How claim specificity can improve claim credibility in Green Advertising: Measures that can boost outcomes from environmental product claims

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Being specific, being credible in green advertising: Specificity increases the perceived credibility of environmental advertising claims

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Abstract

This study establishes *claim specificity* as a conceptually distinct message characteristic and a robust antecedent of claim credibility. The relationship between the specificity and credibility of green claims is examined by way of a 2 x 2 online experiment, with a broad sample of consumers. The results show that being specific increases the perceived credibility of green claims across a range of products, regardless of their perceived environmental relevance. Theoretical, practical and research implications are discussed.

Managerial slant

From a practitioner perspective, this study:

1. Validates the use of specific green claims as a relatively simple, flexible and low cost means of enhancing the credibility (and thus effectiveness) of green advertising;
2. Demonstrates the credibility benefits of maximising the specificity of the green claim when promoting genuine environmental improvements in products, whether or not they are perceived to be of high environmental relevance;
3. Emphasises the selection and integration of media channels to facilitate the provision of detailed and meaningful information in green advertising claims; and
4. Encourages diagnostic copy testing and post-campaign measurement of the perceived specificity and credibility of green advertising claims, as a basis for improving the effectiveness of green advertising.

Introduction

In the face of growing environmental concern, organisations have long sought to limit the environmental impact of their sourcing, operating and marketing practices; to develop *green products* and to engage in *green marketing* (Leonidou *et al.*, 2011). To reap the benefits of an environmentally-conscious strategy, however, companies must not only "be green" but also "be seen to be green". Thus, the emergence of green marketing prompted a huge surge in green advertising in the late 1980s (Crane, 2000; Davis, 1993; Leonidou *et al.*, 2011); quickly followed by widespread (and often justified) consumer scepticism about the claims that were being made (Carlson, Grove and Kangun, 1993; Iyer and Banerjee, 1993). Indeed, the tendency of some companies to exaggerate, and even fabricate, the environmental qualities of their products and processes (Davis, 1992; Garfield, 1991), rapidly reduced the credibility of green advertising to a "shocking state" (Iyer and Banerjee, 1993: p. 494).

This situation has hardly been improved by a subsequent era of corporate scandal and mistrust, and the emergence of a communication landscape in which historical cynicism about the authenticity of green advertising is compounded by contemporary suspicion of a company's motivations for engaging with social and environmental issues (Pomering and Johnson, 2009). Moreover, the persistent problem of assessing "environmental impact", and the emergent ambiguity of terms such as "biodegradable" and "environmentally friendly", has contributed to a level of contemporary consumer scepticism that threatens to derail the promotion of genuine improvements in environmental performance (Finisterra do Paço and Reis, 2012; Furlow, 2010). Nonetheless, the need for organisations to make and promote such improvements is more pressing than ever, and companies remain keen to engage in green advertising (Furlow, 2010; Hartmann and Ibáñez, 2009).

Given the enduring importance of environmental concerns, and the credibility deficit that continues to plague green advertising (Finisterra do Paço and Reis, 2012; Oyedele and Dejong, 2013), the question of how to reduce consumer scepticism towards green claims is of central importance. In this respect, previous advertising research has considered the extent to which the credibility of advertising claims (hereafter, *claim credibility*) is influenced by various message characteristics. These include the *objectivity* of the claim (Darley and Smith, 1993; Ford, Smith and Swasy, 1990) and the degree to which it is *substantive* or *associative* in nature (Chan, 2000; Chan and Lau, 2004).

The aim of the current study is to extend this body of work by directly examining the impact of claim *specificity* on claim credibility, in the highly relevant context of green advertising. This is of theoretical, empirical and practical value for the following reasons. First, the specificity of the claim is conceptually distinct from other claim characteristics (such as objectivity and substantiveness), and is central to the reduction of consumer scepticism towards CSR advertising (Pomering and Johnson, 2009). Second, there has not yet been a sufficiently direct and rigorous empirical examination of the relationship between claim specificity and claim credibility; and thus the mechanism by which the former might be expected to enhance green advertising effectiveness (Davis, 1993; Tucker *et al.*, 2012). Third, the specificity of the claim is an aspect of creative strategy that practitioners can manipulate quickly, easily and at little additional cost. The paper begins by developing and broadening these arguments to form a theoretical foundation from which hypotheses are derived. The method by which these hypotheses were tested is then explained, prior to the presentation and discussion of results.

