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Ethical claims and labelling: An analysis of consumers' beliefs and choice behaviours

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Abstract Although consumers' growing interest in ethical consumption has been well-documented, their understanding of specific claims, and the link between their stated concerns and behaviour, has not. Using a framework from systematic-heuristic and behaviour modification theory, this study explored consumers' understanding of varied ethical claims and a specific eco-label, and then estimated the effect these stimuli had on their choice behaviours. In-depth interviews revealed a strong interest in environmental and social attributes but considerable scepticism about specific claims. However, a choice modelling experiment found ethical attributes nevertheless influenced respondents' choices. Two distinct clusters whose views and choice behaviours differed markedly existed: one was primarily price-driven and the other more responsive to specific claims. Discrepancies between the qualitative and quantitative studies appear attributable to differences in information processing; many consumers respond strongly to heuristics, even though they believe themselves sceptical of the claims these communicate. The findings raise important policy questions about the scientific basis of many ethical claims, since consumers were strongly influenced by these, despite their views to the contrary.

Keywords ethical claims and labels; choice experiment; depth interviews; green marketing

Introduction

For nearly three decades, public opinion surveys have documented increasing concern over ethical and environmental problems (GfK Roper, 2009; Roper Organization, 1990). Although initial polls documented consumers' general concerns about pollution, recent evidence suggests their concerns have become more specific and include problems such as carbon footprints, fair trade, ethical labour, and water consumption. Perhaps more importantly, several commentators have suggested consumers may pay premium prices for brands that possess environmental and social attributes they regard as important (Menon & Menon, 1997; Peattie & Crane, 2005).

These findings have stimulated marketers' interest in environmentally friendly and socially responsible products, which could represent a source of competitive advantage (Gallavotti, 1995; McDaniel & Rylander, 1993). As a result, there has been

a proliferation of brands that employ specific claims, such as 'genetic engineering (GE) free', 'fair trade', and 'no animal testing', or announce general positions such as 'eco-friendly' (de Pelsmacker, Janssens, Sterckx, & Mielants, 2005). In addition, some use labels endorsed by third-party certifiers on their packaging to promote a particular ethical position.

However, although the widespread adoption of these claims has stimulated research into consumers' environmental and social attitudes and profiles (see Brown & Whalers, 1998; Diamantopoulos, Schegelmilch, Sinkovics, & Bohlen, 2003; Pickett-Baker & Ozaki, 2008), less is known about how consumers respond to ethical claims. More specifically, few studies have explored how consumers interpret ethical claims and visual labels, whether and how these stimuli influence them, or the relationship between their perceptions and behaviour (Peattie, 2001). Research examining these latter questions will enable marketers to estimate the effect ethical claims have, the groups most affected by these, and the alignment between consumers' stated concerns and their actual choices (Prothero, Dobscha, et al. 2011). Identification of particularly responsive segments may also help marketers refine their brand communications, and the media and distribution channels they use.

To address these questions and examine both the managerial and policy implications of ethical labelling, we conducted two studies. The first, a qualitative project, explored consumers' responses to social and environmental claims and labels, while the second used a choice modelling experiment to test trade-offs between ethical attributes and other product features. We begin by briefly reviewing past research into ethical claims and labelling before outlining the theoretical framework that guided our study.

Ethical claims and labelling

At present, ethical claims and labelling are voluntary. Thus manufacturers disclose information they believe will enhance their market position. Environmental claims feature strongly among the ethical claims made and, as Hussain and Lim (2000) noted, 'the fundamental goal of voluntary environmental labelling is to provide information about the environmental superiority of products and/or services to consumers in order to support their (green) purchasing decision' (p. 173).

Hussain and Lim (2000) identified three types of claim and label. Type I claims use labels developed by third parties that testify a brand has met a specified standard (such as its use or recycled or recyclable packaging). Firms themselves generate Type II claims, which report on areas where they believe they can establish a brand's superiority or make general positive claims. Finally, Type III claims provide independent scientific information, which may be both negative and positive (unlike Type I and II claims, which tend only to be positive); for example, they may report a company's carbon or water footprint (Hussain & Lim, 2000, pp. 173–174).

Recent evidence suggests Type I claims have effectively shaped consumers' behaviour. Bjorner, Hansen, and Russell (2004) reported that the 'Nordic Swan', Sweden's equivalent of a Green Tick (an heuristic connoting environmental attributes), had a 'significant effect on the choice of toilet paper, where marginal willingness to pay for certified environmental friendly brands ranges from 13% to 18% of the price' (p. 428).

Unlike Type I claims, Type II claims may require interpretation and have no third-party authentication, although Pocibò (2007) argued this situation benefited consumers because Type II claims could be implemented more rapidly than officially sanctioned claims. Nevertheless, as D'Souza, Taghian, and Lamb (2006) noted, consumers are exposed to multiple versions of Type II claims (including 'environment-friendly, ozone-friendly, earth-friendly, degradable, recycled, recyclable, renewable, reusable and biodegradable', pp. 163–164). However, in the vast majority of these cases, consumers must accept (or dismiss) these claims at face value, since they cannot test their validity against external scientific evidence and have no knowledge of how the claims were established (Teisl, Roe, & Levy, 1999).

