplied (Burch et al 2001; Coombes and Campbell 1998; Lyons 1999). The subsequent entry of many of these players into the organic industry has led to considerable debate over the meaning of the term 'organic' (Campbell and Liepins 2001; Reed 2001) and the extent to which organic principles are compromised by increasingly large-scale and industrialised (but chemical-

free) production methods, the development of highly processed and nutritionally suspect organic foods, and the energy expensive transport of organic produce to export markets (Buck et al. 1997; Guthman 1998; Lockie et al. 2000).

While a number of authors have examined the role that agribusiness and other new entrants have had in the industrialisation, institutionalisation and 'conventionalisation' of the organic industry (Buck et al. 1997; Campbell and Liepins 2001; Coombes and Campbell 1998; Guthman 1998; Lockie et al. 2000; Lyons 1999, 2001), and others have examined the effects of governments' alteration of policy settings (Lynggaard 2001; Michelsen 2001) it is quite clear that the future of organics will also be very much dependent on the motivations of end consumers. This is not to say that consumers will dictate that future, but that the success of strategies to create and stabilise organic food networks will be dependent on the ability to mobilise people as 'organic consumers' by providing foods that materially and symbolically satisfy and/or influence those peoples' 'needs, desires, pleasures and terrors' (Miller and Rose 1997, p. 32) more successfully than other available foods.

Our concern here is not with the likelihood, or otherwise, of commercial success for organic products, but the extent to which the current growth in consumption of organic products actually reflects a 'greening' of consumer lifestyles. Environmental concern is just one of several key factors commonly identified as influential in the decision to purchase and ingest organic foods—other factors including the health, animal welfare, safety, quality and taste claims of organic products (Cunningham 2001; Davies et al. 1995; Lakin and Shannon 1999; Makatouni 2001). Following from this, it is reasonable to expect that the extent to which consumers are motivated by individualised concerns regarding personal safety or enjoyment, relative to ecological or altruistic concerns regarding environmental or social health, is likely to have a major bearing on how far organics moves along the path of industrialisation and incorporation within 'conventional' food networks. US market research has identified groups of consumers for whom environmental concern either provides minimal motivation to purchase organics or is only considered when simple or convenient (Hartman and Wright 1999). In their attempts to either avoid food hazards or guarantee quality, consumers might be expected not only to have few reservations about organic products that are industrially produced but also to embrace the convenience that large-scale industrialised food networks provide. We might also expect such consumers to be attracted to products that are certified via a range of Quality Assurance and Integrated Pest Management schemes that compete with organics as signifiers of safety and quality (Lockie et al. 2000). In contrast, Hartman and Wright (1999) identify another two groups of organic consumers; the first of which actively prioritises the purchase of 'earth-friendly' products and is prepared to pay premium prices for them; and the second of which is concerned about the environment but which perceives barriers to the purchase of more organic foods in the form of price and availability. This group is likely to be growing, Cunningham (2001) suggests, with the increasing availability and selection of organic and other 'green' products. As Buck et al. (1997) argue, the growth of these latter groups is related in large part to dissatisfaction with the ways in which food is produced and marketed; dissatisfaction that is likely to be expressed in resistance to highly industrialised organic products.

The types of consumers identified by Hartman and Wright (1999) make intuitive sense with a small group of hard-core environmentalists driven by passionate environmental concerns; a wealthy, older group interested more in their own health; a young group who profess environmental concern but are more influenced, in reality, by convenience; and a growing mainstream who are genuinely interested in the environment and prepared to do more about it as products become more accessible. These categories mirror the popular perception that price premiums for organic products largely restrict their consumption to 'yuppies', 'greenies' and 'health nuts'. Such categories, however, speak little of the competing desires, concerns and possibilities in relation to food consumption that people invariably face and present, as a result, a set of rather one-dimensional consumer profiles. The research on which this paper is based takes a more multidimensional approach that avoids the polarisation of motivations behind food choice and seeks to explore the relationships between environmental and other concerns in the mobilisation of people as organic consumers. It does so in the context of a national study of the motivations behind food choice and the ways in which 'organics' and food-related issues are constructed by Australian food consumers.

The presentation of results will begin with an outline of competing discourses on organic food and farming derived from focus group interviews. These demonstrate the contradictory ways in which general attitudes such as environmental concern are translated into specific beliefs and behaviours concerning organic foods. It then proceeds to a quantitative assessment of the extent to which a variety of motivations behind food choice and attitudes to food-related issues actually do factor in organic food consumption.

Methodology

This study was based on two key activities. First, a series of 13 focus groups were conducted in regional and metropolitan Queensland and Victoria. Each group involved 8-10 participants and was structured to explore the issues that participants associated with food before moving specifically to the question of how they constructed organic food together with its production and consumption. Each interview was tape recorded and transcribed verbatim before analysis of key themes using N'Vivo qualitative data analysis software.

Second, a national survey of 1,200 Australian consumers was conducted using Computer-Assisted Telephone Interviewing facilities at the Centre for Social Science Research, Central Queensland University. The target population designated for telephone interviewing was all persons 18 years of age or older who, at the time of the survey, were living in a dwelling unit anywhere in Australia that could be contacted by a direct-dialled, land-based telephone service. A random selection approach was used to ensure that all potential participants had an equal chance of being contacted. The survey itself was designed to gather data on: actual organic food consumption and other relevant behaviours; motivational factors such as environmental and health concerns likely to influence food choice; attitudes towards contemporary food-related issues such as food safety and biotechnology; and demographic characteristics.

