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ARTICLES

The Synergy in Green Persuasion: Green Celebrity Endorsers in Green Advertising: A Study of Brand-Endorser Congruence Effects in Green Advertising

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ABSTRACT. This study examines celebrity endorser-brand congruence effects in green advertising on the ads' effectiveness. In an experimental survey, Dutch participants (197) saw ads with a congruent or incongruent celebrity endorser. Extending the match-up hypothesis to a novel match-up factor, greenness, the results show that pro-environmental celebrity endorsers yield more favourable attitudes towards the ad, the brand, and purchase intentions compared to non-green celebrity endorsers. Practitioners can enhance endorser selection and branding strategies for green brand products by using green celebrity endorsers. Pro-environmental celebrity endorsement reaches a wide share of consumers, thus paving the way to more eco-conscious consumerism.

KEYWORDS. Celebrity endorsement, green advertising, brand congruence, match-up hypothesis, environmental concern, ad attitude, brand attitude, purchase intention.

INTRODUCTION

Imagine you want to buy a green, eco-friendly and sustainably produced product. At the store, you find one product advertised by Julia Roberts, and a comparable one by Paris Hilton. Would you choose the product advertised by Roberts, known for her pro-environmental conduct, or would you select Hilton's endorsed product, despite her lack of green publicity? Celebrity endorsement is a

popular marketing strategy, yet research has not assessed if star endorsers with an environmental image improve green ads' effectiveness. This study examines whether green advertising benefits from pro-environmental celebrity endorsers, and whether consumers' environmental concern moderates the relationship. With a globally expanding green industry, marketing increasingly more green products has generated a cluttered ad environment, calling for new, efficient ad strategies. In

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2020, the international green business sector shall reach a value of 3.2 trillion Euros, thus offering eco-friendlier product choices, business prospects, and trending to a pro-environmental industry and consumer culture (Berger, 2010). Green products are available in technology, cosmetics, fashion, and foods (Lee & Park, 2013; Winge, 2008). Green consumerism, preferring “environmentally friendly products” (Matthes & Wonneberger, 2014, p.116) grows as more people desire products for personal wellbeing, or become aware of their consumption’s environmental impact (Green & Peloza, 2014; Lee & Park, 2013). Marketers, always eager to fulfill customer needs, can establish new markets, build brand images, or boost corporate repute by going green (Banerjee, Gulas, & Iyer, 1995; Lee & Park, 2013). Green goods thus face annual increases of up to 73% (TerraChoice, 2010), and require marketing to sell. Consumers expect companies to provide respective product information in ads (Kong & Zhang, 2013). Thus, green advertising, promoting products with environmental qualities, keeps rising (Atkinson & Rosenthal, 2014): Green ads have decupled since the 1990s, and tripled from 2006 until 2013, leading to a cluttered ad environment and reduced ad effectiveness (Kong & Zhang, 2013). To overcome the clutter, marketers of green brands need new, attention-getting strategies. A suggested but still non-investigated strategy is the use of celebrity endorsers in green ads (Atkinson & Rosenthal, 2014; Lee & Park, 2013; Minton & Rose, 1997). A celebrity endorser is a public figure aiming to transmit their image onto brands through advertising (Lee & Thorson, 2008). Celebrity endorsement is such a profitable strategy that a quarter of all ads use it today (Spry, Pappu & Cornwell, 2011). Principally, stars break the clutter due to their entertainment value, and due to the audience’s star fascination, identification, and familiarity (Erdogan, 1999; Fleck, Korchia & Le Roy, 2012). Using star endorsers in green ads may

thus overcome the clutter. Yet, selecting a suitable star can determine an ad’s success or failure. The key is congruence: The brand and endorser have to make sense as an entity (Keel & Natarajan, 2012; Stafford, Stafford, & Day, 2002). To illustrate, studies show athletic celebrities are the most effective endorsers for sports products (Lee & Thorson, 2008), while attractive stars are the most persuasive for beauty products (Kamins, 1990; Till & Busler, 2000). Not every celebrity is thus suited for all types of endorsements. Matching relevant traits creates congruence, which yields positive brand (Hung, 2014) and ad attitudes, as well as purchase intent (Fleck et al., 2012). Applied to green advertising, if an endorser shares a brand’s green image, the crafted congruence may amplify the product’s selling point: its environmental value (Kong & Zhang, 2013). To create a green brand image, the endorser should thus have a pro-environmental image (Minton & Rose, 1997). An eco-celebrity—a star using fame for green purposes, promoting green values, consumption, or causes (Alexander, 2013; Winge, 2008)—may be the most congruent endorser choice for green goods. Research suggested, but did not empirically assess, stars like Cate Blanchett or Harrison Ford as prime endorsers for green products, due to their environmental activities and publicity (Kong & Zhang, 2013; Spry et al., 2011). Testing the impact of stars’ green image in green ads, this study employs an eco- and a non-green star, meaning a celebrity with a lacking green image. Though endorser selection is crucial, marketers must consider consumer traits (Erdogan, Baker, & Tagg, 2001). Green consumerism grew with people’s rising environmental concern, and according to an individual’s level of involvement with the environment (Kong & Zhang, 2013). Environmentally concerned and unconcerned consumers are henceforth also called green and non-green consumers. Most green ad strategies work best on green consumers, since they actively use provided ad

information (Atkinson & Rosenthal, 2014; Matthes & Wonneberger, 2014). Clearly, not every consumer is truly green, yet society needs a greener, sustainable consumer culture (Alexander, 2013; Kong & Zhang, 2013).

Besides, with the thriving green industry (Berger, 2010), practitioners require ad strategies that appeal to consumers of any environmental concern. Star endorsers may succeed, as they are entertaining, attention-grasping, and can encourage green behaviours (Alexander, 2013; Minton & Rose, 1997), yet by looking at green ads more attentively, green consumers may study a celebrity's brand suitability more critically, while non-green consumers may fail to do so. This study firstly strives to determine if green ads profit from green celebrity endorsers. Secondly, it assesses if environmental concern amplifies ad effects. The study sheds light on green ads' potential to create a greener consumer culture, as well as stars' potential to reach green and non-green consumers. Investigating the subject further may thus be of particular relevance to industries with a growing green business sector. Respectively, practitioners can exploit the knowledge obtained from this research to improve green branding and endorser selection strategies. This study broadens congruence research to the green ad realm, assessing if a green endorser-brand match creates synergy effects, and thus persuasion. Hence, the goal of this study is to assess how a green celebrity endorser affects ad effects, compared to a non-green endorser, and if a person's environmental concern moderates this relationship, to thus establish the potency of using green star endorsers for green brand products.