Although 'eco' claims are arguably the most widely used ethical attributes, manufacturers have increasingly adopted other claims such as 'fair trade' and provided country-of-origin details to associate their brands with perceived advantages (Jones, Comfort, & Hillier, 2007). However, even knowledgeable consumers may lack the context to evaluate these claims (Bray, Johns, & Kilburn, 2010; Titus & Brandford, 1996). Furthermore, as these claims are often vague and not easily quantified, consumers may view them sceptically and dismiss them as puffery or green-washing (Imkamp, 2000; Morris, Hastak, & Mazis, 1995; Peattie & Crane, 2005; Prothero et al., 1997; Tonner, 2000). However, they may also respond as marketers hope and (implicitly or explicitly) accept these claims, regard products bearing them as more attractive those with no claim, and locate these higher up their brand hierarchies.

Consumers' responses to ethical claims

Predicting how ethical attributes influence purchase decisions presents marketers with many challenges, as choices may not directly reflect consumers' expressed concerns or product evaluations (Auger & Devinney, 2007; Gallastegui, 2002; Peattie & Crane, 2005; Prothero et al. 2011). Despite these difficulties, marketers routinely assume that consumers process information about ethical attributes directly. For example, Van Birgelen, Semeijn, and Keicher (2009) argued that environmental purchase decisions depend primarily on whether consumers have positive attitudes towards environmental consumption, as well as on the opinions of reference people such as family or friends. This model implies that consumers acquire knowledge of ethical traits, reach an understanding of how these function, form brand attitudes, and develop preferences that ultimately shape their purchase behaviour (Kahn, 2007; Kaiser, Wolfing, & Fuhrer, 1999; Schlegelmilch, Bohlen, & Diamantopoulos, 1996; Tanner & Kast, 2003). According to this approach, consumers engage in a detailed analysis where they reflect on product attributes, evaluate these, consider trade-offs, and arrive at reasoned decisions.

However, despite the intuitive appeal of this model, the link between consumers' knowledge and their beliefs and behaviour has not always been straightforward (Auger & Devinney, 2007; de Boer, 2003; Peattie, 2001; Prothero et al. 2011; Schann & Holzer, 1990). Furthermore, studies testing the link between environmental attitudes and behaviour have also reported varied findings (see, e.g., Bohlen, Schlegelmilch, & Diamantopoulos, 1993). Thus while Ozanne and Vlosky (1997) reported that some consumers would pay higher prices for sustainable

products, other studies have produced more ambiguous findings (see Auger, Burke, Devinney, & Louviere, 2003; Carrigan & Attala, 2001).

De Boer (2003) explained this discrepancy by suggesting that consumers who held ethical concerns may also be more sceptical and thus more inclined to scrutinise claims and evaluate the likely benefit a brand would deliver, particularly if it had a premium price (p. 260). Perceived differences between products' claimed and actual status has affected the standing of Type II ethical claims and raised questions about consumers' understanding and processing of eco-claims (Pocibò, 2007).

Discrepancies between stated beliefs and actual behaviours may also arise if consumers engage in heuristic rather than systematic processing, and respond to immediate cues instead of undertaking a reasoned analysis of these (Eagly & Chaiken, 1993). The heuristic-systematic model outlines two processing paths – systematic or heuristic – and suggests the former involves 'accessing, scrutinizing and integrating all useful information', while the latter draws on 'learned knowledge structures in the form of simple decision rules or cognitive heuristics to reach judgments' (Zuckerman & Chaiken, 1998, p. 622).

Researchers often assume consumers analyse environmental information systematically, since this is consistent with the concerns they express about environmental problems. However, where consumers' knowledge does not match their concerns, they may lack the background to engage in a systematic appraisal of evidence, leading them to rely more on the heuristics available to them. This reasoning is consistent with Zuckerman and Chaiken's (1998) extension of the heuristic-systematic model, and suggests consumers' choices are shaped by *accessible* information, which may represent only a small proportion of the total information available to them.

Eagly and Chaiken's heuristic-systematic model has much in common with the Elaboration Likelihood Model, which also describes two alternative processing routes (Petty, Cacioppo, & Schumann, 1983). The systematic, 'central route' is a 'relatively thoughtful route in which people focus on scrutiny of the issue-relevant information presented' (Rucker & Petty, 2006, p. 40). By contrast, the heuristic or 'peripheral route' is a 'less thoughtful route in which attitudes can be changed as result of simple associations and cues' (Rucker & Petty, 2006, p. 40).

Consumers exposed to thousands of fast-moving-consumer-goods (FMCG) brands may have developed habitual, routine and uninvolved behaviours via respondent conditioning (Nord & Peter, 1980). Pairing teaches consumers to associate visual devices such as a 'green tick', or claims such as 'natural' or 'fair trade', with specific product attributes. Ultimately, these stimuli may come to function as discriminative stimuli, which simplify choice behaviours by signalling the link between consumption and a reward (Nord & Peter, 1980). Thus instead of reflecting thoughtfully on information, consumers may instead use specific claims, imagery, or symbols as heuristics to simplify their choices. Busy and distracting environments, such as supermarkets, where opportunities to gather and reflect on information are limited, further promote use of simplifying mechanisms such as heuristics. This response is logically consistent with arguments that consumers are cognitive misers (Fiske & Taylor, 1984). Furthermore, it aligns with Foxall's (2005) suggestion that consumers 'recognize the limitations of human cognitive capacity and the impossibility of devoting substantial mental effort to the evaluation of all messages' (p. 30).