Table 1: *Food choice items and scale reliability*

Scale	Item	Reliability (Cronbach's Alpha)
Health	Contains a lot of vitamins and minerals Keeps me healthy Is nutritious Is high in protein Is good for my skin/teeth/hair/nails etc Is high in fibre and roughage	.82
Weight Control	Is low in calories Helps me control my weight Is low in fat	.84
Fitness	Provides enough energy to get through my physical exercise program Does not compromise my sporting and exercise goals	.54
Mood	Helps me cope with stress Helps me relax Keeps me awake/alert Cheers me up Makes me feel good	.80
Convenience	Is quick and easy to prepare Can be cooked very simply Can be bought in shops close to where I live Is easily available in shops and supermarkets Is not messy to eat	.73
Sensory appeal	Smells nice Looks nice Has a pleasant texture	.67
Natural content	Contains no additives Contains natural ingredients Contains no artificial ingredients Certified free of chemical and hormone residues Is as unprocessed as possible Is prepared in a way that preserves its natural goodness	.86
Price	Is not expensive Is good value for money	.58
Familiarity	Is what I usually eat Is familiar Is like the food I ate when I was a child	.61
Animal welfare	Has been produced in a ways that animals have not experienced pain Has been produced in a way that animals' rights have been respected	.86
Environmental protection	Is prepared in an environmentally friendly way Is produced in a way that has not shaken the balance of nature Is packaged in an environmentally friendly way Is grown locally to reduce transportation	.79
Political values	Comes from a country that I approve of politically Comes from a country in which human rights are respected Has the country of origin clearly marked Has been prepared in a way that does not conflict with my political values	.78
Religion	Is not forbidden by my religion Is in harmony with my religious views	.66

Source: Authors' survey

As Turrini (2000) argues, there are inherent problems involved in collecting accurate data on food consumption using population surveys. In order to avoid spurious suggestions of precision in relation to consumption levels, and to ensure ease of response, response categories for questions related to levels of food consumption were kept broad and descriptive.

Questions on the motivations behind food choice were based on the Food Choice

Questionnaire (FCQ) developed by Steptoe et al. (1995) and the additional items related to ethical food choice motives developed by Lindeman and Väänänen (2000). The FCQ assesses nine food choice motives (health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity and ethical concern) while the additional items developed by Lindeman and Väänänen (2000) differentiate ethical concern into animal welfare, environmental protection, political values and religion. As both sets of scales had been previously validated only minor changes were made to eliminate duplication and ensure the language they used would be familiar to Australian respondents. The final set of scales consisted of 55 five-point items. Each item took the form: "How important is it to you that the food you eat on a typical day contains a lot of vitamins and minerals" where 1=Not at all important and 5=extremely important). Each scale was tested for validity following the survey and several further items deleted. The final food choice scales are shown in Table 1 above.

A preliminary set of questions on attitudes to food-related issues was developed and pre-tested with 77 students from two Queensland universities. Scales were then developed for the issues of primary concern; namely, disposition towards biotechnologies; perceived risks from industrial food production and processing methods such as chemical use, irradiation, artificial additives and genetic engineering; beliefs regarding the quality characteristics of organic foods including shelf-life and taste; the perceived health benefits of organic foods; and willingness to purchase more organic food if it was available. The scale on risks from industrialised foods included five four-point items taking the form: "How high would you consider the risk posed to food consumers by regular consumption of foods grown or treated with pesticides and other chemicals?" where 1=very low risk and 4=very high risk. The remaining scales comprised 19 five-point items taking the form: "How strongly do you agree or disagree with the statement, organic foods have lower chemical residues than conventional foods?" where 1=strongly disagree and 5=strongly agree. Each scale was tested for validity following the survey and four items deleted. The final attitudinal scales are shown in Table 2 below.

Results

Conflicting discourses on organic food

Data gathered during the focus group interviews show there is no reason to necessarily assume a direct relationship between levels of environmental, health or other concerns and the consumption of organic foods. This is not because consumers profess values that they fail to act on. Rather, it is because in making choices about foods consumers must manage an array of competing imperatives, needs and desires, while confronting a range of competing and contradictory discourses about organics, health, environment and so on.

The focus groups suggested that the principle factors limiting the consumption of organic foods (where organic foods were considered desirable) were cost, convenience and availability. The following quote illustrates the way in which these factors were indeed traded off against benefits such as health in arriving at decisions to purchase, or not purchase organic food.