THEORETICAL FRAMEWORK

The Match-up Effects of Endorser-Brand Congruence in Green Advertising

Advertising research regularly assesses the underlying mechanisms of effective endorser-

brand combinations with the match-up hypothesis (Erdogan, 1999; Fleck et al., 2012; Lee & Thorson, 2008; Kamins, 1990; Kamins & Gupta, 1994; Till & Busler, 2000; Törn, 2012). The match-up hypothesis stipulates that advertising effectiveness and persuasiveness can be increased if the endorser and brand are congruent (Erdogan et al., 2001; Lee & Thorson, 2008; Stafford et al., 2002). Congruence describes the deliberate fit, match-up, or consistency of characteristics or images relevant to and shared by the star and the brand (Erdogan, 1999; Fleck et al., 2012; Keel & Natarajan, 2012; Törn, 2012). A congruent match evokes favourable effects, since the ad, brand, and endorser obtain greater credibility and trust (Erdogan et al., 2001; Keel & Natarajan, 2012). An underlying mechanism is that congruence induces affect transfer, the transmission of positive valuations from one object (the celebrity) onto another (the brand), based on shared associations (Lee & Thorson, 2008; Spry et al., 2011). Favourable congruence responses result from the perceived consistency of meaning conveyed by the brand and the endorser as an entity (Erdogan, 1999), and resultant enhanced ad understanding (Törn, 2012). Reversely, in a mismatch, brand and endorser obtain negative or less favourable effects, as incongruence hinders credibility, trust, and affect transfer (Lee & Thorson, 2008; Törn, 2012). Consumers cannot solve the cognitive dissonance, the mental struggle that arises while attempting to resolve an illogical brand-endorser match (Lee & Thorson, 2008). A non-sense making match creates irritation and negative ad attitudes, and it diminishes purchase intent (Erdogan et al., 2001; Farhat & Khan, 2011; Lee & Thorson, 2008). Prior research gauged green ad effectiveness with the ad and brand attitude, and with purchase intent (Kong & Zhang, 2013). This research employs all three.

The match-up hypothesis postulates that congruence and ad effects can be enhanced if endorser and brand are paired by a predomi-

nant, overlapping image factor. Most frequently examined match-up factors comprise the three items of Ohanian's endorser credibility scale: physical attractiveness; expertise, the endorser's "knowledge, experience, or skills" in the ad, brand, and product context; and lastly trustworthiness, how much honesty, credibility, and integrity the endorser is seen as having (Erdogan, 1999, p. 298). In practice, the match-up hypothesis obtained mixed results. On the one hand, previous research found that congruence generates a range of positive consumer reactions (Erdogan et al., 2001; Farhat & Khan, 2011; Fleck et al., 2012; Kamins & Gupta, 1994; Lynch & Schuler, 1994; Till & Busler, 2000). Congruence is the most effective strategy for novel, unfamiliar brands because stars can add, change, and shape meaning to build a desired brand image (Erdogan et al., 2001; Törn, 2012). On the other hand, Fleck, Korchia, and Le Roy (2012) demonstrated that congruence positively affects the attitude toward the ad and purchase intention, yet not necessarily brand attitude. Till and Busler (2000), in contrast, found that congruence affected purchase intent, and brand attitude in particular.

Ohanian's endorser aspects, however, do not do justice to the complex, multi-layer star image. Due to media presence, personal and professional activities, or publicity, stars' images change over time (Alexander, 2013; Erdogan, 1999; Till & Shimp, 1998). Hence, celebrities can actively obtain multiple meanings, such as being politically or environmentally active, and these reputations can be marketed (Alexander, 2013). Stars in turn function as highly communicative, human brands (Alexander, 2013). Researchers thus cautioned star images go far beyond beauty and expertise, and advocated expanding the match-up hypothesis to the entirety of the star image (Erdogan et al., 2001; Lee & Thorson, 2008; Törn, 2012). Exemplifying this, Lynch and Schuler (1994) showed an endorser's gender could convey, e.g., a masculine brand

image. Ryu, Park, and Feick (2006) studied the effects of endorsers' ethnicity on product image and appeal, while Alexander (2013) illustrated the multi-faceted star image with eco-celebrity Ian Somerhalder. His ecological conduct defines him as a green human brand. For green ads, this image could be an essential, credibility-adding selling point. Hence, this research proposes extending the match-up hypothesis by probing congruence effects in green advertising with a novel match-up factor: an environmental image shared by brand and endorser, hereafter also termed greenness.

Using a star's distinct characteristics diversifies branding prospects. Törn (2012) suggested integrating new traits into a brand's image using a match-up or co-branding strategy (Keel & Natarajan, 2012). Co-branding, a concept related to congruence, means matching a product brand to a human brand; in this strategic partnership, two brands promote one product with united efforts (Keel & Natarajan, 2012). Co-branding facilitates spill-over effects, so that a star's image is mentally associated to the brand (Keel & Natarajan, 2012). An effectively matched endorser-brand pair or co-branding strategy can create synergy effects (Simmers, Damron-Martinez & Haytko, 2009): The product and the human brand share a pro-environmental image. By pairing them, endorser and brand greenness is emphasised, which should enhance the ad's communicative power, brand image, and product selling point, as well as the celebrity's image as an eco-conscious persona (Alexander, 2013). Both profit from the endorsement, because the match purposefully amplifies both the celebrity's and the brand's green image, which should create favourable ad effects, credibility, trust, and affect transfer (Lee & Thorson, 2008).

Pairing a celebrity-brand with a product-brand based on one salient match-up factor constitutes a co-branding strategy (Keel & Natarajan, 2012). Matching a green human brand with a green product brand should con-

stitute a green co-branding strategy. No green advertising congruence research, nor an assessment of the match-up factor greenness has been conducted so far. Based on match-up mechanisms, it is assumed that a green celebrity endorser returns more positive ad effects than a non-green star endorser in green advertising.

H1: In green advertising, a congruent endorser-brand match (= co-branding: green celebrity & green brand) will generate a more positive a) attitude toward the ad, b) attitude toward the brand, and c) purchase intention, than an incongruent endorser-brand match (= mismatch: non-green celebrity & green brand).

The Moderating Role of Environmental Concern

With varying degrees of environmental concern, a predictor of green consumer behaviour, green advertising is not equally relevant to all consumers (Kong & Zhang, 2013; Matthes & Wonneberger, 2014). Consistent with prior studies, environmental concern is conceptualized as green involvement (Banerjee et al., 1995; Matthes & Wonneberger, 2014; Souza & Taghian, 2005). In the past, more involved consumers trusted green ads and developed positive ad and brand attitudes (Matthes & Wonneberger, 2014). However, mixed results were obtained for consumers' willingness to buy green products. Minton and Rose (1997) found stronger purchase intent among environmentally concerned consumers. Other studies concluded that although green consumers hold positive attitudes, they often fail to turn these into green buying intention, a phenomenon known as the "attitude-intention gap" in green consumerism (Atkinson & Rosenthal, 2014, p. 41; Kong and Zhang, 2013). Nonetheless, exposure to an environmental celebrity advertising a green brand may stimulate purchase intent. Green ads

contain cognitive and affective benefits for green consumers, including informational value and reassuring a green identity, explaining why they are more motivated to attend to green ads than non-green consumers (Matthes & Wonneberger, 2014; Souza & Taghian, 2005).