Research into nutrition labelling has examined the role played by heuristics such as discriminative stimuli, particularly 'traffic light' labels, which communicate information more effectively than either nutrition facts panels or voluntary 'percentage daily intake' labels (FSA, 2009; Maubach & Hoek, 2008). While preliminary, these findings could also apply to non-food FMCGs, particularly if the heuristics used draw on well-established learned associations. However, while Prothero, Peattie, and McDonagh (1997) noted that consumers may trust green labels above green advertising, they also suggested this trust may not always be well-founded. This apparent discrepancy between consumers' concerns and their understanding of ethical attributes stimulated our first research question, which explored how consumers interpreted ethical claims and heuristics. Our second overall research question applied this understanding to estimate the effects specific attributes have on behaviour or behavioural proxies.

Methodology

The research involved two phases. The first of these involved qualitative work that explored consumers' knowledge of different environmental claims, the attributes they associate with these, their reliance on eco-claims, and their attitudes towards brands featuring different claims. Twelve face-to-face, semi-structured, in-depth interviews were undertaken with individuals recruited from two major New Zealand cities. Purposive sampling was used to ensure participants had some experience with or knowledge of ethical consumption while also promoting diversity in their age, gender, education, and occupation. Interviewing continued until no new themes emerged (Glaser & Strauss, 1967); transcripts were reviewed and compared following each interview. After 10 interviews, respondents' comments began adding little new material to earlier interviews, and following the twelfth interview, two researchers who had jointly reviewed all transcripts agreed that saturation had been reached.

A flexible interview protocol guided the discussion and enabled participants to raise new topics. The interviews began with participants describing a typical shopping expedition and factors they considered important when making purchases. This led into a discussion of ethical claims, such as 'eco-friendly', 'natural ingredients', 'no animal testing', and country of origin, which explored how participants interpreted and responded to these terms. Interviews lasted between 40 and 60 minutes, and respondents' answers were carefully probed to test ambiguities and ensure detailed responses were obtained. With participants' permission, interviews were recorded and then transcribed. Participants received a $20 gift voucher as *koha* (an acknowledgement of their time and goodwill). The research was reviewed and approved by the relevant University Ethics Committee and by the Ngai Tahu Consultation Committee (an indigenous people's consultation committee).

The second phase used a choice modelling experiment to estimate the effect of selected ethical claims on consumers' choice behaviour relative to other product attributes. The data were collected using an online panel drawn to ensure participants' age, gender, education, income, and geographic location reflected population parameters. Additional screening questions ensured that respondents had at least shared responsibility for their household's grocery shopping and had

purchased the test product category (laundry powder) in the last six months. The final sample comprised 401 respondents who completed a seven-minute, three-part survey. Although there are no population statistics for household grocery shoppers, our sample had a predictable female skew. However, sample members' other demographic traits varied and suggested they represented a diverse cross-section of shoppers. Table 1 contains details of respondents' demographic characteristics.

Laundry soap powder was selected as the test category, as the claims tested were logically relevant to this product category. Second, concern about the effect detergents have on waterways when waste water is released and the use of animals to test for possible allergies meant laundry powder was topical and relevant to the claims tested. Finally, this product category has high penetration and is purchased by most households, thus making it a suitable carrier for the claims identified following the qualitative phase.

The choice experiment asked respondents to imagine they were in a supermarket, saw a sales display featuring three new brands of laundry soap powder, and had to select one option to purchase. Each respondent saw 10 choice sets containing three images of fictional laundry soap powder brands – Fantastique, Ultra, and EziFresh – that had been created by a graphic designer to simulate a section of a supermarket shelf. The brand order varied across showcards, and the showcard order was also randomised to avoid order effects. Figure 1 contains an image of one of the showcards.

Brands were paired with one of four claim conditions selected following a review of the qualitative findings. Finally, two price levels were used and reflected 'everyday' and discount prices for soap powder brands. Table 2 outlines the overall experimental design.

Respondents also answered questions that measured their environmental attitudes and beliefs, and their willingness to take actions that would promote the environment. This section followed Rucker and Petty's (2006) approach and used nine-point Likert scales. The final section of the online phase collected details of respondents' demographic traits, including their gender, education, income, and age.

Table 1 Choice survey sample characteristics.

Characteristic	**%**
Age	
Aged under 35	25.4
Aged 36–55	45.2
Aged 56 and over	29.4
Gender	
Female	56.9
Male	43.1
Education	
School-level only	47.1
Post-secondary, below degree	31.9
Degree or postgraduate qualification	20.9

Figure 1 Sample choice set.

Table 2 Overall experimental design.