The importance of being credible

In line with other forms of advertising, the perceived credibility of the green advertisement is a key antecedent of attitudes towards the ad and the brand (Choi and Rifon, 2002; MacKenzie and Lutz, 1989; Tucker *et al.*, 2012). In turn, the credibility of an advertisement is the product of two factors: the perceived credibility of a) the source (e.g. endorsers, spokespersons, corporations or sponsors; Freiden, 1982; Goldsmith, Lafferty and Newell, 2000; Patzer, 1983), and b) the message content (Cotte, Coulter and Moore, 2005; Lutz, MacKenzie and Belch, 1983; McDougall and Fry, 1975; Wathen and Burkell, 2002). To the extent that the credibility of the claim influences the credibility of the advertisement (Lutz, MacKenzie and Belch, 1983), and thus consumer attitudes to the ad and the brand (MacKenzie and Lutz, 1989; Tucker *et al*., 2012), the question of how claim credibility might be ensured and enhanced is fundamental to the development of effective advertising.

The importance of being specific

It has been suggested that audience distrust can arise from a lack of clarity in green advertising (Kangun and Polonsky, 1995; Kilbourne, 1995). Similarly, Pomering and Johnson (2009) propose that high levels of consumer scepticism to CSR advertising (of which green advertising is an element) might be most effectively reduced by the provision of specific information about the issue, and the company's efforts to address it. The implication is that the credibility of green advertising claims can potentially be increased by the relatively simple manipulation of *claim specificity*; a variable that is entirely within the organisation's control and confers little or no additional cost. However, empirical evidence for this proposition remains scarce, equivocal and indirect, as will be explained below.

Davis (1993) defines *specific* advertising claims as those that outline meaningful benefits by way of detailed and useful information; as opposed to *vague* claims that imply benefits by way of abstract, general or ambiguous wording. He also presents initial empirical support for the proposition that specific green claims lead to more positive attitudes towards the advertiser and the product (which in this case was shampoo; Davis, 1993). Since then, however, little evidence has been presented to confirm, qualify or extend the findings of Davis (1993) in the context of green advertising. Indeed, the only study that has ostensibly sought to do so is that of Alniacik and Yilmaz (2012). However, these authors appear to conceptualise claim specificity as a product of the *strength* and *substantiveness* of the claim; which might explain why their results only "partially confirm the previous findings of Davis, 1993; Manrai *et al*., 1997; Chan, 2000 and Chan and Lau, 2004 on the superiority of specific (strong and substantive) environmental claims over vague claims" (Alniacik and Yilmaz, 2012: p. 218). Indeed, the extent to which these results reflect the particular impact of claim specificity is questionable; given that *specific* claims are theoretically distinct from *substantive* claims (as will be explained below), and are not by necessity *strong* claims. For example, Petty, Cacioppo and Schumann (1983: p. 139) set a strong claim for a razor ("in direct comparison tests, the Edge blade gave twice as many close shaves as its nearest competitor") against a weak claim for the same product ("in direct comparison tests, the Edge blade gave no more nicks or cuts than its competition"). Whilst the indication of superiority, rather than parity, makes the first of these claims stronger, there is no discernible difference in the *specificity* with which each is made. Indeed, both claims are equally vague in that there is no precise indication of what constitutes a close shave, the number of close shaves, nicks and cuts that were observed, or the product(s) with which comparisons were made. As such,

it is conceivable that the particular influence of claim specificity might be considerably obscured in the work of Alniacik and Yilmaz (2012).

Aside from the precision with which specificity has been conceptualised and manipulated, however, the relatively indirect nature of the dependent variables that have thus far been adopted is also an important issue. Whilst claim specificity might ultimately be expected to contribute to a change in attitude to the advertisement and the brand (Alniacik and Yilmaz, 2012; Davis, 1993), it is theoretically presumed to do so by enhancing the perceived credibility of the claim, and thus the ad (Lutz, MacKenzie and Belch, 1983; Pomering and Johnson, 2009; Tucker *et al.*, 2012). Given the previously noted importance of reducing consumer scepticism, and thus improving the credibility of green claims, the direct measurement of *claim credibility* would appear to constitute a more theoretically appropriate and methodologically sound means by which to assess the precise impact of claim specificity.