Table 2: *Attitudinal items and scale reliability*

Scale	Item	Reliability
Risks from industrialised foods	Pesticides and other chemicals Genetically modified organisms Food irradiation Preservatives and artificial colouring Hormones and antibiotics in meat	.75
Healthiness of organic foods	Organic foods have lower chemical residues than conventional foods Organic foods have no more vitamins and minerals than conventional foods Organic foods are safer to eat than conventional foods Organic food is healthier to eat than conventionally grown food	.72
Quality of organic foods	Organic food tastes better than conventional food Organic food looks inferior to conventional food Organic food has a shortened shelf life	.56
Disposition towards biotechnology	Scientists are going too far with cloning and other biotechnologies. Biotechnologies like cloning and genetic engineering are against the laws of nature Releasing genetically modified organisms into the environment is too risky. We just don't know what will happen. All foods containing genetically modified ingredients should be labelled so that consumers can make their own choice	.63
Fairness of premium for environmentally friendly food	The prices received by Australian farmers are not high enough for them to address environmental problems I think it is fair to pay farmers more for producing food in an environmentally friendly way	.70
Willingness to buy more organic food if available	I would gladly buy more organic food if I could find it I would buy more organic food if it was available as convenience, packaged and pre-prepared food	.64

Source: Authors' survey

But it also illustrates the potential role of familiarity and non-rational decision-making processes.

"Even if it's available, and even if it is cost wise okay, it's what you're used to. What will you pay? Are you prepared to change? You talk about it. I've got a relative who is quite ill and who's been told to give up smoking, and the last time I saw this person they were still smoking. I mean I don't think it's going to help him now, but you know it may prolong his life, but it's what you're used to, and it's habit isn't it?"

Other participants who believed organic foods were desirable were discouraged by the belief that they couldn't, or wouldn't, actually consume enough organic foods to make much of a difference to anything.

"I guess the thing that really hits home for me at the moment, is okay, we've got a choice, to choose organic foods possibly from some products that we buy, but certainly not all. So no matter what you buy, you are only going part of the way in achieving a healthy lifestyle for yourself, achieving good land use and other planetary global issues".

However, not all participants agreed that organic farming methods offered the environmental or nutritional benefits they claimed. Criticisms of organic methods often mirrored those criticisms disseminated through the mass media by proponents of chemical use and genetic engineering (see for example Avery 1995). While some participants were sceptical that organic food offered them personal

benefits, others were more concerned with broader social issues such as food security and sustainability:

“One of the other disadvantages of the organic thing is that you get less quantity of a product per acre, so to speak. So we’ve got an increasing population and food shortages, and we are talking about growing less per acre of land use, so there are some issues there”.

And reflecting the belief that organic farming tends towards excessive cultivation and mining the soil of nutrients, participants argued:

“I can see problems with mechanical cultivation in some areas contributing to erosion more than say, if you used a site and left the crop on the surface”.

“It still involves, once you’ve harvested, you are still taking something out of the earth, out of the soil, ripping it off and sending it away, and so you are constantly sucking and draining the soil no matter what you do, or where you are or how you’re growing it. It’s just the inputs that have changed”.

There were also questions regarding the safety of organic foods, principally based in suspicions regarding the use of animal manures as fertiliser and lack of understanding of the procedures required of organic growers when using such inputs:

“Whilst I don’t like genetic engineering, I personally feel a lot safer that way because I don’t know what they are doing with the organic stuff. I mean I don’t know what fertilisers, manure or human excretion or anything is used on it, and I personally wouldn’t like to feed my child a tomato that has been peed on”.

Nor was food quality necessarily seen as adequate: “No, they are not beautiful, they are not all identical, beautiful big round and rosy”.

Finally, all focus group participants stressed the importance they saw of independent certification of organic status. However, few understood existing certification schemes for organic growers and processors and many were sceptical regarding the honesty and reliability of organic labels. As the following quote shows, the increasing availability of processed organic products fuelled this suspicion to some extent due to the images of wholesomeness and non-industrialised production methods associated by most participants with organics:

“You slap organic on it, but there is no way you can prove what they’ve been doing to it. One of the things that I’ve been seeing going to the supermarket is that you’ve suddenly got organic everything coming out. People are producing, you know, organic biscuits, organic breakfast cereals, organic toilet rolls and you know, organic drain cleaner and stuff. And you look and go, well hang on, isn’t this going just a little bit too far? Where’s the standardisation?”

For each of these issues there were participants in the focus group discussions who believed that organic foods were more environmentally and socially sustainable and

who were prepared to pay premiums and to experiment with unfamiliar brands and products:

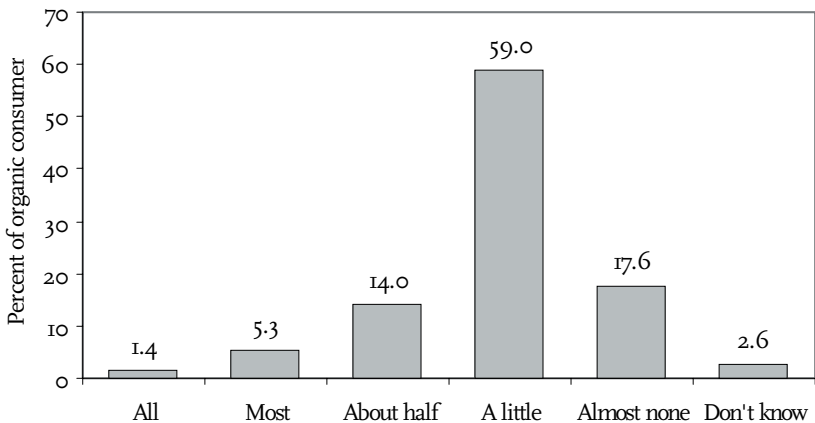
“When I go into an organic shop, I feel a sense of safety. Like my food isn’t saturated in pesticides, and I instantly associate it with a greater respect for food, and I feel a more creative process in using the more basic ingredients you buy. And the whole act of creating a dish out of that food is a more creative and respectful thing”.