Attribute	Level
Eco-claim	Eco-friendly
	Natural ingredients
	No animal testing
	No claim
Price	$4.39
	$4.99
Eco-label	Present
	Absent

Phase 1: Qualitative results

Interview transcripts were coded using Braun and Clarke's (2006) six phases of thematic analysis: 'a method for identifying, analyzing and reporting patterns (themes) within data' (p. 79). Key themes were identified inductively and the thematic analysis was data-driven. The main themes identified were labelled 'ambiguous appeal' and 'self-efficacy'. We first discuss participants' interpretations of the different claims tested before exploring these overarching themes. Where quotations are used, participants have been allocated a pseudonym.

Participants associated the term 'eco-friendly' with high-quality ingredients and assumed products labelled in this way did not contain artificial scents, perfumes, and colours. Consequently, they regarded 'eco-friendly' products as simple and healthier alternatives:

> It's probably going to be less smelly, less perfumed and less coloured and all the artificial crap that's going to go in it and possibly destroy me. It's going to be basic, no frills, I don't want something that smells like fake strawberries, I just want something that's basic and works. (Dylan)

Eco-friendly was consistently interpreted as meaning 'less harmful to the environment'; most participants could not elaborate on how they thought harm was reduced, although some suggested products with this label would use less detrimental manufacturing and disposal processes, and fewer artificial chemicals.

However, some participants regarded 'eco-friendly' as clichéd, and many questioned the authenticity of this term, describing it as vague, and suggesting it lacked a strong legal definition. As a result, they questioned whether 'eco-friendly' amounted to more than a marketing gimmick:

> If there's eco-friendly on the front of a bottle, it becomes [expletive] to me. It's all-encompassing, eco-friendly; it basically sucks you into thinking that this is good for the environment. And buy this, just because of that key phrase. (Cody)

Some participants assessed the authenticity of products bearing 'eco-friendly' labels by examining information displayed on the packaging. For example, if the product had travelled a long distance or they thought it was over-packaged in a small, non-recyclable container, they would distrust the claim.

Participants who assessed eco-friendly claims by comparing them to other product information found country-of-origin details important, since these enabled them to assess the distance to market a product had travelled. 'Made in New Zealand' claims evoked higher quality connotations, and participants associated local products with reduced carbon footprints, safe and fair labour conditions, and support of local and national economies:

> It encompasses a few of the things, if it's made in New Zealand then it hasn't had to travel far so it could be grouped with the environmental stuff, but it's also an economic decision to try and support local business. (Jane)

However, participants were cynical about partial claims (such as 'sourced from local and imported ingredients'), as they could not evaluate these. This was of particular concern when they discussed concepts about which they were less certain, such as genetic modification, which few could define:

> Yeah I know a little bit about it but I don't fully understand it . . . And it's really bad that I don't know anything about it. (Beth)

Perhaps because they did not understand the meaning of this term, they interpreted it by placing it in context with claims they did understand, such as country-of-origin claims. However, where they could not be confident that products were made from wholly national ingredients, they became distrustful:

> They shouldn't be allowed to get away with saying 'contains imported and local ingredients'. I think that really they should have to say exactly where all the things have come from, because I think consumers are, it's very easy for consumers to be, sort of blinded by a particular brand which they associate as being a New Zealand brand and just make the assumption. (Jane)

Reservations about product ingredients also emerged when participants discussed their responses to fair-trade claims. While many thought fair trade was an appealing attribute, they regarded it as a lower priority than specific environmental features, such as claims of local or domestic production, which required an explicit trade-off with fair-trade claims:

> It probably hasn't been the most important thing to me. Especially if I'm trying to buy New Zealand made products, they can't be both. (Freya)

Some were less trusting of fair-trade labels, as they could not evaluate these directly, and several felt this claim required legal clarification, and perhaps trademarking, before it could be accepted as valid:

> Oh it's so hard. You know the Fairtrade, it's a bit like the Heart Foundation Tick, you can pay to get the tick, and you can pay to get the Fairtrade, you can buy it, you don't earn it, as such. (Ella)

Participants also made assumptions about local production when asked their understanding of 'no animal testing' claims. However, while they assumed nationally made products had not been tested on animals, most stated they had little knowledge about the extent of animal testing or even whether this still occurred. Some associated this claim with specific brands, such as the Body Shop, while others were more cynical and regarded the claim as a marketing gimmick that lacked real meaning:

> No animal testing doesn't mean that they are not using the information that was collated from data collected from when someone else did animal testing. So it's an empty, empty claim, it really is quite empty. (Ella)

Participants consistently criticised the ambiguity of other eco-claims, such as 'recycle':

> It's grammatically wrong isn't it, needs to be 'recyclable'. Recycled? Recyclable? . . . it's an ambiguous word, it should be more defined. It's a statement isn't it, a statement saying 'recycle!' (George)

When asked what they thought this meant, some described packaging made of recycled materials, others thought the packaging could be recycled, while still others thought the claim encouraged recycling.

