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Construal-level mind-sets and the perceived validity of marketing claims

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Abstract Prior research shows that the repetition of unfamiliar statements increases their subjective truthfulness. The present research shows that truth ratings can also be increased without repetition. Several different manipulations of low-construal-level mind-sets increased the perceived validity of a wide variety of marketing claims across a broad spectrum of products and industries. Mismatched construals reduced this effect. The results suggest that concrete construals enhance truth ratings when consumers focus on their intuitive feelings and impressions but not when they process marketing claims analytically.

Keywords Construal-level theory · Mind-sets · Truth ratings

One of the foremost difficulties in marketing is convincing consumers that product information is truthful. To accomplish this, marketers have employed a variety of techniques, including the use of trustworthy endorsers, multiple arguments, and repetitive advertising. Repetition has proven effective in bolstering the believability of product claims when heuristic processing is likely due to information processing constraints (Hawkins and Hoch 1992; Hawkins et al. 2001; Johar and Roggeveen 2007; Law et al. 1998; Roggeveen and Johar 2002; Skurnik et al. 2005). The vast majority of studies on determinants of truth ratings have focused on repetition-induced perceptual fluency (for reviews, see Dechêne et al. 2010; Schwarz 2004). Relatively few studies have investigated techniques that do not involve repetition (for exceptions, see Hansen and Wänke 2010; McGlone and Tofighbakhsh 2000; Reber and Schwarz

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1999). The goal of the present research is to investigate determinants of truth ratings that do not require repetition, linguistic, or font-related manipulations while holding product claims constant. Holding claims constant controls for meaning, processing ease, word length and frequency, and other extraneous variables.

Prior research on truth ratings without repetition focused on linguistic or font-related procedures for influencing perceptual fluency. Claims are rated as higher in validity when they are written concretely rather than abstractly (Hansen and Wänke 2010), when they rhyme (McGlone and Tofighbakhsh 2000), or when they are written in fonts that are easy to perceive due to high figure-ground contrast (Reber and Schwarz 1999). However, construal-level theory suggests that truth ratings can be influenced without varying repetition, the wording, or the readability of the product claims.

Construal-level theory explains how psychological distance influences mental representation (i.e., level of abstractness), judgment, and choice (Trope and Liberman 2003, 2010; Trope et al. 2007). Psychological distance can vary according to any dimension that diminishes the extent to which consumers focus on themselves in the here and now. These dimensions include time (e.g., "yesterday" vs. "last year"), space (e.g., "2 miles away" vs. "2,000 miles way"), social distance (e.g., "self" vs. "other"), sensory distance (e.g., "firsthand" vs. "secondhand"), and hypotheticality (e.g., "a 99% chance of occurring" vs. "a 1% chance of occurring"). As distance on any of these dimensions increases, the inferred distances on the other dimensions also increase (with spatial distance being the exception, see Zhang and Wang 2009) such that consumers are more likely to represent psychologically distant objects and events in high-level, abstract, and global terms that emphasize the fundamental properties of an object or event (e.g., superordinate categories, key attributes, and primary reasons for performing an activity). Conversely, as distance on any of these psychological distance dimensions decreases, consumers are more likely to represent objects and events in low-level, concrete, and local terms that emphasize the peripheral issues of an object or event (e.g., subordinate categories, peripheral attributes, and secondary reasons for performing an activity). Furthermore, the relationship between the psychological distance dimensions and construal level is bidirectional, such that as construal levels increase, inferred psychological distances increase, and vice versa (Trope and Liberman 2010).

Experience often teaches consumers to trust what they see and hear with their own eyes and ears. Research on naïve realism shows that people believe that their own perceptions reflect reality, whereas the perceptions of others are often distorted or biased (Gilbert and Gill 2000). Furthermore, concrete information is more vivid, often perceived as more relevant, and often weighed more heavily in judgment and decision making, relative to abstract information (Herr et al. 1991; Nisbett and Ross 1980; Reyes et al. 1980). Concrete details are also used to distinguish real memories from memories of imagined events (Johnson et al. 1993). Moreover, likely events are experienced frequently and are associated with rich, concrete details, and consequently, events construed concretely seem more likely (Wakslak and Trope 2009; Wakslak et al. 2006). To the extent that construal levels, perceived likelihood, certainty, and perceived validity are associated, marketing claims should seem more truthful as construal levels decrease.

Our research also tests an important boundary condition of this hypothesis. When multiple dimensions of psychological distance are manipulated simultaneously, truth

ratings should be higher when distances match rather than mismatch. Matching psychological distances increases processing fluency (Alter and Oppenheimer 2009; Schwarz 2004) and confers value from fit (Higgins 2000; Higgins et al. 2003). Matching feels right, whereas mismatching produces disfluency that reduces the reliance on intuitive impressions in judgment and decision making (Alter et al. 2007).