In the continued absence of direct empirical evidence for the enhanced credibility of *specific* (over vague) claims, it may be tempting to draw inferences about this from the apparent superiority of *objective* (over subjective) claims (Darley and Smith, 1993; Ford, Smith and Swasy, 1990), and of *substantive* (over associative) claims (Chan, 2000; Chan and Lau, 2004). However, it is important to acknowledge that specific claims are conceptually distinct from those that are objective and substantive. To explain: Objective claims describe tangible product features (that can be directly perceived and verified through the senses) by way of factual information derived from a standard scale (e.g. “our product weighs 24 pounds”; Darley and Smith, 1993; Ford, Smith and Swasy, 1990). Given that a key characteristic of objective claims is that they can be easily verified by consumers (Darley and Smith, 1993), this also implies access to an appropriate measurement tool (e.g. weighing scales), or clear

and reliable information from those that have the ability and opportunity to make such measurements. Objective claims are thus conceptually distinct from specific claims, which, in addition to tangible (product) factors and 'factual' information, might also be made with respect to relatively intangible or opaque process factors (e.g. "22% of the raw materials used in producing our products are recyclable"), and subjective opinion, where this concerns quite precise information about what the company *believes* to have occurred as a result of its actions (e.g. "we believe that by securing protected status for the part of the forest from which we source our materials, we have saved the habitat of over 100,000 animals"). In both of these cases, the claims are specific (in that they describe clear and meaningful benefits by way of detailed information; Davis, 1993), but not necessarily objective (in that the benefits described are extremely difficult, if not impossible, for consumers to verify by way of their senses or a standard, accessible scale). As such, the superiority of specific claims over vague claims cannot necessarily be inferred from previous reports of the superiority of objective information over subjective information.

Similarly, the *specific-vague* dichotomy is conceptually distinct from the *substantive-associative* dichotomy (Chan, 2000; Chan and Lau, 2004). The latter is derived from Carlson, Grove and Kangun's (1993) broader classification of green claims as being oriented to either the product (e.g. "this product is biodegradable"), the production process (e.g. "20% of the raw materials that were used in the manufacturing of this product are recycled"), the company's image (e.g. "we are committed to preserving the world's rainforests"), or environmental 'fact' (e.g. "the world's rainforests are being destroyed at the rate of two acres per second"). On this basis, Chan (2000) and Chan and Lau (2004) argue that product- and process-oriented claims may be categorised as "substantive", to the extent that they present concrete information about the way in which an organisation's activities and outputs benefit

the environment. By contrast, claims that are oriented towards company image or environmental fact may be categorised as "associative", because they are less tangible and not specifically concerned with *how* the company is helping to preserve the environment.

On the basis that both provide factual information about the environmental credentials of the product or the company (see Chan, 2000; Chan and Lau, 2004), it is possible to draw parallels between substantive and specific claims. However, there are also important distinctions between them. For example, product-oriented claims can be both specific (e.g. "every part of this product and its packaging will biodegrade fully within 5 years") and relatively vague (e.g. "this product is biodegradable"); both of which would be regarded as *substantive* claims by virtue of the classification above. Furthermore, to state that "the world's rainforests are being destroyed at the rate of two acres per second" is to provide specific information in a claim that is oriented towards environmental fact (Carlson, Grove and Kangun, 1993), and is thus *associative* in nature (Chan, 2000; Chan and Lau, 2004). It is of course possible for environmental claims to be both specific and substantive; particularly if the characterisation of specific green claims is refined to include only those that provide clear, concrete information about the environmental issue at stake and the actions the company is taking to address it (see Pomering and Johnson, 2009). Where this is not the case, however, results pertaining to the effectiveness of specific claims should be treated with considerable caution when they are founded on data that relate primarily to *substantive* claims.