Participants also expressed varied responses when asked about 'natural ingredients'; some thought this term meant the product was organic, GE free, or contained only plant-based ingredients and no man-made chemicals. However, several saw this claim as part of an overall branding strategy rather than a specific eco-claim. Some participants had tried to validate this claim by seeking further information but had found little additional information available. These difficulties negatively affected their trust in the claim:

> Definitely a bonus, but what percentage of the product is natural ingredients? Because, I mean, it could have 1% natural ingredients! There's no law! . . . I'd prefer to see exact percentages, and exact ingredients and where all of the ingredients came from. (Ella)

Comments on eco-claims frequently led to suggestions about labels that could simplify consumers' choices and guarantee the quality of information provided. Participants recognised the Green Tick probably meant an environmentally friendly alternative and assumed it also meant domestically produced goods. However, they were less certain how the Green Tick was awarded.

> Green Tick sustainable certified. By who? is my first question. Certified by who? Sustainable according to who? (Ella)

Perhaps because the Green Tick was not easily defined, some participants felt less likely to trust it, although others thought it looked 'certified', which led them to believe it was an official mark and thus more trustworthy. These latter respondents thought the Green Tick would simplify their purchase decisions and save time, and they again compared it to the Heart Foundation Tick, which is also a simple, recognisable image:

> I think this is more useful as a visual device because you're always under pressure in a supermarket and therefore you have to make decisions almost subconsciously, you're on autopilot in the supermarket. This is not an intellectual exercise. (George)

However, others felt the Green Tick would need to be better established before they could trust it and stated they needed more information before they would use it as a decision short-cut:

> I would really love someone to just give me the information, so you know, a little flyer or something in the supermarket, to tell me exactly how it came about, who has certified it, that would be really good. (Lily)

Overall, while 'made in New Zealand' and 'fair trade' were perceived as distinct concepts, participants thought these attributes provided similar benefits. They regarded 'natural ingredients' and 'GE free' as largely synonymous but saw 'no animal testing' as distinct from other claims, since it involved animals, rather than the environment, economy, or human welfare. The 'eco-friendly' claim and 'Green Tick' eco-label subsumed several of the more specific attributes. For example, the 'Green Tick' indicated 'eco-friendly', 'natural ingredients', 'GE free', 'recycle', and 'no animal testing', and was seen as a national initiative and thus a country-of-origin statement.

Each claim held some appeal to participants, although many qualified their responses to the claims by commenting on the ease with which marketers could exploit ethical attributes. Thus while the claims were appealing, participants also saw them as ambiguous, a fact several found unsettling. This doubt about the validity of claims was compounded by the difficulty they faced in assessing ethical attributes, and the tension between their interest in 'good' products and their varying ability to identify and assess these. Even participants with a strong interest in ethical consumption doubted whether they had the knowledge to evaluate some claims, and so felt unable to take these at face value. These related themes of ambiguity and self-efficacy reflect broader questions of trust that underpin consumers' quest for brands they can rely on as possessing ethical attributes.

Participants' ambivalence reflects their systematic processing of the claims and the probing of their responses, which required them to evaluate and compare claims. Such situations inevitably prompt higher levels of reflection, both providing and creating opportunities for doubts and uncertainty to emerge and knowledge gaps to be exposed. While systematic processing is vital to identify ambiguities, enable claims to be mapped, and discern themes, it does not reflect the typical product evaluation consumers undertake when purchasing household goods. For this reason, we also undertook a quantitative study in which we simulated consumers' choice contexts.

Phase 2: Stated choice study

Because participants regarded several claims as similar, we reduced repetition in the experimental design by selecting claims participants regarded as ambiguous and that captured different dimensions of ethical consumption. Country-of-origin and fair-trade claims elicited considerable scepticism and so were not used further. However, participants saw 'eco-friendly' as a general term that subsumed claims such as recyclable and GE free, and that described a product's effects on the environment. In this respect, it was distinct from 'natural ingredients', which participants associated with production processes; 'no animal testing' was also linked to production but to quality testing rather than ingredients.

Because we expected respondents to engage in heuristic processing when placed in a simulated choice context, and thus that their reservations would be less likely to emerge, our first hypothesis was that:

H1: Front-of-pack ethical claims featured on household cleaning FMCGs will have a significant, positive effect on consumers' choice behaviour.

Participants saw the Green Tick as ambiguous; nevertheless, this was included in the design because of its potential as a visual heuristic that could simplify choice behaviour, particularly during the choice task participants were set. Furthermore, participants had commented that the Green Tick was consistent with each of the claims tested. To recognise this ambiguity and the potential for different responses to verbal and visual stimuli, we developed separate hypotheses for the Green Tick.

H2a: A front-of-pack ethical label – the Green Tick – will have a significant, positive effect on consumers' choice behaviour.

Nevertheless, given the higher levels of scepticism expressed, we also posited that:

H2b: A front-of-pack ethical label – the Green Tick – will have a weaker influence on choice behaviour than specific ethical claims.

Throughout the eco-claim discussions, several participants had noted that, despite their general support for environmentally friendly attributes, they would not pay a premium price for brands offering these benefits if they thought viable alternatives existed. These comments reflect the trade-offs Peattie (2001) and Peattie and Crane (2005) argued consumers made when faced with competing attributes, such as price and environmental traits. For this reason, our third hypothesis posited that while eco-claims would elicit positive overall responses, these would not compensate for higher prices.