Research on mind-set effects shows that the processing strategies that consumers use in one situation can persist to influence the processing strategies used in subsequent situations, even when the situations are unrelated and even when the consumer's goals change (for a review, see Wyer and Xu 2010). Consequently, a perceptual or cognitive task that induces local, concrete processing initially, encourages local, concrete processing in a subsequent claim validity judgment task (Freitas et al. 2004; Wakslak and Trope 2009). Low-level-construal mind-sets or matching psychological distance dimensions should increase truth ratings, whereas, high-level-construal mind-sets or mismatching psychological distance manipulations should decrease truth ratings.

Three experiments were conducted to test these hypotheses. In study 1, construal level was manipulated via the Navon (1977) task, in which large letters composed of small letters are presented, and participants are asked to focus either on the large letters (global processing) or the small letters (local processing). Local processing decreases construal levels, subsequently increasing the perceived likelihood, certainty, and perceived validity of marketing claims (Liberman and Forster 2009). Hence, truth ratings should be higher in local (vs. global) processing conditions. In study 2, construal level was manipulated via "how" versus "why" priming (Freitas et al. 2004). How questions pertain to concrete steps for implementing an activity, and why questions pertain to abstract reasons for performing an activity. Responding to a series of how questions decreases construal levels (Freitas et al. 2004). Hence, truth ratings should be higher in how (vs. why) priming conditions. In study 3, sensory distance (firsthand vs. secondhand experience) and temporal distance (yesterday vs. last year) were manipulated orthogonally. Thinking about firsthand experiences (Kardes et al. 2006; Liberman and Forster 2009) and recent events (Trope and Liberman 2003, 2010) decreases psychological distance, and this decreases construal levels. Because value from fit and processing fluency decrease when construal levels fail to match (Alter et al. 2007; Higgins 2000; Higgins et al. 2003), truth ratings should be higher when construal levels match (i.e., firsthand and recent events and secondhand and distant past events) rather than mismatch (i.e., firsthand and distant past events and secondhand and recent events). Across the three experiments, multiple construal-level manipulations, multiple products, and multiple product claims were used to increase the generalizability of the results.

1 Study 1: Navon task

1.1 Participants, procedure, and materials

Undergraduates from a large Midwestern university (N=103) participated in exchange for course credit. We seated participants at partitioned cubicles and asked them to fill out a paper and pencil survey. Participants first completed the letter

identification task where they were presented with a series of large letters, each of which was composed of a series of smaller letters (e.g., a large A created out of small Hs) (Navon 1977). We randomly assigned participants to conditions. Those assigned to the high-construal-level condition (n=51) were asked to identify the large letters, whereas those assigned to the low-construal-level condition (n=52) were asked to identify the small letters. After the Navon task, participants rated the truthfulness of 15 product claims on a 7-point scale ranging from 1 (definitely false) to 7 (definitely true). The claims were pretested to be plausible and are presented in the Appendix.

1.2 Results and discussion

An analysis of variance performed on mean truth ratings averaged across the 15 claims yielded a main effect for construal level, $F(1, 101)=4.19$, $p<.05$, $\omega^2=0.03$. Truth ratings were higher in the low-construal-level condition compared with the high-construal-level condition ($M_{\text{low-construal}}=3.73$, SD=0.54 vs. $M_{\text{high-construal}}=3.51$, SD=0.57). Hence, focusing on the trees (local processing) rather than the forest (global processing) in the Navon (1977) letter identification task increases truth ratings in a subsequent, ostensibly unrelated, judgment task.

2 Study 2: how vs. why priming

2.1 Participants, procedure, and materials

Undergraduates from a large Midwestern university (N=150) participated in exchange for course credit. Participants were randomly assigned to either a high-construal-level mind-set condition (n=70) or a low-construal-level mind-set condition (n=80). The mind-set tasks were identical to those used by Freitas et al. (2004), except they were administered online. In both conditions, participants were asked to consider a prompt involving improving and maintaining one's physical health. In the high-level mind-set condition, participants responded to a series of questions directing them to consider why it might be important to improve and maintain one's physical health, while in the low-level mind-set condition, participants were directed to think about how one might improve and maintain one's health. After the mind-set manipulation task, participants completed a purportedly unrelated task that required them to rate the truthfulness (1=definitely false to 7=definitely true) of 15 marketing claims. The claims were pretested to be plausible and are presented in the Appendix.