In sum, evidence for the enhanced credibility of specific green claims (over vague ones) is scarce and indirect. Currently, it can only be inferred from studies that have manipulated

ostensibly similar (but conceptually distinct) characteristics of the message, or those that have measured broad attitudinal responses to the advertisement, the advertiser and the brand (within a single product category). To the best of the authors' knowledge, no study has yet sought to directly examine the mechanism by which claim specificity might ultimately be expected to improve the effectiveness of green advertising; i.e. by enhancing the perceived credibility of the claim (see Tucker *et al.*, 2012). The primary objective of this study, therefore, is to test the following hypothesis:

> *H1: Specific green advertising claims will be perceived as more credible than vague green advertising claims.*

The moderating influence of perceived environmental relevance

In the context of green advertising, however, Alniacik and Yilmaz (2012) suggest, quite reasonably, that the perceived *environmental relevance* of the product might be expected to moderate the influence of a claim's specificity on its perceived credibility. By environmental relevance is meant the association of the product or company with environmental problems, such as the excessive consumption of resources or the destruction of natural habitats (Alniacik and Yilmaz, 2012). All products and services have an impact on the environment during the processes of production and consumption, but some are perceived as more damaging than others (Kong and Zhang, 2014).

The moderating influence of this factor on the antecedents of claim credibility has understandably received little attention in generic advertising research, where the appeals in question have not necessarily been related to the natural environment (e.g. Darley and Smith,

1993; Ford, Smith and Swasy, 1990). Indeed, it does not appear to have been considered prior to the recent work of Alniacik and Yilmaz (2012); in which it is claimed that a more 'specific' green claim was found to improve the effectiveness of green advertising for a product with low environmental relevance (DVD player), but not for one with high environmental relevance (laundry machine). Whilst there is perhaps a logical coherence to the notion that any increase in credibility that is afforded by the specificity of the claim may be hindered by a belief that the product is inherently damaging to the environment, the degree to which it is validated by the results of Alniacik and Yilmaz (2012) is considerably limited by their conflation of claim specificity, strength and substantiveness (as previously discussed), and the inherent difficulties of generalising from a single-item study and a student sample. As such, the second objective of this study is to test the following hypothesis:

> *H2: The perceived environmental relevance of the product (high versus low) will moderate the degree to which the credibility of green claims is enhanced by their specificity.*

Method

A 2 x 2 mixed experimental design was adopted, with claim specificity (vague versus specific) as the between-group variable, product type (high versus low environmental impact) as the within-subjects variable, and claim extremity as a covariate (the necessity of which will be explained subsequently). A between-group analysis of the claim specificity effect was conducted to avoid the potentially confounding influence of participants having previously viewed a more (or less) specific claim for the same product.

Sample

Three hundred and thirteen adult participants were recruited from an online panel of 375,083 UK consumers, and randomly assigned to one of two treatment conditions (*specific claims* versus *vague claims*). Thirty-nine participants were excluded from the analysis (24 from the *vague claim*s group and 15 from the *specific claims* group) on the basis that they completed the study in an unusually short period of time and/or using a specific pattern of responses (see Ford, Smith and Swasy, 1990). Thus the sample for analysis comprised 274 participants: 141 in the *specific claims* condition and 133 in the *vague claims* condition. Of these, 61% were male and 39% female, and all were aged between 19 and 81 years old (M = 53). No significant demographic differences were apparent between the treatment groups.

Stimuli

Stimuli comprised 12 advertising claims (6 specific + 6 vague) for 6 products (3 high environmental relevance + 3 low environmental relevance; see Appendix 1). Product categories were pretested (n = 114) to ensure appropriate differences in the perceived environmental relevance of the products in each condition ($t(113) = 19.26$, $p < .01$) whilst minimising differences in familiarity, favourability and involvement (following Kong and Zhang, 2013).

Thirty eight green advertising claims (19 specific + 19 vague) were then created according to the guidelines provided by Davis (1993). Care was taken to ensure that specific claims were commonly characterised by their *specificity* rather than their reliance on objective information, or their entirely substantive nature (as previously discussed). To distinguish them from being entirely objective, the specific claims were framed in such way as to include information that was precise but also largely process-oriented (e.g. “our product requires 20% less energy to make”), very difficult for consumers to verify with a standard scale and