H3: A price difference of 12% will exert a stronger influence on choice behaviour than environmental attributes.

However, Peattie (2001) suggested consumers fell along a green continuum anchored by weak environmental interest at one end and green dedication at the other, and thus raised the possibility that overall responses may mask variations in subgroup behaviour. Although public opinion polls reveal the existence of more and less

ethically oriented consumers, surprisingly little is known about whether these groups' beliefs and attitudes correspond with their behaviour. This discrepancy highlights the need to explore population subgroups, and the alignment between their stated views and choice behaviours. Thus our final hypothesis was:

H4: Segments with strong beliefs and attitudes towards ethical consumption will be significantly more responsive to environmental and social claims and labels.

Phase 2: Stated choice study results

A multinomial logit model was used to estimate the effects of the price, ethical claim, and label on respondents' choice behaviour. Multinomial logit models assume that consumers' choices depend on the utility of alternatives offered, and that the utility of each alternative can be calculated by summing its attributes weighted by their multinomial logit regression coefficients. To estimate this model, respondents' choices were combined to produce aggregate frequencies for each brand in each choice set. These were then regressed against the matrix of attribute variables: the price, claim, and label. Table 3 contains details of the main effects model.

As predicted in H1, each ethical claim had a significant effect on respondents' choice behaviour. The general 'eco-friendly' claim was more attractive than either the 'natural ingredients' or 'no animal testing', and all were more attractive than the no claim (control) condition. Despite the reservations some qualitative phase participants expressed about the actual meaning of these claims and the evidence on which they were based, respondents in the choice experiment exhibited positive responses. These differences may reflect the more evaluative and critical process the qualitative participants engaged in and the more rapid (heuristic) decision making that occurred during the choice study, where the claims and labels functioned as discriminative stimuli. Although the choice study was conducted via an online survey, the test stimuli and choice task were designed to approximate actual shopping conditions, and the results may thus provide more accurate insights into how consumers will behave when shopping.

While the Green Tick had a positive coefficient, this was not significant and thus did not differ from the control (no tick) condition. We therefore reject H2a, which posited the Green Tick would have a significant positive effect, but accept H2b, which

Table 3 Main effects model.

Attributes[a]	*B*	Sig.
$4.39	1.2079	<.0001
Eco-friendly	.86692	<.0001
Natural ingredients	.55615	<.0001
No animal testing	.54500	<.0001
The Green Tick	.06042	NS
χ^2 (df 5) = 2198.500		.0000
Nagelkerke pseudo R^2 = .233		

[a]Baseline price is $4.99; baseline eco-claim is no eco-claim; baseline eco-label is no eco-label.

stated the Green Tick would have a weaker effect than the ethical claims. These results reflect phase one participants' ambivalence towards the Green Tick and their lack of knowledge about it.

As hypothesised, price exerted the dominant influence on respondents' choice behaviour, and the lower price of $4.39 was significantly more attractive than the higher price of $4.99. Despite the fact that all three eco-claims had a significant positive coefficient, none was sufficiently attractive to compensate for the higher price (all had smaller coefficients than the lower price attribute). While the prices used reflect prevailing everyday and discount prices, a smaller discount would logically have reduced the influence price exerted, and so may have resulted in a different price–eco trade-off. Overall, however, the results are consistent with H3 and with earlier studies (de Boer, 2003).

To test the final hypothesis, we used three general behavioural statements ('I often read environmental information'; 'I check environmental information before buying a new product'; 'I feel confident I can use environmental information to see how environmentally friendly a product is') as classifying variables in a k-means cluster analysis. This resulted in two distinct clusters of 236 and 165 respondents respectively ($M_{1a} = 6.75$ cf. $M_{2a} = 2.90$; $M_{1b} = 6.81$ cf. $M_{2b} = 2.79$; $M_{3a} = 6.02$ cf. $M_{3a} = 3.37$). Table 4 contains the mean cluster responses to statements testing willingness to make compromises to achieve environmental outcomes, beliefs about the environment, and perceived self-efficacy.

Table 4 shows that the clusters differed significantly across all variables. The first cluster was less willing to make personal or financial compromises to promote the environment, less likely to see environmental problems as a priority, and less likely to see individual actions as able to make a difference. By contrast, the second cluster was more willing to make personal sacrifices and saw themselves as able to make a contribution to resolving these problems. The clusters were thus labelled as less and more concerned respectively. Given these findings, separate multi-nomial models

Table 4 Cluster beliefs and characteristics.

I am willing to . . .	**Cluster 1 ($n = 236$) mean[a]**	**Cluster 2 ($n = 145$) mean**	**Sig.**
Pay higher taxes to protect the environment	3.0	4.9	.000
Pay higher prices to protect the environment	3.4	5.5	.000
Reduce my standard of living to protect the environment	3.5	5.2	.000
It is too difficult for someone like me to help protect the environment	4.0	3.3	.001
I do what is right for the environment, even when it costs money or takes time	4.1	5.6	.000
There are more important things to do than protect the environment	4.5	3.3	.000
There is no point trying to protect the environment unless others do the same	5.1	4.3	.001
Many claims made about environmental problems are exaggerated	5.3	4.4	.000

[a]The higher the mean score, the higher the level of agreement with the statement.