Our purpose in this paper, however, is not to explore the ways in which organics is constructed in detail but to highlight the complex nature of decisions about whether to consume organic food and to argue that this must be taken into consideration when interpreting quantitative data on the relationships between those factors that motivate food choice and organic consumption.

Rates of organic food consumption

Over 40 percent of respondents to the telephone survey claimed to have consumed at least some organic foods over the preceding 12 months. As Figure 1 shows, only a small proportion of these people ate more than a little organic food. In fact, just over eight percent of the overall sample consumed half or more of their diet as organic food. But with such a large number of people eating small amounts of organic food, understanding the motivations of those people is of potentially great importance in charting the future of the organic industry.

Figure 1. *Over the last year, what proportion of the food you ate was certified organic?*



Place of purchase of organic food

As argued in the introduction to this paper, the organic industry is currently characterised by considerable tension between retention of the strong ideological commitments of early participants—and the relatively localised production-consumption networks they participated in—and the pressures towards industrialisation

created by dramatically increasing demand and the entry of large conventional food processing and retailing companies into the industry. It is interesting, in this light, to examine where organic food is purchased. Forty two percent of organic consumers bought half or more of the organic food they consumed at supermarkets. Greengrocers were the next most popular source of organic foods with nearly 28.9 percent buying half or more there. Next came direct from farmers (15.5%), then butchers (5.6%), home delivery (2.1%) and restaurants/cafes (1.8%). While supermarkets have rapidly secured the leading market share there appeared to remain high levels of support among consumers for smaller retailers and alternative production-consumption networks such as buying direct from farmers through either farm gate sales or farmers' markets.

Who consumes organic food?

There were a number of demographic differences between consumers and non-consumers of organic foods. There was a clear gender dimension to organic consumption with 44.1 percent of women respondents claiming to have consumed certified organic foods compared to only 33.8 percent of men. These rates are extremely close to those reported by Davies et al. (1995) for Northern Ireland (46.2% for women and 34.4% for men) in 1992-93, although it is important to note the likelihood that overall rates of organic consumption have increased in the decade since that data was collected (see Tovey 1997). Focus group data and other research (Cunningham 2001) suggest that the higher level of responsibility taken by women for feeding children and other family members may go some way to explaining this gender difference, with people often more concerned about what their children eat than what they eat themselves. Figure 2 shows that when comparing those Australian men and women who had consumed organic food, the levels of consumption were similar.

Figure 2. *Proportion of diet of certified organic by gender*

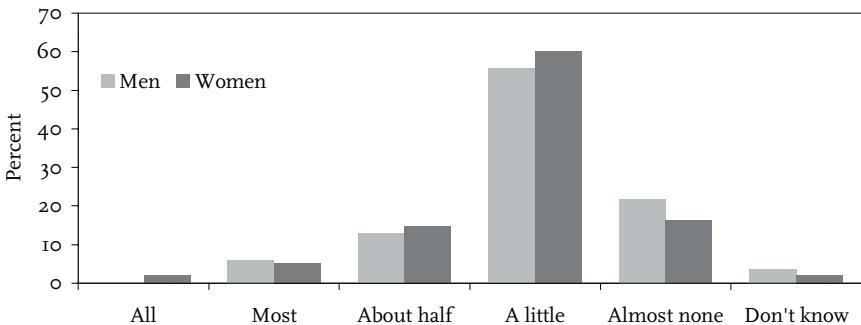
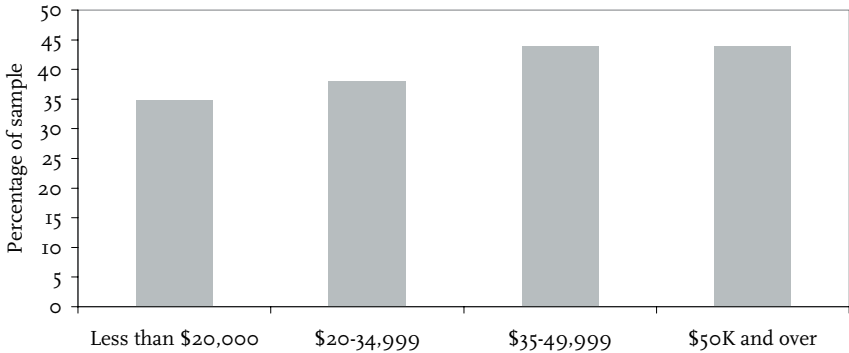


Figure 3 shows that income had an effect, but not enough to confirm the 'organic consumer as yuppie stereotype'. The number of people consuming organic food did increase with income, but only until income reached about A\$35,000 per annum. And a third of those earning less than A\$20,000 per annum still consumed organic