Involvement determines how consumers process ad information, which is explained by the Elaboration Likelihood Model (ELM) (Erdogan, 1999). The ELM posits that high involvement consumers process ad content centrally, responding to cognitive cues like compelling arguments (Atkinson & Rosenthal, 2014; Hung, 2014). Low involvement consumers process ad content peripherally, reacting to affective cues such as celebrities (Erdogan, 1999; Hung, 2014). The green ad-processing route might thus depend on consumers' green involvement. Green involvement may thus govern consumers' intensity of comparing the brand-endorser match, which may lead to differing congruence evaluations. Schema congruity, concerned with consumer memory, explains how the endorser and brand are assessed as a unit: Over time, consumers obtain masses of information, which is classified into coherent schemas or categories, to make sense of one's environment and manage cognitive efforts (Lee & Thorson, 2008). Exposed to ads, consumers create brand associations, but if changes occur, e.g., through endorsements, they assess the fit of endorser and brand schemas anew (Törn, 2012). Congruent schemas result in affect transfer, whereas incongruent schemas result in cognitive dissonance, low ad understanding, and no affect transfer (Lee & Thorson, 2008). A green celebrity endorsing a green brand comprises a congruent schema. A non-green celebrity advertising a green brand constitutes an incongruent schema.

If environmental concern regulates ad processing, green consumers might scrutinize the endorser-brand match more critically, while non-green consumers may process ads super-

ficially. The more involved, the likelier becomes central processing, including not only logos and arguments, but also celebrities (Atkinson & Rosenthal, 2014; Hung, 2014). The star is a green ad cue whose image is centrally assessed within the ad context (Hung, 2014). Congruent schemas raise credibility, affect is transferred, resulting in positive ad effects (Lee & Thorson, 2008). Incongruent schemas cause cognitive dissonance, hindering credibility, affect transfer, and ad understanding (Lee & Thorson, 2008). Green consumers may even feel deceived, presuming the brand engages in *greenwashing*, promoting allegedly green products with “false and misleading environmental claims” (TerraChoice, 2010, p. 5). By intensifying positive reactions to a match and negative reactions to a mismatch, environmental concern is assumed to moderate effects among green consumers.

Less involved consumers are enticed by emotional appeals (Minton & Rose, 1997). Green ads are peripherally processed, as they are less relevant to this consumer (Atkinson & Rosenthal, 2014). Yet, celebrity endorsement is an affect-based strategy, with the capacity to attract those usually not interested in green ads (Alexander, 2013; Minton & Rose, 1997). Superficially processing, consumers may only react to the affective cue, appreciate the use of a familiar star, but not scrutinize their suitability as an endorser (Erdogan, 1999; Minton & Rose, 1997). Failing to critically assess whether or not the star fits in the ad and brand context, non-involved consumers may be oblivious to a co-branding or a mismatch strategy. Hence, they may see either ad positively or neutrally: If the star is likable, positive attitudes may arise. A disliked celebrity may only trigger neutral attitudes, as green ads are less relevant to this consumer (Matthes & Wonneberger, 2014).

H2: Environmental concern will moderate the endorser-brand congruence effect. Specifically, the effects of endorser-brand

congruence on a) ad attitude, b) brand attitude, and c) purchase intention will be stronger for environmentally concerned than unconcerned consumers.

METHOD

Study Description

The study employed a cross-sectional, between-subjects experimental survey design. Respondents were randomly assigned to one of two experimental conditions. This facilitates comparing experimental groups, who are exposed to the same questions, yet likely to differ in responses due to systematically manipulated stimuli (Bryman, 2012). Congruence was manipulated, and environmental concern was measured.

Pre-Tests

The study examines celebrity endorsers with differing green images: a pro-environmental celebrity endorser in contrast to a non-environmentally affiliated star endorser. Prior to ad development, celebrity, brand and product choices required pre-testing for stimulus materials.

Stimulus Materials

In collaboration with a graphic designer from Berlin, Germany, a digital colour print ad was created and systematically manipulated into two versions. Both ads contain identical design and content features, including several green cues, like the colour scheme, an eco-label (Atkinson & Rosenthal, 2014), the fictitious brand name *Naturalux* (Lee & Thorson, 2008; Till & Busler, 2000), and copy regarding product qualities and brand values (Atkinson & Rosenthal, 2014; Lee & Park, 2013). The ads' only difference was the endorser to ascribe differing effects to this manipulation.

Gwyneth Paltrow was the congruent and Lindsay Lohan the incongruent endorser.

Endorser Pre-Tests. A qualitative pre-test ($N = 21$) prompted respondents to list stars with a green, and a non-green image. Based on eco-celebrity research, a respective conceptualization was provided (Alexander, 2013; Winge, 2008). The five most often mentioned 25 green and 33 non-green stars were assessed in a quantitative pre-test ($N = 32$). Adapted from Lee and Thorson (2008), celebrity familiarity, recall of previous endorsements (Kamins & Gupta, 1994), match-up factor “greenness,” and endorser favourableness (Lee & Thorson, 2008) were gauged on 7-point bipolar semantic scales. Paltrow was perceived as green ($M = 5.31$, $SD = 1.53$), quite favourable ($M = 4.84$, $SD = 1.57$), well known ($M = 5.44$, $SD = 1.95$), and remembered for some prior advertising activities ($M = 3.69$, $SD = 1.55$). Lohan, in turn, was seen as non-green ($M = 1.75$, $SD = 1.34$), neutrally favourable ($M = 3.63$, $SD = 1.29$), well known ($M = 5.5$, $SD = 1.56$), and recalled for a similar amount of advertising activities ($M = 3.06$,

$SD = 1.7$). Neither celebrity should thus induce an affective halo effect, a consumer being smitten with a star so much that they consider them suitable for any endorsement (Fleck et al., 2012). However, positive congruence effects may result from a greater likeability of the green star (Fleck et al., 2012; Lee & Thorson, 2008). Since both stars are female actresses, neither endorser gender nor profession should interfere with the analysis (Goldsmith et al., 2012; Lynch & Schuler, 1994; Stafford et al., 2002).

Product-Endorser Pre-Tests. Since products have gender meaning, a feminine product was required for ad construction. Since furniture and home décor have a feminine image (Lynch & Schuler, 1994), and the TerraChoice report (2010) testified to a growing trend of green products for the home, the study investigates green home products. With a green product conceptualization, the qualitative pre-test ($N = 10$) generated ten products, including furniture made from plastic bottles, an interior solar lamp, and a water-saving showerhead.

Congruence: Gwyneth Paltrow

Natura LUX
Green light for a brighter future

NaturaLUX offers inspiring designs to bring natural light into your home. We believe in sustainability and providing solutions to reduce and redirect today's energy consumption - using home solar technology.

Cost-efficient, cordless, durable, and partially recyclable light source.
Lamp stand: 100% recycled plastic. Solar panel: 60% recycled batteries.
Uses limitless, clean and free energy from the sun.

www.naturalux.com

Incongruence: Lindsay Lohan

Natura LUX
Green light for a brighter future

NaturaLUX offers inspiring designs to bring natural light into your home. We believe in sustainability and providing solutions to reduce and redirect today's energy consumption - using home solar technology.

Cost-efficient, cordless, durable, and partially recyclable light source.
Lamp stand: 100% recycled plastic. Solar panel: 60% recycled batteries.
Uses limitless, clean and free energy from the sun.

www.naturalux.com

They were pre-tested ($N = 25$) on two 7-point bipolar semantic scales: perceived greenness and favourableness.

Additionally, respondents indicated if they envisioned the product advertised by a man or a woman. The solar lamp was considered as the greenest product ($M = 6.08$, $SD = 1.51$), likeable ($M = 5.16$, $SD = 1.34$), and envisioned by 80 per cent ($N = 20$) with a female endorser.