accessible instrument (e.g. “our product uses 74% less packaging than a bottle of the same size”), and accompanied by either subjective opinions (e.g. “there is nothing more important to mankind than the environment”) or subjective interpretations of the meaning and value of the stated ‘facts’ (e.g. “meaning that our product is *the* environmentally friendly choice”). The specific claims were also created in such a way as to be both substantive and associative in nature; e.g. “Clean energy that is great for the environment. The only high-performing battery that is totally free from toxic heavy metals and 98% recyclable. We are committed to caring for the environment by reducing landfill.” In this example, the specific claim is both *associative* (in that it is focussed on the importance of pollution as an environmental issue and the image of the company as environmentally caring) and *substantive* (in that it indicates how the company is reducing pollution and caring for the environment). Finally, the pairs of specific and vague claims created for each product were very similar in terms of length, features described, language and message style (see Abruzzini, 1967; Soley, 1986).

All 38 claims were pre-tested in random order (n = 185), and a pair of green advertising claims was selected for each product on the grounds that: a) each of the two claims was deemed to be appropriate and reasonable for use in advertisements, b) the differences observed in their perceived specificity were both substantively and statistically significant, and c) the differences observed in their perceived extremity were *not* substantively and statistically significant. This final factor was included on the understanding that claim extremity is a separate message characteristic that might have confounded the effects of claim specificity on claim credibility if it were not held constant between the two groups (see Manrai *et al.*, 1997). In order to avoid claim extremity also confounding the moderating influence of the products’ environmental relevance (H2) on the relationship between claim specificity and claim credibility (within each group), the researchers also sought to select

claims that were perceived (during pretesting) to be equally extreme across the two product types (i.e. low versus high environmental relevance). However, this was not possible without compromising the main manipulation of specificity within each claim pair. As such, a decision was made to measure perceived claim extremity in the main experiment, with a view to statistically controlling for any possible moderating influence it may exert (as a covariate) during analysis.

Procedure

The study was administered by way of a self-paced online experiment. In each treatment group (*specific* versus *vague claims*), participants were sequentially presented with 6 green advertising claims, each pertaining to a different product. For each item, the product was stated first, followed by the claim. The order in which the claims (and thus the products) were presented was randomised, and participants were required to evaluate the credibility of each claim before the next one was presented. This procedure was then repeated, with participants now required to evaluate the specificity and extremity of each claim. This repeated procedure approach was favoured over one in which participants were required to make multiple judgments (i.e. credibility, extremity and specificity) at the same time as a means of limiting common method variance (Podsakoff *et al.* 2003). Finally, participants were required to assess the environmental relevance of each of the six products.

Measures

Claim credibility was measured by way of a seven-point semantic differential scale, adapted from Beltramini and Evans (1985) and similar to that used by Tucker *et al.* (2012; where $\alpha = .93$). Two statements were used to assess perceived claim specificity, with responses

measured on a seven-point Likert scale. The scales used to measure the dependent and independent variables are detailed in Table 1. Seven-point Likert scales were also used to measure the perceived environmental impact of the product and the perceived extremity of the claim (following Tan, 2002).

Table 1: Measurement scales for dependent and independent variables

Construct	Question / Item	Answer scale
Claim Credibility	This advertising claim is…	unbelievable (1) - believable (7) untrustworthy (1) - trustworthy (7) not convincing (1) - convincing (7) not credible (1) - credible (7) unreasonable (1) - reasonable (7) dishonest (1) - honest (7) questionable (1) - unquestionable (7) inconclusive (1) - conclusive (7) not authentic (1) - authentic (7)
Claim Specificity	The advertising claim provides specific information. The information given in this advertising claim provides clear evidence of how the company has helped the environment.	Strongly agree (7) Agree (6) Somewhat agree (5) Neither agree, nor disagree (4) Somewhat disagree (3) Disagree (2) Strongly disagree (1)

Note: Scoring of the answers is shown in parentheses

Manipulation checks

A first manipulation check confirmed that, on aggregate, the specific claims (M = 4.84, SD = 1.11) were considered to be significantly more specific ($t(247.95) = 10.14$, $p < .001$) than the vague claims (M = 3.25, SD = 1.45). For each item (product), the specific claim was

considered to be significantly more specific than the vague claim (all $p < .001$). A second manipulation check confirmed that, on average, the group of high environmental relevance products (M = 5.24, SD = 1.30) were considered to have a significantly greater impact on the environment ($t(273) = 18.89$, $p < .001$) than the group of low environmental relevance products (M = 3.61, SD = 1.24). On a disaggregated level, the mean perceived environmental impact of each of the former was significantly higher than each of the latter (all $p < .001$). No significant difference in judgments of the products' environmental relevance were observed between the two treatment groups ($t(272) = -0.871$, $p > .05$). The manipulation of both *claim specificity* and *product environmental relevance* is thus deemed to have been successful.