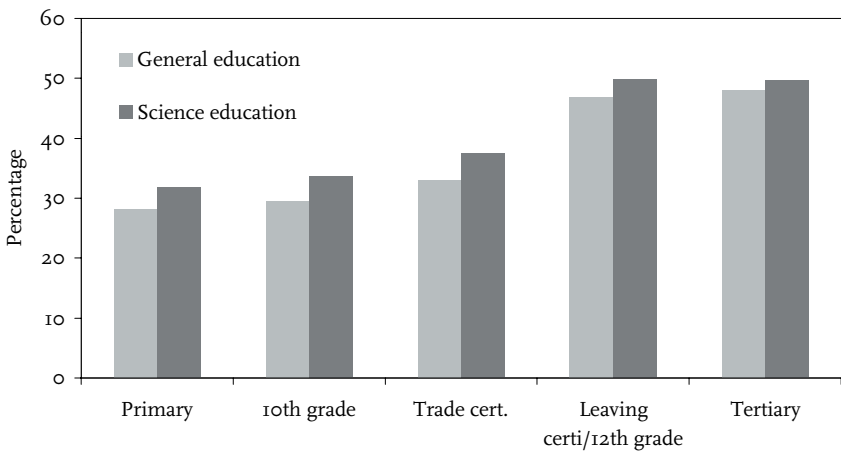
foods. This suggests that while the premiums associated with organic products may make them less affordable for low income earners, low income earners are not necessarily less interested in consuming them.

Figure 3. *Organic consumption by income*



Education had a more consistent impact. As Figure 4 shows, the number of people consuming organic food increased with both general and science education. Contrary to yet another stereotype, organic consumers should not be labelled as anti-science Luddites. Organic consumption showed little variation across age groups until respondents reached their 60s, at which age the number of organic consumers dropped to 29.9 percent, potentially reflecting a drop in income following retirement from paid employment.

Figure 4. *Organic consumption by education*



What motivates organic consumers?

There is no doubt that the stereotypical images of organic consumers as ‘greenies’, ‘health nuts’ or ‘yuppies’ were prevalent among many participants in the focus group interviews. Often these stereotypes formed the basis for disparaging or resentful comments suggesting organic consumers were more interested in fashion than anything else:

“I don’t think there is any [organic produce] around here. It’s the little fruiterers, they’re in the more trendy areas”.

“Yeah. You’ve got to grow your hair long and wear daggy clothes to be into that sort of stuff”.

“They are not very welcoming, you don’t feel very welcome. There is sort of a click and it’s like, well, to be in that click you have to look a certain way. Yeah, you have to look like a feral and you have to be so-called cool with it...”

Yet when those factors motivating food choice were actually examined a rather different picture emerged. Table 3 compares the importance attributed to each of a range of potential motivating factors behind food choice for organic and non-organic consumers.

Table 3 demonstrates that organic consumers in Australia are certainly more motivated than non-organic consumers by considerations such as health, the natural content of foods, animal welfare, environmental protection, weight control, fitness, political values and mood. However, Table 3 also demonstrates that there are no significant differences between organic and non-organic consumers in relation to price, sensory appeal, convenience, familiarity and religion. In other words, organic consumers are, on the whole, just as busy, price sensitive and risk averse as other consumers. Further, if we examine the levels of importance attributed to each factor in relation to the others some interesting trends emerge (these are shown more clearly in Figure 5).

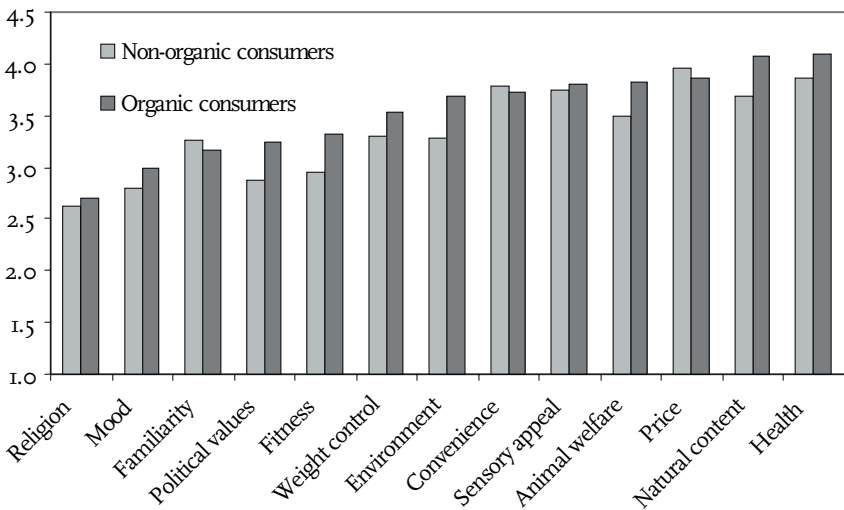
One of the most obvious features of Figure 5 is the broadly similar trend for organic and non-organic consumers in terms of the relative importance of each motivating factor. Both groups, for example, ranked health and the natural content of food more highly than they did fitness and weight control. Similarly, both groups ranked animal welfare and environmental protection more highly than political values. While organic consumers have higher scores than non-organic consumers on all motivating factors that relate either to the healthiness (health, natural content, weight control and fitness) or ethical attributes (animal welfare, environment and political values) of food, the importance of each of these factors in relation to the others is very much the same. This suggests that despite the current stereotypes of greenies and health nuts, organic consumers are simply slightly more motivated by values that are, in fact, widely shared.