Brand Name. A strategy was required to ascribe effects to the endorser, not the brand. This research employed a fictitious brand name to avoid brand familiarity, attitude, and experience effects (Lee & Thorson, 2008; Till & Busler, 2000). Conforming to prior studies, a brand name was created (Lee & Thorson, 2008; Stafford et al., 2002). For the solar lamp using sun energy, the words nature and the Latin word for light were merged: *Naturalux*.

Sample

A Dutch sample was recruited from the 3rd until the 23rd of December 2014. The national homogenous sample was employed to avoid cultural differences. Moreover, due to American media exposure and international television broadcasts, the Dutch should be familiar with American stars and have a high level of English language proficiency (De Houwer & Wilton, 2011). Also, according to the *Green growth in the Netherlands 2012* report by CBS - *Statistics Netherlands*, the Dutch continue establishing a greener economy, industry, and society (Baldé, Klein, van Leeuwen, Schenau, & Verberk, 2013). This is evidenced by surging environmental protection policies, 1.7 % of the population working in the green sector in 2011, continuing green product patents, and expanding environmental investments (Baldé et al., 2013). Hence, the Dutch should be an insightful study population for assessing celebrity endorsement effects in green advertising. Participants were recruited, firstly, via

Facebook, in the Dutch Facebook group “Respondenten gezocht,” and subsequent snowball sampling. Secondly, three contacts of the researcher distributed the survey to their Dutch organizational network. Lastly, Dutch respondents were approached at the university campus. This makes it a convenience sample, which may, however, lack external validity (Bryman, 2012). No incentives were given.

Procedure

Participants were randomly assigned to the co-branded or mismatched ad. After seeing a large-scale ad version, a smaller version was shown while answering questions on dependent measures. When evaluating congruence after, ads were no longer visible. Four randomized endorser scales followed: greenness, expertise, trust, and attractiveness. A randomized multiple-choice celebrity test then ensured respondents recognized the star in the ad. Kate Hudson, blond as Paltrow, and Emma Stone, red haired like Lohan, were added. As all are female actresses, Hudson and Stone were suitable additions for the manipulation check (Stafford et al., 2002). Choosing the wrong star resulted in exclusion from research. Environmental concern questions were posed at the end, to not prime respondents when valuing congruence and ad measures.

Measures

Questions were based on existing scales except for four 1-item endorser scales. Prior research validated single-item scales equally as suitable as multiple-item scales, as they benefit research by inhibiting early survey fatigue (Gardner, Cummings, Dunham, & Pierce, 1998).

Endorser-Brand Congruence. This independent variable measured suitability perceptions of a star for brand endorsement (Erdoğan, 1999; Fleck et al., 2012). A three-item

scale by Keller and Aaker was employed (Spry et al., 2011), which asked: "Please indicate how suitable you think the person in this advertisement is for advertising *Naturalux*." Measured on 7-point Likert scales (1 = strongly disagree, 7 = strongly agree), respondents indicated if they thought the endorser-brand match was a bad or good fit, how logical, and how appropriate it was for the person to advertise (Spry et al., 2011). In principal component analysis, all items loaded onto one factor ($EV = 2.7$, $R^2 = .90$). The scale thus effectively measured congruence ($\alpha = 0.95$).

Scales of dependent measures were all adapted from Kong and Zhang's (2013) green ad research. It is assumed ad and brand attitudes, as well as purchase intent are directly affected by congruence. On 7-point semantic scales, 1 reflects negative and 7 positive attitudes.

Attitude towards the Ad. This concept measured opinions toward the ad with a homonymous scale. Respondents were asked: "What do you think about the advertisement? Please indicate on the provided scales." Three scales gauged if the ad was good or bad, pleasant or unpleasant, and favourable or unfavourable. Principal component analysis confirmed the concept's reliable measurement ($EV = 2.60$; $R^2 = .87$; $\alpha = 0.92$).

Attitude towards the Brand. This concept assessed respondents' opinions towards the brand. Respondents were asked: "How do you feel about the brand? Please indicate on the provided scales." The scales comprised three items: negative or positive, bad or good, and lastly unfavourable or favourable. Principal component analysis confirmed the concept's reliable measurement ($EV = 2.74$; $R^2 = .91$; $\alpha = 0.95$).

Purchase Intention. Validated by Yoon, Bolls and Lang in 1998, and further validated by Kong and Zhang (2013), this concept assesses the willingness to buy a product (Kong & Zhang, 2013). The subsequent question was posed: "If you were in the market for a

home solar lamp, how likely is it that you would choose *Naturalux*?" (Kong & Zhang, 2013, p. 435). Respondents evaluated if it was unlikely or likely, improbable or probable, and impossible or possible for them to buy. The bipolar items were reverse coded, so all measures in this study are consistent: Low scores signify the scale's negative, while high scores signify the scale's positive end. Principal component analysis confirmed reliable concept measurement ($EV = 2.73$; $R^2 = .91$; $\alpha = 0.95$).

Environmental Concern. A person's environmental concern was measured using a scale by Schuhwerk and Lefkoff-Hagius in 1995, validated by Matthes and Wonneberger (2014). Respondents rated three statements on 7-point Likert scales (1 = strongly disagree, 7 = strongly agree). Firstly, "I am concerned about the environment." Secondly, "The condition of the environment affects the quality of my life," and lastly, "I am willing to make sacrifices to protect the environment" (Matthes & Wonneberger, 2014). Principal component analysis confirmed consistent, reliable concept measurement ($EV = 2.58$; $R^2 = .86$, $\alpha = 0.92$).

Control Variables. Age, gender, nationality, income, education, and English language proficiency were used to assess group differences.

Manipulation Checks

One question block investigated endorser characteristics in order to ascribe effects to different degrees of greenness, rather than other endorser aspects (Fleck et al., 2012; Till & Busler, 2000). In addition to greenness, and to avoid priming about the research subject, three 1-item scales adapted from Ohanian's endorser credibility scale were added: attractiveness, expertise, and trust (Erdogan, 1999; Till & Busler, 2000). All were measured on 7-point bipolar semantic scales, with 1 being the negative and 7 the positive end. Respond-

ents were asked: “Please indicate if you perceive the celebrity in the ads as”: not at all or very attractive, not at all or very trustworthy, not at all or very qualified, and lastly, not at all or very green. These items were randomized.

To make valid inferences, it was tested if the stimuli’s manipulation of congruence and greenness was successful. Respective *t*-tests found endorsers differed significantly in congruence, $t(195) = 15.59$, $p = .000$, 95% CI [2.37, 3.06], and greenness, $t(195) = 14.49$, $p = .000$, 95% CI [2.61, 3.44]. Illustrated in ta-

ble I, Paltrow was seen as congruent and green, while Lohan was seen as incongruent and non-green. The experimental manipulation was successful. Congruence was recoded to create the two experimental groups (congruence = 1, incongruence = 0). Controlling for alternative explanations, *t*-tests of endorser traits revealed significant differences in perceived expertise, $t(195) = 9.1$, $p = .000$, 95% CI [1.57, 2.43], trust, $t(195) = 14.71$, $p = .000$, 95% CI [2.39, 3.13], and attractiveness, $t(195) = 6.06$, $p = .000$, 95% CI [0.73, 1.44].