2.2 Results and discussion

An analysis of variance performed on mean truth ratings averaged across the 15 claims yielded a main effect for construal level, $F(1, 148)=5.39$, $p<.05$, $\omega^2=0.03$. Truth ratings were higher in the low-construal-level condition compared with the high-construal-level condition ($M_{\text{low-construal}}=3.49$, SD=0.64 vs. $M_{\text{high-construal}}=3.22$, SD=0.77). Hence, focusing on concrete how questions rather than on abstract why

questions increase truth ratings in a subsequent, ostensibly unrelated, claim validity judgment task.

3 Study 3: sensory and temporal distance

3.1 Participants, procedure, and materials

Undergraduates from a large Midwestern university (N=190) participated in exchange for course credit. Study 3 was administered online and included two construal-level manipulations within each marketing claim. The manipulations modified the sensory and temporal distance of each claim. When the claim pertained to the participants themselves (vs. a friend) sensory distance was low (vs. high). Similarly, when the claim pertained to a recent (vs. distant) past event temporal distance was low (vs. high). Participants rated the truthfulness of ten marketing claims on a scale ranging from 1 (definitely false) to 7 (definitely true). The claims were pretested to be plausible and are presented in the Appendix.

3.2 Results and discussion

A 2 (sensory distance, low vs. high)×2 (temporal distance, recent past vs. distant past) between-subjects analysis of variance performed on the mean truthfulness ratings of the ten marketing claims revealed a significant two-way interaction, $F(1, 180)=8.00$, $p<.01$, $\omega^2=0.04$, and no main effects. As Fig. 1 indicates, when temporal distance was low, truth ratings were higher when sensory distance was low (M=3.81, SD=0.88) rather than high (M=3.46, SD=0.7, $t(92)=2.12$, $p<.05$, $\omega^2=0.04$). However, when temporal distance was high, truth ratings were higher when sensory distance was high (M=3.94, SD=0.65) rather than low (M=3.67, SD=0.65, $t(94)=2.04$, $p<.05$, $\omega^2=0.03$). Hence, consumers perceive marketing claims as more valid when sensory and temporal distance levels match rather than mismatch. Matching increases fluency

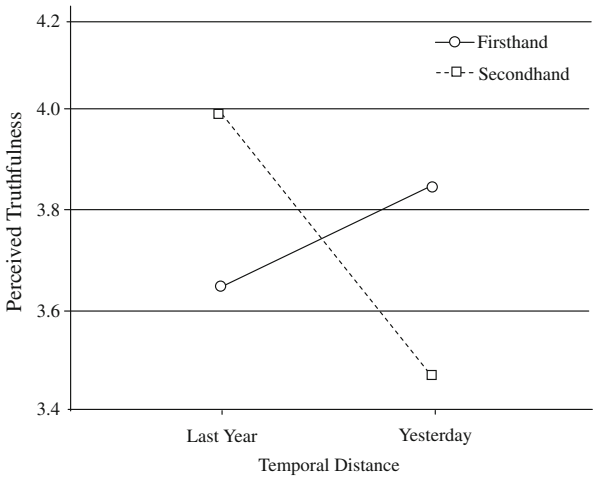

Fig. 1 Mean claim validity as a function of sensory and temporal distance

and value from fit (Higgins 2000; Higgins et al. 2003), whereas mismatching produces disfluency which encourages consumers to switch from an intuitive processing strategy to an analytic processing strategy (Alter et al. 2007).

4 General discussion

Three experiments using several different manipulations of construal level, products, and marketing claims all showed that truth ratings increase as construal levels decrease, except when intuitive processing is disrupted. Focusing on local letters (vs. global letters), how (vs. why) to perform an activity, oneself (vs. one's friend), and recent past (vs. distant past) events decreases the level at which claims are construed, and this increases the perceived validity of marketing claims. Studies 1 and 2 show that truth ratings increase as construal levels decrease even when construal levels are manipulated using a seemingly irrelevant perceptual (study 1) or conceptual (study 2) mind-set task and even when product claims are presented only once. Study 3 shows that the effect of construal level on truth ratings is moderated by the extent to which sensory and temporal distance levels match vs. mismatch. Matching distance levels increases processing fluency and value from fit (Alter et al. 2007; Higgins 2000; Higgins et al. 2003). By contrast, mismatching distance levels reduces processing fluency and encourages consumers to process marketing claims more analytically.