Table 3: *Motivating factors behind food choice*

Group Statistics	t-values	Sig	Organics consumed	N	Mean ¹	Standard Deviation
Health	t(1065) = 4.93	p<.001	Yes	488	4.10	0.71
			No	579	3.87	0.83
Natural content	t(1055) = 7.25	p<.001	Yes	485	4.08	0.78
			No	572	3.68	0.95
Price	t(1072) = 1.57	ns	Yes	488	3.87	0.84
			No	586	3.95	0.87
Animal welfare	t(1040) = 4.28	p<.001	Yes	474	3.83	1.19
			No	568	3.49	1.37
Sensory appeal	t(1070) = 1.00	ns	Yes	489	3.81	0.85
			No	583	3.75	0.91
Convenience	t(1067) = -1.15	ns	Yes	487	3.73	0.89
			No	582	3.79	0.78
Environmental protection	t(1014) = 6.00	p<.001	Yes	468	3.68	0.98
			No	548	3.29	1.09
Weight control	t(1075) = 3.27	p<.001	Yes	491	3.54	1.10
			No	586	3.31	1.18
Fitness	t(1036) = 5.17	p<.001	Yes	475	3.32	1.12
			No	563	2.96	1.14
Political values	t(995) = 5.08	p=.001	Yes	456	3.25	1.16
			No	541	2.87	1.19
Familiarity	t(1061) = -1.49	ns	Yes	483	3.17	0.98
			No	580	3.26	0.91
Mood	t(1028) = 3.07	p=.002	Yes	466	3.00	1.08
			No	564	2.80	1.02
Religion	t(994) = 1.37	ns	Yes	452	2.70	0.93
			No	544	2.62	0.84

¹ Five point scale where 1 = Not at all important and 5 = extremely important

Source: Authors

Figure 5. *Motivating factors behind food choice*

This conclusion is also supported by an examination of whether the strength of motivation towards any of these values increases as levels of consumption of certified organic foods increase. This was found to be the case in regard to all factors other than weight control and fitness. However, consistent with the relatively small differences between those who consumed no organic foods and those who consumed at least some, the strength of correlation here was weak. The factors most strongly correlated with increasing consumption of organics were natural content ($\rho=.296$) and environmental protection ($\rho=.220$) followed by animal welfare ($\rho=.163$) and mood ($\rho=.166$).

The stronger motivation of organic consumers towards otherwise widely shared values—while not as radical as the stereotypes suggest—appears sufficient to make a significant difference to the willingness of consumers to act on these values. This becomes clear when the strength of motivation towards health and ethical factors is examined in relation to price, sensory appeal and convenience. For non-organic consumers, price is the most important consideration followed by health, convenience and sensory appeal. For organic consumers, price is just as important, but health and the natural content of food appear slightly more important while animal welfare and sensory appeal are of similar importance. Thus, while the premium prices paid for organic food are likely to present a barrier to increased consumption for both organic and non-organic consumers, organic consumers are likely to weigh the disadvantage of increased cost against a range of other factors, some of which are regarded as ultimately more important. For non-organic consumers, any suspicions regarding the veracity of health claims are likely to result in continued resistance to organic food. When asked what would need to happen before they would consume more organic food one focus group participant replied:

First I'd like to see logical appropriate evidence produced that the extra expense will result in improved health, longer life, more brains ... I've heard a lot from the food Nazis telling me how good it is for me. But they haven't actually been able to demonstrate to my satisfaction that it would be better for me.

Meanwhile, a number of organic consumers participating in the focus groups contested the notion that higher prices for organic food necessarily meant a larger grocery bill:

At the end of it it's more economical, organic food, because it last's longer in your fridge. You're not throwing out what you were throwing out before because it was going off.

As these quotes suggest, the motivational factors examined above are not the sole determinants of organic consumption. Rather, their influence lies in their interaction with a host of both individual and non-individual characteristics and processes ranging from beliefs and attitudes towards food to its availability and cost.

Table 4 shows the relative scores for organic and non-organic consumers on a number of scales designed to measure beliefs and attitudes towards food-related issues that are also likely to influence food consumption. Based on these data it

appears that organic consumers do believe more strongly that industrial methods of food production and processing constitute a threat to consumers. Similarly, they are more convinced of the healthiness and quality of organic foods; they are more willing to consume more organic foods should availability be improved; and they are more resistant to biotechnologies. Respondents were also asked their views on the fairness of paying premiums to farmers for farming in an environmentally sustainable manner, with no significant differences emerging between organic and non-organic consumers.

Table 4: *Attitudes to food-related issues*

Group statistics ^a	t values	Sig	Organics consumed	N	Mean	Sd ¹	SEm ²
Risks from industrialised foods ^b	t(1075) = -5.51	p < .001	Yes	490	1.96	0.76	0.03
			No	587	2.22	0.78	0.03
Healthiness of organic foods ^b	t(1073) = -8.81	p < .001	Yes	489	2.27	1.03	0.05
			No	586	2.82	1.17	0.05
Quality of organic food ^b	t(1073) = -7.69	p < .001	Yes	489	3.00	0.95	0.04
			No	586	3.51	1.17	0.05
Concern over biotechnology ^b	t(1073) = -3.31	p = .001	Yes	489	2.22	0.70	0.03
			No	586	2.37	0.77	0.03
Buy more organic food if it was available ^b	t(1073) = -7.55	p < .001	Yes	489	2.43	0.89	0.04
			No	586	2.89	1.07	0.04

^a 1 = very high risk through 4 = very low risk

¹ Standard deviation

^b 1 = strongly agree through 5 = strongly disagree

² Standard Error mean

It is important to note, however, that as with the motivating factors behind food choice, the strength of beliefs and attitudes about these issues follows similar patterns for organic and non-organic consumers despite the significantly stronger beliefs expressed by organic consumers for each individual issue. Stronger attitudes were also correlated with increasing organic consumption (albeit weakly).