Table 1. Perceived Endorser Congruence, Greenness & Endorser Characteristics

	Gwyneth Paltrow		Lindsay Lohan	
Congruence	$M = 5.25$	$SD = 1.26$	$M = 2.53$	$SD = 1.18$
Greenness	$M = 5.35$	$SD = 1.47$	$M = 2.32$	$SD = 1.46$
Expertise	$M = 4.02$	$SD = 1.69$	$M = 2.02$	$SD = 1.38$
Trustworthiness	$M = 5.17$	$SD = 1.41$	$M = 2.41$	$SD = 1.21$
Attractiveness	$M = 5.53$	$SD = 1.26$	$M = 4.44$	$SD = 1.26$

Besides being green, Paltrow was also perceived as trustworthy, attractive, and a moderate expert (see table I). Lohan was not seen as green, trustworthy or an expert, but fairly attractive. To assess if a halo effect was present (Erdogan, 1999; Fleck et al., 2012), bivariate correlation analyses examined if greenness affected remaining perceptions. Greenness correlated strongly with trust ($r = .87$, $p < .01$) and expertise ($r = .78$, $p < .01$), and somewhat with attractiveness ($r = .54$, $p < .01$). Examining each trait’s impact on congruence, a final correlation analysis with the four source effects and the original congruence variable was conducted. Results revealed an equally strong correlation of congruence with greenness and trust ($r = .84$, $p = .000$). Expertise ($r = .77$, $p = .000$) also had a strong effect, while beauty influenced congruence less, but still significantly ($r = .58$, $p = .000$). This implies more endorser traits may affect congruence, implying the presence of a halo effect (Fleck et al., 2012). Still, the greener the star was, the more trust, expertise, and some attractiveness she

gained. Greenness thus appears to be a vital factor for green ad evaluation, strengthening the assumption of greenness as a relevant match-up factor.

Analysis

For the main effect, three linear regression analyses were conducted. Interactions among dependent variables could have been examined with a MANOVA, yet the aim was to gauge direct congruence effects on individual ad measures. A MANOVA would require dichotomizing environmental concern into high and low while it is a continuum rather than two extremes (Kong & Zhang, 2013). In order to avoid losing this interval variable’s richness and predictive power, regression analyses were conducted. The moderating effect of environmental concern was examined with three multiple regressions. Congruence functioned as independent, and the three ad effect measures as dependent variable, with the add-

ed predictor and interaction variable environmental concern during moderation analysis.

RESULTS

The 250 survey invitations were shared through snowball sampling, making the total number of invitations unknown. As 138 of 250 invitations were accepted, non-response lies at 55%. Of overall 269 generated responses, 72 participants were excluded as they did not complete the survey, were not Dutch, indicated the wrong star, or were an age outlier (see Table 2). The final sample contains 197 respondents, with 100 in the congruent, and 97 in the incongruent condition. Warranting experimental group comparability, demographical distributions were examined.

Table 2. Sample Information

Total sample	269	100 %
Excluded	72	(26.8%)
Dropout	32	(11.9%)
Non-Dutch	20	(7.4%)
Indicated wrong celebrity	19	(7.1%)
Too old	1	(0.4%)
Final sample	197	

As Table 3 illustrates, demographical distributions were equal after eliminating an outlier participant, aged 64. Assuming homogeneity of variance between groups, Levene's tests of Homogeneity of Variances were conducted with age, income, education and English skills, and gender. None of Levene's tests were significant, confirming equality of error variance amid groups (Field, 2009). This enhances group comparability and the experimental design's quality.

Controlling for alternative explanations, bivariate correlation analyses with control and dependent measures were conducted prior to regression. Age correlated with purchase intent, so it was controlled for during analyses H1c and H2c. To ensure that predictors in

multiple regressions of H2 did not correlate, thus diffusing results, assumptions of collinearity were assessed (Field, 2009). The analysis of congruence, environmental concern, and their interaction concluded that no threat of multicollinearity was present for H2a, H2b (congruence, tolerance = .99, *VIF* = 1.01; environmental concern, tolerance = .98, *VIF* = 1.03; interaction effect, tolerance = .99, *VIF* = 1.01) or for H2c, which also included age (congruence, tolerance = .98, *VIF* = 1.02; environmental concern, tolerance = .96, *VIF* = 1.04; interaction effect, tolerance = .99, *VIF* = 1.01; age, tolerance = .98, *VIF* = 1.02). Predictors only yield their independent influence on dependent variables, which strengthens the analyses' reliability.

Testing Hypothesis 1

Hypothesis one held that a congruent endorser-brand match yields a more positive a) attitude toward the ad, b) attitude toward the brand, and c) purchase intention, than an incongruent match. Hypotheses 1a, 1b, and 1c were supported. Preliminary *t*-tests assessed group differences. Simple regression analyses gauged associations between congruence and dependent measures. Respondents exposed to the co-branded ad had a significantly more favourable ad attitude, $t(195) = 8.08, p = .000, 95\% \text{ CI } [1.05, 1.73]$; brand attitude, $t(195) = 5.23, p = .000, 95\% \text{ CI } [0.59, 1.3]$; and purchase intent, $t(195) = 4.8, p = .000, 95\% \text{ CI } [0.59, 1.4]$, than respondents exposed to the mismatch. As Table 4 shows, the co-branded ad featuring Paltrow was greatly liked, whereas the mismatched ad with Lohan was neutrally liked. While the incongruent ad still created a somewhat positive brand attitude, the congruent ad generated a very positive brand attitude.

Independent sample *t*-tests did not consider age's impact on purchase intent. Controlling for age, purchase intention decreased in the congruent ($M = 3.57, SD = 1.88$) and in-

congruent condition ($M = 2.64$, $SD = 2.3$). Thus, respondents were not inclined to buy the solar lamp endorsed by Lohan, and held rather neutral buying intentions for the lamp endorsed by Paltrow. Nevertheless, as hypothe-

sized, purchase intent remains less favourable for incongruence. Regression models for hypothesis 1 are summarized in Table 4.

Table 3. Demographics – Sample I: Congruence & Sample II: Incongruence

	Sample I – Paltrow ($N = 100$)	Sample II – Lohan ($N = 97$)
Nationality	100 % Dutch ($N = 100$)	100 % Dutch ($N = 97$)
Gender	52 % women ($N = 52$) 48 % men ($N = 48$)	52.6 % women ($N = 51$) 47.4 % men ($N = 46$)
Age	range: 19 – 52 years ($M = 27.78$, $SD = 6.6$)	range: 19 – 51 years ($M = 26.54$, $SD = 5.98$)
Income		
Less 31.000€ p.a.	50 % ($N = 50$)	53.6 % ($N = 52$)
Ca. 31.000€ p.a.	9 % ($N = 9$)	10.3 % ($N = 10$)
31.- 62.000€ p.a.	19 % ($N = 19$)	10.3 % ($N = 10$)
more 62.000€	4% ($N = 4$)	3.1 % ($N = 3$)
no answer	18 % ($N = 18$)	22.7 % ($N = 22$)
Education		
university	65 % ($N = 65$)	62.9 % ($N = 61$)
higher	19 % ($N = 19$)	20.6 % ($N = 20$)
higher general	9 % ($N = 9$)	9.3 % ($N = 9$)
secondary vocational	4 % ($N = 4$)	3.1 % ($N = 3$)
secondary general	3 % ($N = 3$)	1.0 % ($N = 1$)
English		
Proficient	63 % ($N = 63$)	60.8 % ($N = 59$)
Advanced	35 % ($N = 35$)	38.1 % ($N = 37$)
Basic	2 % ($N = 2$)	1.0 % ($N = 1$)