Results

The means and standard deviations for perceived claim credibility ($\alpha = 0.97$) across all four experimental conditions are illustrated in Table 2.

Table 2: Perceived claim credibility in four experimental conditions

Environmental Relevance Condition	Claim Specificity Condition	Claim Credibility		N
		Means	SD	
High Environmental Relevance	Specific	4.65	1.03	141
	Vague	4.05	0.96	133
Low Environmental Relevance	Specific	5.06	1.03	141
	Vague	4.52	0.92	133

Overall, specific claims (M = 4.86, SD = 0.97) were considered to be significantly more credible ($p < .001$) than vague claims (M = 4.28, SD = 0.87), $t(272) = 5.142$, $r = .30$. At the disaggregated level, t-tests show that the specific claims were considered to be significantly

more credible ($p < .001$) than the vague claims for five of the six products (see Table 3). In line with pretest results, no significant ($t(272) = 0.852$, $p > .05$, $r = .05$) differences were apparent in the perceived extremity of specific (M = 4.11, SD = 1.08) and vague claims (M = 4.00, SD = 1.13). H1 is thus supported.

Table 3: Differences in the perceived credibility of specific and vague claims by product

Product Category	Claim Credibility Mean (SD)		Difference Means	T	Df	Sig. (2-tailed)
	Specific Claim	Vague Claim				
Battery	4.32 (1.47)	3.70 (1.27)	0.62	3.73	272	.000
Refrigerator	4.80 (1.17)	4.35 (1.05)	0.45	3.35	272	.001
Laundry detergent	4.83 (1.21)	4.10 (1.15)	0.73	5.16	272	.000
Toothpaste*	4.71 (1.42)	4.55 (1.14)	0.16	1.03	265.74	.304
Towel*	5.17 (1.20)	4.27 (1.04)	0.90	6.66	269.89	.000
Cereal	5.31 (1.21)	4.74 (1.09)	0.57	4.09	272	.000

Note: * Indicates that the assumption of homogeneity of variances (Levene's test) was violated. These results are, therefore, adjusted using the Welch-Satterthwaite method (Rovai, Baker and Ponton, 2014).

For both product types (i.e. those with high versus low environmental relevance), specific claims were perceived to be significantly more credible than vague claims ($t_{high\ impact}(272) = 4.997$, $p < .001$, $r = .29$); ($t_{low\ impact}(271.130) = 4.628$, $p < .001$, $r = .27$). The size of this effect hardly differed between the two conditions, suggesting that H2 is not supported. As previously noted, however, it was considered prudent to test the moderating influence of the product's environmental relevance on the relationship between claim specificity and claim credibility, whilst controlling for claim extremity (covariate). The results of a two-way ANCOVA show a significant main effect of claim specificity on participants' perceived credibility of the claim, after controlling for claim extremity ($F(1, 271) = 26.424$, $p < .001$,

r = .30), with specific claims (M = 4.86, SD = 0.97) considered to be significantly more credible than vague claims (M = 4.28, SD = 0.87). H1 is again supported. There was no interaction effect of claim specificity and perceived environmental impact on claim credibility, whilst controlling for claim extremity ($F(1, 271) = 0.521$, $p > .05$, $r = .04$). H2 is thus not supported. There was no main effect of claim extremity (covariate) on claim credibility ($F(1, 271) = 0.075$, $p > .05$, $r = .02$). In addition, and outside of specific hypothesis testing for this study, a main effect of the products' environmental relevance on claim credibility is noted, while controlling for claim extremity ($F(1, 271) = 5.031$, $p < .05$, $r = .14$). Green advertising claims were generally considered to be more credible for products that were deemed to have a low (M = 4.79, SD = 1.01) versus high level of environmental relevance (M = 4.35, SD = 1.04).