Conclusion

The most prevalent common-sense belief about organics today—among academics and lay people alike—is possibly the view that growth in the organic sector is driven largely by high income earners attracted both to the perceived health and food safety attributes and to the high status of niche-market organic foods. This belief is based on the logic that since organic products are generally more expensive than their conventional counterparts, surely only the wealthy or the radically health or environment conscious could afford them. Like so many common-sense beliefs, this one is only partially true. Australian organic consumers are drawn from a broad cross-section of society and are not comprised solely of yuppies, greenies and health nuts. Income and values certainly do have an impact on organic consumption levels, but this impact is nowhere near as dramatic as the stereotypes would suggest. While organic consumers expressed stronger views and motivations in relation to issues such as the environment, animal welfare and biotechnology, their views were not radically opposed to those of non-organic consumers.

Concern about the industrialisation of food is clearly very mainstream. But translating this concern into consumption behaviour is not a straightforward process. Consumers are not faced with a simple choice between right and wrong—between good, healthy, environmentally friendly organic food and bad, unhealthy, environmentally destructive conventional food. Rather, they are faced with a dazzling array of competing discourses on food, nutrition, environment etc, together with an equally dazzling array of competing desires, preferences, anxieties and beliefs, as well as the rather practical issues of availability, convenience and cost. As the focus groups showed, acting on any issue of concern can become a highly complicated affair. Although we are yet to see a comprehensive review of the extent of anti-organics media coverage in Australia, many focus group participants were aware of the arguments typically promoted by apologists for industrialised agriculture to undermine confidence in the claims of organic foods. It is no wonder that a number of participants were quite ambivalent about the extent to which their consumption behaviour meaningfully reflected their values and attitudes about food, health and environment. However, this ambivalence is not indicative solely of confusion about who to believe and what trade-offs to make. It is also indicative of constant redefinition of consumer subjectivity in relation to food, the meaning of organics, the politics of food choice and so on. These issues are explored in more detail in forthcoming publications from this research.

In the context of this paper it is important to highlight the strong correlation between increasing consumption of organic foods and increasing levels of formal education; including science education. Contrary to yet another stereotype of organic consumers—as possessed by an irrational fear, or inability to understand, technological development—it seems that the more training people have in the critical evaluation of knowledge claims the more likely they are to consume organic food. This is consistent with the findings of Lawrence et al. (2001) that the more people understand about the genetic engineering of foods, the more likely they are to reject them. It is also important to highlight the relationship between gender and organic consumption. This provides another point of convergence with research on consumer responses to genetic engineering, with women both more likely to consume organic food and more likely to express concerns about genetically modified organisms (Lawrence et al. 2001). Although the suggestion from the focus group data and the literature that these gender differences may reflect the greater responsibility taken by women for feeding children is plausible, this is an issue that warrants closer investigation.

Overall, the data presented here suggest that relatively small increases in motivation towards the factors and issues identified above may be sufficient to dramatically increase organic consumption at a national level. Given the small number of people who consume more than a little organic food this may be exactly the process responsible for the dramatic increases in demand the industry is currently experiencing. But does this represent a greening of consumer lifestyles and what are the likely implications for the future of the organic industry?

Organic consumers rated health and the natural content of foods as the most important motivating factors in making food choices, followed by price. This in itself raises an interesting question as to how consumers will weigh up the potentially conflicting motivations of convenience, price and natural content when

confronted with some of the highly processed organic foods now entering the market. In the absence of other green motivations we might expect little resistance. It is important to note though that ethical concerns regarding the welfare of animals and environmental protection were rated by organic consumers as roughly equivalent to price in overall importance. Further, while there were associations between increasing organic consumption and increasing animal welfare and environmental motivation, these were weak. The idea that there is a hard-core of highly committed environmentalists consuming organics distinct from those who are really more concerned about their own health or convenience (as identified by Hartman and Wright 1999) is not borne out by these data. A more reasonable conclusion is that among the plethora of competing demands and motivations faced by organic consumers—including a genuinely strong environmental commitment—the concern least likely to be compromised is that of personal and family health. The pre-eminent position given to health does not at all suggest that the contemporary organic consumer is driven by little more than individualised concerns for their own well-being.

We may well expect that the desire of many organic consumers to meet the criteria of convenience will favour the consumption of value-added processed foods consistent with the industrial model, but we should also expect continued support for unprocessed, unpackaged and locally produced foods. The focus group interviews suggested quite strongly that these are the types of foods people associate most closely with the ideal of organics and represent the type of foods about which participants felt the least sense of compromise. They are also the types of organic food that are likely to remain most affordable to those who wish to consume organics but who do not command large disposable incomes. While we have no intention of trying to predict the future for the entire organic industry, this study suggests that consumers are neither entirely supportive nor entirely opposed to the industrialisation of organics predicted by Guthman (1998) but would support a differentiated structure that embraced both processed convenience foods and fresh, local, seasonal foods on the one hand, and large-scale producers, processors and retailers and small-scale, locally-oriented producers and distributors on the other (Coombes and Campbell 1998; Lyons 2001).