Table 4. Main Analysis – Celebrity Endorser Means & Standard Deviations

	Gwyneth Paltrow	Lindsay Lohan
Ad attitude	$M = 5.37$ $SD = 1.13$	$M = 3.98$ $SD = 1.29$
Brand attitude	$M = 5.51$ $SD = 1.21$	$M = 4.57$ $SD = 1.32$
Purchase intention	$M = 4.95$ $SD = 1.4$	$M = 3.96$ $SD = 1.51$

Note: age not held constant for purchase intention

Constants in Tables 5 and 7 reflect variable units in the control category incongruence. Congruence values are computed by summing constant and beta values of the reference category congruence. Pearson's r coefficients (b^*) show congruence and ad meas-

ure correlations. R^2 signifies the variance in dependent variables accounted for by congruence. F -values denote the model significance, applicability for prediction, and quality of data fit (Field, 2009). An analysis of collinearity for H1c, including congruence and age, con-

firmed there was no threat of multicollinearity (congruence, tolerance = .99, *VIF* = 1.01; age, tolerance = .99, *VIF* = 1.01). Regression analyses found a strong, significant positive main effect of congruence on ad attitude, $b^* = .501$, $t = 8.08$, $p = .000$, 95% CI [3.73, 4.22], and both a moderate main effect on brand attitude, $b^* = .351$, $t = 5.23$, $p = .000$, 95% CI [0.59, 1.30], and purchase intent, $b^* = .305$, $t = 4.57$, $p = .000$, 95% CI [0.53, 1.34]. The latter was weakly affected by age, $b^* = .205$, $t = 3.07$, $p = .000$, 95% CI [0.18, 0.82], meaning older respondents showed a stronger inclination to buy. All regression models were significant, inferring congruence can be used to predict ad

effects. Congruence had a moderate predictive strength on and explained 24.7% of ad attitude's variation, $R^2 = .25$, $F(1, 196) = 65.24$, $p = .000$. Congruence weakly predicted brand attitude, explaining merely 12% of its variance, $R^2 = .12$, $F(1, 196) = 27.31$, $p = .000$. Lastly, congruence weakly predicted and accounted for 14% of purchase intent's variance, $R^2 = .14$, $F(2, 196) = 16.72$, $p = .000$. In summary, the mismatched ad generated less favourable ad attitudes, brand attitudes, and purchase intentions than the congruent ad. Supporting hypothesis I, green co-branding creates more positive ad effects than a mismatch.

Table 5. Regression Analyses – Congruence & Ad Effect Measures

	Ad Attitude	Brand Attitude	Purchase Intention
Constant	3.976**	4.570**	2.641**
Congruence beta	1.394**	.943**	.933**
Congruence (b^*)	.501**	.351**	.305**
Age beta	-	-	.05*
Age (b^*)	-	-	.205*
R^2	0.25	0.12	0.14
F	65.24**	27.31**	16.72**

Note: $N = 197$ * $p < .01$. ** $p < .001$

Testing Hypothesis 2

The second hypothesis held that the effect of congruence on a) ad attitude, b) brand attitude, and c) purchase intent would be weaker for less environmentally involved consumers. Green consumers were assumed to evaluate the mismatched ad more negatively, and the co-branded ad more positively, than non-green consumers. Hypotheses 2a, 2b and 2c were

rejected. Congruence effects moderated by environmental concern are presented in Table 6. With the impact of environmental concern, ad and brand attitude dropped slightly for both groups. While the congruent ad still obtained favourable ad and brand valuations, the incongruent ad failed to do so as illustrated by neutral, negatively tending attitudes.

Table 6. Moderator Analysis – Celebrity Endorser Means & Standard Deviations

	Gwyneth Paltrow		Lindsay Lohan	
Ad attitude	$M = 4.84$	$SD = 1.73$	$M = 3.48$	$SD = 1.41$
Brand attitude	$M = 4.87$	$SD = 1.8$	$M = 3.97$	$SD = 1.47$
Purchase intention	$M = 2.51$	$SD = 1.84$	$M = 1.67$	$SD = 2.1$

Note: age held constant for purchase intention

Environmental concern also diminished purchase intent in both groups: Respondents exposed to Lohan were unwilling to buy the product, while respondents exposed to Paltrow exhibited a greater, yet still negative buying intent. However, comparing Tables 4 and 6, dependent measures do not change remarkably

under the influence of environmental concern. This implies an absent moderation, contradicting hypothesis 2. Results are assessed with multiple regression analyses (age held constant in H2c). Multiple regression models for hypothesis 2 are summarized in Table 7.

Table 7. Regression – Congruence & Ad Effects Moderated by Environmental Concern

	Ad attitude	Brand attitude	Purchase Intention
<i>Constant</i>	3.477**	3.969**	1.648*
Congruence beta	1.359**	.903**	.861**
Congruence (<i>b*</i>)	.488**	.336**	.281**
Env. concern ^a beta	.103	.122	.238*
Env. concern (<i>b*</i>)	.108	.131	.225*
Moderator ^b beta	.087	.114	.079
Moderator (<i>b*</i>)	.003	.084	.051
Age (<i>b*</i>)	-	-	.043*
Age beta	-	-	.179*
<i>R</i> ²	.25	.13	.18
<i>F</i>	22.84**	10.88**	11.75**

Note: *N* = 197

a) Environmental concern as predictor variable

b) Interaction effect of congruence and environmental concern as moderator variable

p* < .01. *p* < .001

Against expectation, the analyses did not yield significant moderation effects on ad attitude, $b^* = .003$, $t = 0.05$, *ns*, 95% CI [-0.17, 0.17]; brand attitude, $b^* = .084$, $t = 0.08$, *ns*, 95% CI [-0.07, 0.29]; or purchase intention, $b^* = .051$, $t = 0.78$, *ns*, 95% CI [-0.12, 0.28]. Congruence as individual predictor still had a significant positive moderating impact on ad attitude, $b^* = .488$, $t = 7.84$, $p = .000$, 95% CI [1.02, 1.7], and brand attitude, $b^* = .336$, $t = 5.01$, $p = .000$, 95% CI [0.55, 1.26]. With age held constant yet not yielding any effect, $b^* = .179$, $t = 2.73$, *ns*, 95% CI [0.01, 0.08], congruence still had a significant positive weak effect on purchase intent, $b^* = .281$, $t = 4.3$, $p = .000$, 95% CI [0.47, 1.26]. This finding corresponds with hypothesis 1. Environmental concern as individual predictor did not generate significant effects on ad attitude, $b^* = .108$, $t = 1.72$, *ns*, 95% CI [-0.02,

0.22], and brand attitude, $b^* = .131$, $t = 1.95$, *ns*, 95% CI [-0.02, 0.25]. However, the interaction effect revealed a significant positive weak effect on purchase intention, $b^* = .225$, $t = 3.42$, $p = .001$, 95% CI [0.1, 0.38]. A unit increase in environmental concern yielded a higher purchase willingness of 0.24 units (see Table 7). This implies the buying intent is slightly more positive for those more concerned about the environment, disregarding congruence levels.