The findings are consistent with the implications of construal-level theory (Trope and Liberman 2003, 2010), which suggests that distancing consumers from themselves in the here and now increases the level of abstractness with which objects and events are interpreted. As distance on one psychological dimension (e.g., time, space, social distance, sensory distance, and hypotheticality) increases, the inferred distance of other dimensions also increase (with spatial distance being the exception, see Zhang and Wang 2009). Furthermore, construal levels increase with psychological distance, and inferred psychological distance increases with construal level (Trope and Liberman 2010). Because truthful statements often contain concrete details, statements construed concretely seem subjectively more valid. Naïve realism (Gilbert and Gill 2000), the vividness effect (Herr et al. 1991; Nisbett and Ross 1980; Reyes et al. 1980), and fluency effects (Alter and Oppenheimer 2009; Alter et al. 2007; Schwarz 2004) contribute to this finding. Furthermore, this finding is moderated by the likelihood of intuitive vs. analytic processing, consistent with prior research on the repetition-induced truth effect (Dechêne et al. 2010).

Marketers frequently try to persuade consumers using embellished, exaggerated, or even blatantly false product claims, and this has led to consumer mistrust (Campbell and Kirmani 2008; Friestad and Wright 1994). Nevertheless, even objectively false claims are more likely to be perceived as valid when consumers think concretely and intuitively, even though consumers realize that marketers are often biased sources of product information.

Considered together, the results show that several different manipulations of construal-level mind-sets influence truth ratings for a wide variety of product claims. As construal level decreases, truth ratings increase, provided that consumers focus on intuitive feelings and impressions. This occurs even when a product claim is presented only once and even when the product claim is held constant. Our findings show that

low-construal-level mind-sets often increase subjective perceptions of truth even though these mind-sets have no influence on the objective validity of a product claim.

Appendix: marketing claims

Study 1

1. Time Warner is the largest cable company in the world.
2. Rogaine with Minoxidil has been proven to re-grow hair for 75% of its users.
3. Pottery Barn offers high quality products at affordable prices.
4. Burt's Bees is made from all natural ingredients and is more effective than other leading brands.
5. Simply Orange is the purest, most natural orange juice on the market.
6. Chewing a stick of Wrigley's Chewing Gum after every meal is equivalent to brushing your teeth.
7. New 3D televisions have been shown to cause headaches and nausea.
8. Burger King only uses recycled material for the packaging for its products.
9. eBay ensures that no counterfeit products are sold on its site.
10. Products from Walmart are better than products from Target.
11. Eating Natural Vision's vitamin and mineral supplement can improve eyesight.
12. Traveling with Delta Airlines will get you to your destination faster than other airlines.
13. Scotts LawnPro Lawn Fertilizer guarantees a lush, beautiful lawn.
14. Allstate offers the cheapest auto insurance.
15. On average, people catch more fish per hour using the Bass Pro Shop's XPS Fishing rod than any other rod.

Study 2

1. Apidexin can help you lose weight easily.
2. GEICO insures over 100 million vehicles.
3. Advanced Night Repair of Estée Lauder can completely help shield skin from environmental assaults.
4. One ShamWow towel can hold as much as 1.5 gal of water.
5. Diet soda burns more calories than regular soda.
6. Apple—where tradition is everything.
7. In some countries the Twinkie is considered a delicacy.
8. Toyota products are the highest with respect to reliability, safety, and longevity.
9. Starbucks invented the "iced" coffee.
10. Toyota—where reliability never stops.
11. Brad Pitt was the highest paid actor in 2009.
12. Cannon cameras are the highest quality.
13. Crest—the anti-aging toothpaste.
14. South America has had the fastest-growing economy in the world for the past three decades.
15. Gatorade replenishes electrolytes 50% better than any other electrolyte restoring drink on the market.

Study 3

1. (Yesterday/Last year) (you discovered that/a friend told you that) a BMW 3 series will cost roughly twice what a Ford Expedition costs.
2. (Yesterday/Last year) (you discovered that/a friend told you that) TaylorMade golf clubs hit the ball farther than any other clubs.
3. (Yesterday/Last year) (you discovered that/a friend told you that) Tide Laundry detergent contains the best cleaning agent.
4. (Yesterday/Last year) (you discovered that/a friend told you that) station wagons get better gas mileage than SUVs.
5. (Yesterday/Last year) (you discovered that/a friend told you that) chewing Jolt gum makes you as alert as consuming a 16 oz energy drink.
6. (Yesterday/Last year) (you discovered that/a friend told you that) eating Chipotle can aid in weight loss.
7. (Yesterday/Last year) (you discovered that/a friend told you that) Kitchen-Aid knives are 95% stronger than most other knives on the market.
8. (Yesterday/Last year) (you discovered that/a friend told you that) Iams makes the healthiest dog food on the market.
9. (Yesterday/Last year) (you discovered that/a friend told you that) it would make it even easier for Chinese firms to purchase American goods if China lowered the value of its currency.
10. (Yesterday/Last year) (you discovered that/a friend told you that) the new Chevy Malibu gets 35 mpg on the highway.

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