References

- Acres 8 (6) July 2000 p.1. *Organic Demand Outstrips Supply*
- Avery, D. (1995) *Saving the Planet With Pesticides and Plastic: The Environmental Triumph of High-Yield Farming* (Indianapolis, IND: Hudson Institute)
- Buck, D., Getz, C. and Guthman, J. (1997) 'Archaic' relations of production in modern agricultural systems: The organic vegetable commodity chain of Northern California. *Sociologia Ruralis* 37 (1) pp. 3–19
- Burch, D., Lyons, K. and Lawrence, G. (2001) What do we mean by 'green'? Consumers, agriculture and the food industry. Pp. 33–46 in S. Lockie and B. Pritchard eds. *Consuming foods, sustaining environments* (Brisbane: Australian Academic Press)
- Campbell, H. and Liepins, R. (2001) Naming organics: Understanding organic standards in New Zealand as a discursive field. *Sociologia Ruralis* 41 (1) pp. 21–39
- Coombes, B. and Campbell, H. (1998) Dependent reproduction of alternative modes of agriculture: Organic farming in New Zealand. *Sociologia Ruralis* 38 (2) pp. 127–145

- Cunningham, R. (2001) *The organic consumer profile: Not only who you think it is!* (Alberta: Strategic Information Services Unit, Agriculture, Food and Rural Development)
- Davies, A., Titterton, A. and Cochrane, C. (1995) Who buys organic food: A profile of the purchases of organic food in Northern Ireland. *British Food Journal* 10, pp. 17–23
- Fagerli, R. and Wandel, M. (1999) Gender differences in opinions and practices with regard to a 'healthy diet'. *Appetite* 32, pp. 171–190
- Guthman, J. (1998) Regulating meaning, appropriating nature: The codification of California organic agriculture. *Antipode* 30 (2) pp. 135–154
- Hartman, H. and Wright, D. (1999) *Marketing to the new wellness consumer: Understanding trends in wellness, 1st edn* (Bellevue, Washington: The Hartman Group)
- Lakin, M. and Shannon, P. (1999) *Export of frozen low-chemical and organic vegetables to East Asia and European Union: Interim Report* (Brisbane: Queensland Department of Primary Industries)
- Lawrence, G., Norton, J. and Vanclay, F. (2001) Gene technology, agri-food industries and consumers. Pp. 143–172 in R. Hindmarsh and G. Lawrence eds. *Altered genes II: The future?* (Melbourne: Scribe)
- Lindeman, M. and Väänänen, M. (2000) Measurement of ethical food choice motives. *Appetite* 34, pp. 55–59
- Lockie, S., Lyons, K. and Lawrence, G. (2000) Constructing green foods: Corporate capital, risk and organic farming in Australia and New Zealand. *Agriculture and Human Values* 17, pp. 315–322
- Lynggaard, K. (2001) The farmer within an institutional environment: Comparing Danish and Belgian organic farming. *Sociologia Ruralis* 41 (1) pp. 85–111
- Lyons, K. (1999) Corporate environmentalism and organic agriculture in Australia: Case study Uncle Tobys. *Rural Sociology* 64 (2) pp. 251–265
- Lyons, K. (2001) From sandals to suits: Green consumers and the institutionalisation of organic agriculture. Pp. 82–93 in S. Lockie and B. Pritchard eds. *Consuming foods, sustaining environments* (Brisbane: Australian Academic Press)
- Makatouni, A. (2001) What motivates consumers to buy organic food in the UK? Results from a qualitative study. *organic-research.com* 1, pp. 1–11
- Michelsen, J. (2001) Organic farming in a regulatory perspective: The Danish case. *Sociologia Ruralis* 41 (1) pp. 62–84
- Miller, P. and Rose, N. (1997) Mobilizing the consumer: Assembling the subject of consumption. *Theory, Culture and Society* 14 (1) pp. 1–36
- Palaszczuk, H. (2000) Organic food focus for Queensland farmers, Queensland Media Statement from the Queensland Minister for Primary Industries and Rural Communities, 2 July
- Reed, M. (2001) Fight the future! How the contemporary campaigns of the UK organic movement have arisen from their composting of the past. *Sociologia Ruralis* 41 (1) pp. 131–145
- Roininen, K., Lähteenmäki, L. and Tuorila, H. (1999) Quantification of consumer attitudes to health and hedonic characteristics of foods. *Appetite* 33, pp. 71–88
- Segger, P. (1997) World trade in organic foods: A growing reality. Paper presented at the Future Agenda for Organic Trade, Fifth IFOAM Conference on Trade in Organic Products, Oxford.
- Stephoe, A. and Pollard, T. (1995) Development of a measure of the motives underlying the selection of food: The food choice questionnaire. *Appetite* 25, pp. 267–284
- Tovey, H. (1997) Food, environmentalism and rural sociology: On the organic farming movement in Ireland. *Sociologia Ruralis* 37 (1) pp. 21–37
- Turrini, A. (2000) Food data quality in nutritional surveys: Which issues are to be tackled? *Journal of Food Composition and Analysis* 13, pp. 597–609

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