Summarizing, despite missing moderation effects, all regression models were significant. The model for ad attitude had a moderate predictive strength, and it accounted for 25.1% of variation in ad attitude, $R^2 = .25$, $F(3, 196) = 22.84$, $p = .000$. Predictive strength was weak for brand attitude: only 13.1% of its variance is explained by the model, $R^2 = .13$, $F(3, 196) = 10.88$, $p = .000$. Lastly, 18% of variance in purchase intention is ex-

plained by its model, meaning predictive strength is weak, $R^2 = .18$, $F(4, 196) = 11.75$, $p = .000$. Results fail to provide evidence for hypothesis 2. Specifically, the attitude toward the ad, the attitude toward the brand, or purchase intent was not more pronounced among environmentally involved respondents. Figures 1 and 2 display the attitude toward the ad (solid line), the attitude toward the brand (dotted line), and purchase intent (striped

line), for the incongruent endorser Lohan and the congruent endorser Paltrow. Congruence yields more positive ad effects than incongruence. Minor shifts from the main to the moderator analysis imply that environmental concern does not magnify congruence or incongruence perceptions among greener consumers.

Figure 1: Main Analysis

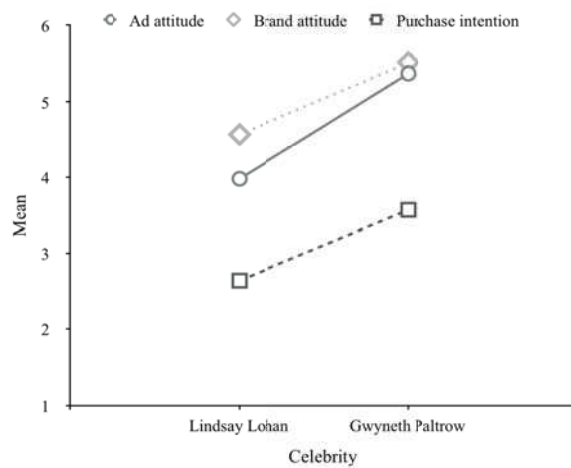
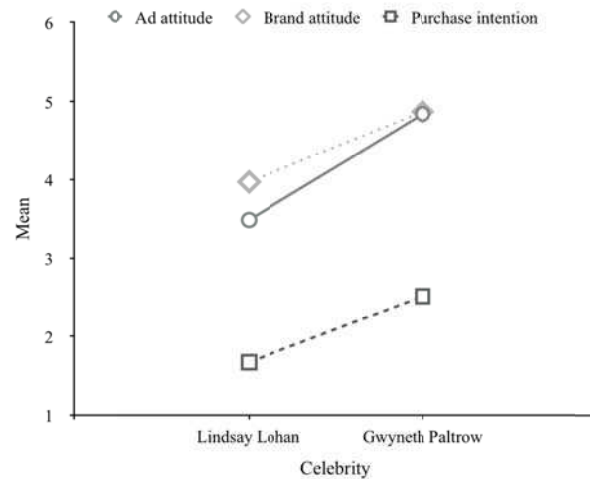


Figure 2: The Moderating Effect



CONCLUSION & DISCUSSION

This research examined celebrity endorser-brand congruence effects on the attitude toward the ad, the brand, and purchase intention in green advertising. This was done in order to extend the match-up hypothesis to a novel match-up factor: greenness. Findings suggest green ads benefit from pro-environmental celebrity endorsers, indicating a co-branded match creates synergy effects, which accelerates persuasion. However, environmental concern did moderate effects. As congruence attained more favourable evaluations regardless of consumers' green involvement, it appears that a green star appeals to consumers of varying environmental concerns.

Theoretical Reflection

A green celebrity endorser had a more positive impact on the ad's effectiveness than

a non-green celebrity endorser. This implies pairing an endorser-brand pair by one pronounced image factor generates more positive ad outcomes than a mismatch, due to the logical link established between brand and endorser (Erdogan et al., 2011; Stafford et al., 2002; Till & Busler, 2000). This validates and extends the match-up hypothesis to green advertising, by positioning a celebrity's environmental reputation as a vital factor for green brand promotion. Consistent with match-up research by Till and Busler (2000), congruence between the pro-environmental endorser and the green brand greatly stimulated, but did not entirely account for brand attitude. This implies other factors drive brand appraisals, which may explain somewhat positive brand attitudes for the non-green endorsement. Findings further support research by Fleck, Korchia and Le Roy (2012), who found that congruence causes a more favourable ad attitude as well as purchase intention than incon-

gruence. Specifically, the green star generated distinct positive attitudes, while the non-green star obtained neutral ad attitudes. Congruence greatly accounting for ad attitude infers that a co-branding strategy stimulates green ad likeability. Eagerness to purchase was modest for the green, and negative for the non-green celebrity, but it increased slightly with age. Not as effective as advertisers may hope, congruence predicted purchase intent only marginally, indicating further factors play a role. Timid purchase intent mirrors findings of a reserved will to buy in the green sector (Atkinson & Rosenthal, 2014; Kong & Zhang, 2013; Peattie, 2010). Older consumers with stable households, higher incomes, and possibly a greater desire for sustainable home products, may explain the slight positive impact of age on purchase intent (Lee & Park, 2013).

Classical match-up mechanisms appear to apply to this extended match-up research: Congruence fuelled, whereas incongruence inhibited endorser trust and credibility—the interplay of expertise, trust, and attractiveness (Erdogan et al., 2001; Farhat & Khan, 2011). Reviewing endorser effect sizes, these characteristics and congruence greatly depended on greenness. Paltrow’s pro-environmental image raised trust and expertise perceptions, suggesting that she gained credibility (Spry et al., 2011). Lohan’s lack of greenness, conversely, diminished trust and expertise valuations, implying that her credibility was weakened (Spry et al., 2011). Match-up studies revealed trust and credibility regularly account for ad effects, as they create affect, which then transfers from the endorser to the brand (Erdogan et al., 2001; Lee & Thorson, 2008). Greenness thus appeared to be at the root of creating positive affect for the green, and negative affect for the non-green star, which finally transferred onto the ad and brand. According to prior research, this mechanism accounts for congruence causing favourable ad effects, and incongruence causing unfavourable ad effects (Fleck et al., 2012; Kamins & Gupta,

1994; Lee & Thorson, 2008). As a result, greenness seems to operate on the theoretical grounds of the match-up hypothesis, thus validating the notion of establishing greenness as a match-up factor for green advertising.