Table 5 Choice patterns by cluster.

	Less concerned ($n = 236$)		More concerned ($n = 145$)	
Attributes	***B***	**Sig.**	***B***	**Sig.**
$4.39	1.85	.000	1.51	.000
Eco-friendly	.96	.000	1.87	.000
Natural ingredients	.96	.000	1.51	.000
No animal testing	.66	.000	.93	.000
The Green Tick	−.09	.000	.18	.009
χ^2 (df 5)	1356	.000	930	.000
Nagelkerke pseudo R^2	.243		.237	

were developed for each cluster to assess whether responsiveness to ethical claims and labels also differed. Table 5 contains these models.

As Table 5 shows, clusters' choice patterns differed significantly. Cluster one was highly price sensitive and the price co-efficient was twice as large as the coefficients for any of the ethical claims, although these all had a significant effect on respondents' choice behaviours. By contrast, cluster two members were more responsive to the 'eco-friendly' claim than they were to the lower price, and the 'natural ingredients' claim was as attractive as the lower price. These results imply that cluster two members would find a higher priced ($4.99) brand bearing either the 'eco-friendly' or 'natural ingredients' claim more attractive than a lower priced ($4.39) brand with no claim. Cluster two members were also influenced by the Green Tick, which significantly increased the attractiveness of products, although the Green Tick's overall effect was small relative to the other attributes tested.

As the groups whose beliefs and attitudes were more ethically oriented also displayed consistent choice patterns, H4 was accepted. While price sensitivity, a concern that emerged during the in-depth discussions, was evident among the less responsive cluster's choices, the ethical claims had a stronger influence on the more responsive cluster than price, and all the claims tested were more attractive to members of this group.

Discussion

Because participants in the depth interviews were asked to reflect on their views of ethical attributes and those in the choice study were not, we expected the latter to process eco-labels and claims heuristically. This type of processing typically occurs when consumers cannot analyse claims or the information underpinning these in detail, and is consistent with the decision making that occurs in busy, distracting environments such as supermarkets (Auger & Devinney, 2007).

Theoretically, the results highlight the importance of heuristics and the influence these may have on consumers' decisions (Zuckerman & Chaiken, 1998). Given the rapidity with which consumers make grocery decisions, the assumption they process claims, test the evidence underlying these, and arrive at reasoned evaluations of competing products is difficult to sustain. The scepticism participants expressed in

depth interviews belied their responsiveness in choice contexts and the ambiguous claims that aroused suspicion when probed were apparently not queried when featured on relevant products. Our findings reinforce the attitude–behaviour disjunction reported in earlier studies, and suggest reliance on simple statements of intention may overestimate consumers' actual behaviour.

Interestingly, consumers responded more positively to general rather than specific claims. This finding reflects research into puffery, which found consumers often extrapolated vague claims, imbuing products with attributes they believed implicit in the claim (Preston, 1967). By contrast, respondents' reaction to the Green Tick, a strong visual heuristic that required minimal processing, was less positive. The Green Tick is a Type I label (usage conferred once a third party has assessed whether it meets a specified standard) and so might have been expected to be more influential than Type II claims, which are created by individual manufacturers. However, the associations required to shape purchase often require repeated exposure to develop familiarity, stimulate links between the heuristic and particular product attributes, and evolve into a discriminative stimulus that triggers behaviour. Our results may therefore reflect the fact this heuristic is not widely used, thus no prior learning will have occurred.

Links between attitudes and behaviour typically require more detailed information processing, and recognition that declarations of 'citizen' behaviour become meaningful only if enacted as 'consumer' behaviour (Prothero et al., 2011). Our findings imply citizen and consumer behaviour have yet to overlap, question the assumption that consumers engage in detailed cognitive processing, and suggest heuristic-level processing may be more common. Furthermore, they suggest more general heuristics may have greater influence than specific cues, perhaps because consumers can locate the former more easily within their own frame of reference. Overall, the results reinforce the need to examine not only how consumers interpret and say they will respond to claims, but how they actually do behave in choice contexts.

Although the scepticism evident in the depth interviews was reflected in the less responsive clusters' beliefs, attitudes, and choices, a sizeable group within the choice study were influenced by the ethical claims. This finding raises important policy questions that require further consideration. Many regulators assume consumers are sceptical and discerning, and that they evaluate and dismiss puffed or overly general claims. However, our findings question this assumption and suggest ambiguous and non-scientific claims may be more influential than has previously been supposed.

As many ethical attribute claims are created by manufacturers and presented without independent verification, there is considerable potential for marketers to promote their brands using ambiguous rather than factual claims. Morris et al. (1995) and Prothero et al. (1997) had earlier called for stricter green marketing guidelines to prevent misleading claims and deception, a call we suggest should apply also to more general social claims. Our findings provide empirical evidence that despite their expressed scepticism, respondents were influenced by ethical claims, some to the extent that they would pay more to obtain a brand bearing such a claim. If these claims are no more than hyperbole, consumers will be misled and deceived, and policymakers should examine whether standards-based claims, monitored by an external independent body, would facilitate more even competition and promote greater consumer protection. Such a stance would not only benefit consumers but

would enable those manufacturers who have created a genuine competitive difference to promote this more effectively.