Discussion

In the context of green advertising, the findings of this study suggest that specific claims are more credible than vague claims. Furthermore, this effect is robust across a broad range of categories and is not influenced by the environmental relevance of the product. The primary theoretical implication of this paper is thus to establish claim specificity as a conceptually distinct construct and a key antecedent of claim credibility. More specifically, it provides empirical support for the related propositions in the literature that a) specific claims are more credible than vague claims (Davis, 1993), and b) scepticism towards social and environmental advertising claims can be effectively reduced, and thus the credibility of such claims increased, by the provision of specific (over abstract) information (Pomering and Johnson, 2009). On the assumption that the credibility of the claim influences the credibility of the advertisement, and consequently attitudes to the advertisement and the brand (Lutz, MacKenzie and Belch, 1983; Tucker *et al.*, 2012), the findings also support the conclusion

that increasing the specificity of the claim is a means by which to increase green advertising effectiveness.

Whilst independent and distinct, the impact of claim specificity on claim credibility is similar to that of objective (rather than subjective) information (Ford, Smith and Swasy, 1990; Holbrook, 1978), and of substantive (rather than associative) claims (Chan, 2000; Chan and Lau, 2004). However, the results of this study challenge the notion that increasing the specificity of the claim will only improve the effectiveness of green advertising for products that are deemed to be of low environmental relevance (Alniacik and Yilmaz, 2012); indicating instead that environmental relevance does not moderate the relationship between the specificity and credibility of a green claim. This discrepancy might be explained by the fact that the results of Alniacik and Yilmaz (2012: p. 218) pertain to the effect of "strong and substantive" claims - for a single and different item (product) in each condition - on attitudes to the ad and purchase intentions of university students (who may be more sensitive to environmental issues than the population at large; see Lee, 2008). By contrast, the current study employs a broad sample of consumers to specifically examine the impact of claim *specificity* on claim *credibility* for multiple items (products) that are replicated in each condition.

Implications for practice

In addition to other message characteristics (such as the degree to which it is objective and substantive), the findings of this study suggest that all companies should carefully consider the degree to which their green claims are specific; i.e. the extent to which they outline

meaningful benefits by way of detailed information (see Davis, 1993). This constitutes a distinct, influential, straightforward and cost-effective means by which to improve the perceived credibility of the claim, and thus the credibility and effectiveness of the advertisement.

Being specific might be reasonably expected to reduce the risk that (vague) green claims are interpreted as misleading or deceptive by environmental organisations and legal authorities (from which high levels of scrutiny are likely; Carlson, Grove and Kangun, 1993; Davis, 1991), and will thus protect the organisation from unnecessary censure. However, the results of this study suggest that the benefits of being specific extend beyond this defensive perspective. The United States Environmental Protection Agency has long advised consumers to be wary of vague terms (such as 'recyclable' and 'environmentally friendly'), and to actively look for specific information in green advertising claims (USEPA, 1992). For example, where the term "recycled" is used, consumers are advised to check whether this applies to the product, the packaging or both; whether it applies to pre-consumption (i.e. manufacturing) *and* post-consumption waste; *how much* of this is recycled; and from where it is collected (USEPA, 1992). The current findings show that practitioners can expect to gain significant improvements in the perceived credibility of their green claims, and thus the effectiveness of their advertising, by developing claims that provide just such precise and meaningful information. Being specific in green advertising is thus in the direct interests of not just consumers and those tasked with their protection, but also of companies seeking to promote their environmental credentials. Furthermore, to the extent that the credibility advantage of specific green claims is robust to variations in the perceived environmental relevance of the product, practitioners should consider this implication to apply broadly across categories and industries.

Alongside the implications for creative strategy, this study may also be seen to have implications for the selection and integration of media channels. For example, green claims might be expected to be more credible when they are delivered via channels that best lend themselves to the provision of detailed and meaningful information (e.g. print, online). Similarly, close integration of creative ad executions with the company's online platforms (e.g. via the embedding of QR codes) may facilitate access to the kind of specific and detailed information that consumers are encouraged to seek (by, for example, USEPA), and which can be expected to increase the perceived credibility of green advertising claims.