Contrary to expectations, environmental concern did not moderate effects. Corresponding with green consumer research, though, environmental concern slightly predicted purchase intent (Akehurst, Afonso & Goncalves, 2012). Nonetheless, both experimental groups were unwilling to buy, illustrating the “attitude-intention-gap” in green consumerism (Atkinson & Rosenthal, 2014; Kong & Zhang, 2013; Peattie, 2010). Respondents across the environmental involvement continuum liked the congruent, while holding neutral attitudes for the mismatched ad and brand. This mirrors Lee and Thorson’s finding (2008) that a meaningful match can determine positive ad effects more than involvement. Hence, mechanisms of the Elaboration Likelihood Model did not apply, since green involvement did not govern ad-processing routes or ad effects (Erdogan, 1999). Still, past research found that green involvement moderates ad perceptions because consumers spend different cognitive efforts on green ad processing (DeVlieger et al., 2005). Future research is required to clarify mixed results regarding green involvement’s role in green ad processing. In line with existing theory, consumers engaged in schema-based processing: A green endorser was rated as brand-congruent, and a non-green endorser as brand-incongruent. The study provides empirical support for Schema Congruity’s applicability in congruence research, and extends the concept to green advertising (Lee & Thorson, 2008; Törn, 2012). Finally, the study confirms Hung’s (2014) and Minton and Rose’s (1997) belief that green stars are persuasive endorsers for highly and less involved consumers. Green celebrity endorsement may thus stimulate more eco-friendly consumerism beyond already environmentally concerned

consumers (Alexander, 2013; Kong & Zhang, 2013).

LIMITATIONS & FUTURE RESEARCH

Although this pioneer study corroborated the principle of congruence in green ads, some limitations warrant attention. Firstly, in line with prior studies, this proof of the principle study was conducted using only two congruence conditions (Farhat & Khan, 2011; Törn; 2012). However, this limits investigating deeper congruence mechanisms. Future research should thus examine if different levels of congruence, such as moderate incongruence, yield greater effects than either congruence or incongruence (Lee & Thorson, 2008). Practitioners could thus derive insights regarding efficient endorser selection strategies for green brand marketing.

Secondly, the aforesaid celebrity halo effect (Fleck et al., 2012) may have amplified positive valuations of the congruent endorser-brand match, and negative valuations of the incongruent endorser-brand match. Greenness, a predictor of congruence, affected trust and expertise, and somewhat affected beauty perceptions. The four endorser traits combined may thus also have stimulated congruence and ad outcomes rather than greenness exclusively. Although halo effects are rather undesirable, they are a common occurrence in celebrity endorsement research (Fleck et al., 2012; Hwang, 2010; Kim, Lee & Prideaux, 2014). Considering prior studies and the results of this study, it appears multiple endorser dimensions matter to consumers (Erdogan et al., 2011; Kim et al., 2014). This verifies that stars' images are complex, multi-level constructs, making it difficult to find clear-cut match-up factors independent of other perceptions (Alexander, 2013; Goldsmith et al., 2000). As trust, expertise, and attractiveness are crucial for an endorser's credibility and likability (Erdogan, 1999; Kim et al., 2014;

Silvera & Austad, 2004), future match-up research should include them as a base line.

Moreover, research emphasized the necessity to discover more thematic match-up factors (Amos, Holmes & Strutton, 2008; Kim et al., 2014). Real-life star activities should be scrutinized in view of green brand image overlaps (Alexander, 2013; Hwang, 2010; Kim et al., 2014). Research prospects in green advertising are plentiful: Stars promoting animal welfare can endorse pet-related products; fashionable celebrities can endorse eco-fashions (Winge, 2008), while celebrities with affinities for technology may endorse hybrid cars (Lee & Park, 2013), technology, or home products. Combining several endorser dimensions, an attractive eco-celebrity could be a prime endorser for organic wellness and personal care products, while a pro-environmental food-expert, like Jamie Oliver, may advertise culinary products. Research has to investigate these fields, as the need for green marketing is likely to grow parallel to the green business sector (Berger, 2010).

Thirdly, the experimental setting may account for the lacking moderation. Green and non-green consumers were thought to process ads at different intensities (Matthes & Wonneberger, 2014). However, during the online-experiment, they actively looked at the ad, rather than seeing it in a natural environment, like a magazine. Participants of varying concerns may thus have processed ads centrally and critically assessed endorser-brand matches. As a result, more respondents may have focused on the star's suitability in the ad context, triggering awareness towards a co-branding strategy or mismatching strategy (Amos et al., 2008; Goldsmith et al., 2012). Future research should examine the subject within a naturalistic setting to gain knowledge on green involvement's effect on green ad processing, and resulting congruence and ad evaluations.

Besides reflecting shortcomings of earlier experimental research, results obtained are

restricted to the product, fictitious brand, celebrities and print ads in this research (Goldsmith et al., 2012; Spry et al., 2011). However, extensive pre-testing strengthened the study's replicability and validity, and aimed to rule out confounding effects. Employing a fake brand prevented brand familiarity and confined effects to congruence manipulations, yet compromised the study's ecological validity (Lee & Thorson, 2008). This study verified congruence mechanisms apply to green advertising. To obtain generalizable results, and to assess if the principle applies in general, follow-up research should investigate if results are repeatable using different products, media, and green celebrity endorsers (Goldsmith et al., 2012; Lee & Park, 2013). Since stars' images can change quickly (Till & Shimp, 1998), follow-up research should examine if other endorser types, like politicians, peer endorsers, or industry experts, may also be suitable advertisers for green products (Friedman, Termini, & Washington, 1976; Keel & Natarajan, 2012; Kim et al., 2014).

By using synergistic celebrities in saturated ad environments, a match-up strategy based on greenness could help differentiate green products, and thus break the clutter in the green ad environment (Erdogan, 1999; Kong & Zhang, 2013). Follow-up research should examine if green ads using celebrity endorsers are superior in breaking the clutter, and more persuasive and attention-grasping compared to other green ad formats, such as eco-labels, different ad claims, (Atkinson & Rosenthal, 2014), or consumer or societal benefit appeals (Green & Peloza, 2014).

IMPLICATIONS

The study yields theoretical and practical implications. From a theoretical perspective, the research advocates extending the match-up hypothesis to greenness, to establish congruence effects within green advertising (Erdogan et al., 2001; Lee & Thorson, 2008; Törn,

2012). The study further suggests including endorser credibility dimensions as a baseline for both celebrity endorsement and match-up research. Schema congruity proved a suitable theoretical foundation for understanding consumers' assessment of the green brand and the endorser as an entity. Like the match-up hypothesis, schema congruity was assessed in, and validated for green ad research. The study contributes to and extends celebrity endorsement, congruence, and green advertising research, and it provides insights on combining these strategies for green brand promotion purposes.

From a practical perspective, using environmental celebrity endorsers in green advertising works. However, practitioners need to be aware that consumers can hold multiple perceptions of the star, which requires consideration when selecting them for endorsements. Therefore, ensuring the star's believability, endorser credibility dimensions should be included as standard criteria in the selection process (Hwang, 2010). If a credible star is seen as eco-conscious and eco-friendly, they can become superior green product endorsers. Possibly, stars could actively contribute to sustainable consumerism, not only by establishing pro-environmental reputations or living by example. If these celebrities want to pro-actively encourage green values and behaviour, they can endorse branded products adhering to the greenest standards. This could mark the dawn of celebrities' empowered role in and towards a greener consumer culture (Alexander, 2013). Considering green and non-green consumers reacted more favourably to congruence, two implications follow: Firstly, by employing pro-environmental celebrity endorsers, practitioners can augment endorser selection and branding strategies in the green sector. Secondly, celebrity endorsement may concurrently reach a wider share of consumers, and thus pave the way to greener consumerism. In conclusion, the synergy in green persuasion can be realised by employing sen-

sibly paired, pro-environmental celebrities to green brands.

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