On a macro level, our findings should interest policymakers who have a strong interest in promoting more sustainable behaviours. Prothero et al. (2011) noted the need to recognise both the rights and responsibilities of consumer-citizens; they suggested governments promote consumers' understanding and knowledge of ethical choices, and empower them to make these. However, without standardised and authentic heuristics to guide them, consumers will have difficulty responding to calls asking them to practise more sustainable behaviours. Furthermore, puffed claims that lack substance risk arousing consumers' latent scepticism, deterring them from making ethical choices, and reinforcing a cynicism they may apply to genuine as well as hyperbolic claims.

Conclusions

This study explored how consumers interpret ethical terminology, and how social and environmental claims affect their choice behaviour. Despite the scepticism evident in qualitative interviews, ethical claims had a significant influence on many consumers' choice behaviours. Importantly, some claims exerted a stronger influence than price on a substantial segment of consumers, although this finding requires replication using more varied price differentials and claims. The growing use of ethical claims on food and clothing brands suggests replication studies should examine diverse product categories so the generalisability of the effects we observed can be tested. Ideally, future work would also involve field experiments that estimated the effect of price and eco-terminology on consumers' actual purchasing behaviour.

Given the proliferation of ethical attribute claims, policymakers need to examine whether the more general and ambiguous among these may be misleading consumers by creating points of difference that have no scientific foundation. Research examining this question is urgently required to ensure those making these claims compete fairly and accurately, and those who respond do so on the basis of genuine attributes.

A copy of the choice questionnaire is available from the first author.

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Appendix. In-depth interview protocol

Introduction

Hello I'm ***; I arranged to meet with you now to talk about some research I'm doing into shopping and how you choose the products you go on to buy. Before we start, I would like to show you some information about the interview and check to see whether you have any

questions about this research. Here's an information sheet. Please take a few moments to look through this.

- Provide participants with an Information Sheet and outline the key points in this (allowing time for participants to read the IS in full).

You'll see that I'm doing this work as part of a project that explores how people choose products to buy when they go shopping in a supermarket. As a participant in the research, *you have the right to ask questions at any time, to decide if you would prefer not to answer some questions, to receive a copy of the findings, and to withdraw from the research at any time*.

- Check whether respondent has any questions about the interview.
- Explain recording of the interview and participants' rights in relation to this.

ONCE PARTICIPANTS HAVE AGREED TO INTERVIEW BEING RECORDED, TURN RECORDER ON AND NOTE THAT IT IS NOW ON.

- Further check on questions, if none, ask the participants to sign the Consent Form.

Going to the supermarket

1. Tell me about a normal trip to the supermarket. How do you go about buying the things you need? **PROBE HABITUAL AND IMPULSE BEHAVIOURS**

Information for personal care products

1. How do you choose which personal care products and brands, such as skin and hair care products like shampoo and soap, to buy? What do you look for? Why do these things matter to you? **PROBE FULLY**
2. How often do you read the information on the back or side of these products that tell you about the product in more detail? What is it that you look for? Why do you check these details? **PROBE FULLY**
3. Can you think about one of the last times you bought a personal care product? **PROBE FULLY**
4. How important are environmental features to you when deciding on a personal care product in the supermarket? **IF IMPORTANT, PROBE:** What features do you look for particularly? Why is that?

Using environmental information for household cleaning products

1. How do you choose which household cleaning products and brands, such as kitchen/bathroom and laundry cleaning products like dishwashing liquid and washing powder, to buy? What do you look for? Why do these things matter to you? **PROBE FULLY**
2. How often do you read the information on the back or side of these products that tell you about the product in more detail? What do you look for? Why do these things matter to you? **PROBE FULLY**

3. Can you think about one of the last times you bought a household cleaning product? What product features were you looking for? **PROBE FULLY**
4. How important are environmental features to you when deciding on a household cleaning product in the supermarket? **IF IMPORTANT, PROBE:** What features do you look for particularly? Why is that?

**Are these features more important to you for personal care products or household cleaning products?*

Alternative claims

1. [Participants shown seven different claims and asked for their interpretation of each]:

- Eco-friendly
- GE free
- Fair trade
- No animal testing
- Recycle
- Made in NZ
- Natural ingredients

1. What would this tell you about a personal care or household cleaning product? How do you make this assessment?
2. Would this be attractive to you? **Why is that? PROBE FULLY**

2. [Participants shown the 'Green Tick' and asked]:

1. What would this tell you about a personal care or household cleaning product? Why is that? **PROBE FULLY**
2. What experience have you had with this label in the past?
   a. Where did you see it? Did you use it? What did you think it meant? If you were to see it, what would you think it meant? Would it be attractive to you?

Comparing alternative environmental information formats

[Participants shown eco-claims and 'Green Tick' eco-label and asked]:

1. Which of these different forms of environmental information do you think you would find most and least useful? Could you order them for me, please? Can you tell me about your list and why you made the order you did?
   a. How do the claims relate to each other? Which do you see as similar and different? Why is that?

Participant demographics

- Age, gender, occupation, education.

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