Finally, the results of this study also imply that measures of claim specificity and claim credibility should be included in copy testing research, and both pre- and post-campaign research. Whilst theoretical definitions of specificity (e.g. Davis, 1993) can be used to guide the design of the advertisement, the specificity of any particular claim is ultimately determined by the observer. Measuring these perceptions amongst the target audience will provide important and immediately actionable information that can be used to maximise the perceived specificity of the claim, and thus its perceived credibility.

Limitations and further research

Whilst this study serves to extend the current literature on message characteristics, it is necessarily restricted in scope. In order to isolate the effect of claim specificity on judgements of claim credibility, participants were exposed to green claims in isolation from other elements of the advertisement. Examining the interactive effects of specific (versus vague) green claims and other aspects of the creative execution might thus constitute a useful direction for future research. Further to this, and in line with the extant literature, the current

work has retained a focus on *product* advertising. An interesting and appropriate avenue for further research would thus be to extend this work to corporate environmental advertising. Finally, whilst it was not the aim of this study to examine the separate question of how green claim credibility is directly influenced by the perceived environmental relevance of the product, an indication of this emerges as a by-product of the analytical approach adopted. Whilst these supplementary results pertain to a novel dependent variable (claim credibility), they would appear to run contrary to those of Kong and Zhang (2014); who draw the conclusion that green appeals will exert a greater impact on *attitudes to the ad* and *purchase intentions* when they relate to products with a *high* environmental impact. By contrast, the perceived *credibility* of green advertising claims in the current study is significantly higher for products that have a *low* environmental impact. Beyond the difference in dependent variables, other methodological factors might also contribute to this apparent discrepancy. For example, Kong and Zhang (2014) employed a relatively small student sample to study the effect of green appeals for one product of each type. By contrast, the current study adopts a broad sample of consumers to study the effects of green appeals across a range of high and low impact products. However, the possibility of different theoretical explanations for the results of these two studies should not necessarily be discounted. Whilst it is beyond the scope of this study to undertake a full theoretical and empirical examination of the potentially complex relationships between the perceived environmental impact of the product and the credibility, effects and effectiveness of green advertising, it emerges as an interesting direction for future research.

Conclusion

In conclusion, this study establishes claim specificity as a conceptually distinct message characteristic that directly influences the perceived credibility of green advertising claims. In short, being specific increases the credibility of green advertising claims. This effect is found to be robust across a range of product categories, and is not moderated by the environmental relevance of the product. Improving the specificity of green advertising claims thus constitutes a broadly applicable, actionable and effective method of enhancing their perceived credibility.

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Appendix 1 Claim pairs used in the experiment

Product Category	Specific Claim	Vague Claim
Battery	Clean energy that is great for the environment. The only high-performing battery that is totally free from toxic heavy metals and 98% recyclable. We are committed to caring for the environment by reducing landfill.	Clean energy that is great for the environment. The only high-performing battery that is genuinely kind to the planet. We are committed to caring for the environment.
Refrigerator	Made from 20% recyclable material, and using a full 26% less energy than the standard government guideline, this refrigerator goes the extra mile to reduce damage to the environment.	This refrigerator goes the extra mile to achieve a level of energy efficiency that reduces damage to the environment.
Laundry detergent	Strong on clothes and easy on the environment. Using energy efficient production and distribution, and 74% less packaging than a bottle of the same size, our 500ml laundry detergent pouch is the environmentally friendly choice.	Strong on clothes and easy on the environment. Our 500ml laundry detergent pouch is the environmentally friendly choice.

Toothpaste	Our toothpaste now comes in sustainable and environmentally friendly tubes. Using recycled water bottles and 100% recycled paperboard, this new packaging saves energy, reduces air pollution, and lessens landfill.	Our toothpaste now comes in sustainable and environmentally friendly packaging.
Towel	There is nothing more important to mankind than the environment. Our environmentally friendly towels are produced using 100% organic cotton and no harsh chemicals or toxic dyes.	There is nothing more important to mankind than the environment. Our towels are produced in an environmentally friendly way.
Cereal	Taking care of the environment is central to our future. Our new cereal boxes are made from 100% recycled paperboard, and reduce waste by using 10% less packaging.	Taking care of the environment is central to our future. Our new cereal boxes are more environmentally friendly.