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EFFECTS OF CONSTRUAL LEVEL ON THE RELIANCE ON AFFECT VERSUS SUBSTANCE

by

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Abstract

The influence of construal level on judgment and decision-making is often seen in consumer research. However, the effect of construal level on preferences for evaluative inputs rather than final products is less explored. Two experiments were conducted to examine whether construal level affects the degree to which individuals rely on either affective or substantive information when making evaluative judgments; specifically, that abstract construals increase reliance on affective information, whereas concrete construals increase reliance on substantive information. Experiment 1 provided evidence for a relative preference for affective versus substantive information when engaged in abstract and concrete construals, respectively. Experiment 2 replicated this effect and provided evidence indicating that perceived diagnosticity mediates the relationships between construal level and the reliance on affective versus substantive information. Advertisements for a print dictionary which independently manipulated affective and substantive information were used in both experiments to test these effects.

Keywords: construal level theory, affect, substance, persuasion, decision-making
Effects of Construal Level on the Reliance on Affect versus Substance in Persuasion

Construal Level Theory (CLT; Trope & Liberman, 2003) asserts that there are different levels of mental representation through which individuals perceive and react to the world around them. The way in which we construe objects, events and actions serves to convey information about the environment that cannot otherwise be directly experienced. That is, our mental constructions of distal stimuli allow us to gain understanding and prediction beyond our immediate experience of the here and now. For example, because we cannot travel backwards or forwards in time, we form mental representations of memories of the past or predictions about the future in order to inform our judgments and decisions. Construal Level Theory posits that there are two levels of mental representation through which we perceive stimuli: high-level, abstract construals and low-level, concrete construals. Abstract construals consist of decontextualized, abstract information that forms coherent, overarching representations. Conversely, concrete construals consist of more specific, incidental information that forms contextualized, detailed representations. Any object, action or event may be construed at either an abstract or a concrete level. For example, the activity of “making a list” can be represented concretely as “writing things down,” or more abstractly as “getting organized,” with both representations capturing different features and communicating different information.

When engaged in a concrete construal, one identifies how an action is performed (Vallacher & Wegner, 1987), and the subordinate means involved in action identification and object categorization (Rosch, 1975). In other words, representations become simpler and more direct as they become more concrete. When engaged in an abstract construal, one identifies why an action is performed, and the affective outcomes involved in action
identification and object categorization. That is, representations become less detailed and elicit greater emotional responses as they become more abstract. For example, “cleaning the house” could be construed at a low-level, concrete identification as “vacuuming the floor,” which entails a straightforward representation with no emotional implications. In contrast, “cleaning the house” could also be construed at a high-level, abstract identification as “showing one’s cleanliness,” which involves less specific detail but has greater emotional implications for subsequent outcomes (Vallacher & Wegner, 1989). Therefore, construal level comprises two distinct modes of representation and thought which shape the perception of environmental stimuli in different ways. As a result, it is possible for two individuals to create completely different representations of the same object, action or event. In this way, construal level theory has often been useful in explaining differences in judgments and behavior that are based on different levels of mental representation. Additionally, the focus upon high or low-level features of objects, actions and situations can also directly influence one’s level of construal (Vallacher, Wegner, McMahan, Cotter, & Larsen, 1992). In other words, it is possible for objects, actions and situations to act as manipulators of construal level as well as targets of its influence. Construal level thus has potential for both prediction and explanation regarding human perception and behavior.

In order to form judgments about objects, actions or events which cannot be directly experienced right here and now, individuals form mental representations of those stimuli from which to derive such judgments. Thus, one’s mental representations or mental construals form the basis for the judgment of any stimulus outside of immediate experience. Consequently, one’s mental construal of a stimulus arguably represents one
of the earliest points at which the decision-making process begins. Because construal level comprises one’s mental representations at such a seminal point in the decision-making process, it has been argued that preference changes often reflect corresponding changes in construal level. When we evaluate external messages and products, the choices we make may not be decided on the products themselves but rather on the construal we have of the products (Trope & Liberman, 2010). For example, it has been shown that abstract construals often engender decision-making based on features of inherent value or desirability (e.g., attractive, value-laden aspects), whereas concrete construals often engender decision-making based on features of feasibility (e.g., specific, immediate-context aspects) (Trope & Liberman, 2003).

The basis of such divergent preferences (Trope & Liberman, 2010) can be understood in terms of the differential processing of affective and substantive information: abstract construals tend to promote greater processing of affective information, or information which elicits immediate or innate emotional reactions that are subsequently used as information (Niedenthal & Showers, 1991). In contrast, concrete construals promote greater processing of substantive information, or information which pertains to the attributes of the target itself (e.g., Critcher & Ferguson, 2011; Hansen & Trope, 2012; Leary, Adams, & Tate, 2006).

Prior research suggests that abstract construals endorse the processing of affective information due to the affective nature of abstract construals themselves (e.g., Critcher & Ferguson, 2011; Trope & Liberman, 2010; Vallacher & Wegner, 1986). Abstract construals are characterized by a focus upon defining features associated with a stimulus’ purposes and outcomes (Trope & Liberman, 2010), and therefore such representations
also emphasize the processing of features with more inherent meaning and greater weight on the causes and implications contained in mental representations. Abstract construals thus rely on “gist” representations which underline centrally defining aspects of objects, actions and events, and it has been suggested that affective information is a critical component of such representations. Indeed, the affective value of objects, actions, and events appears to become more central to one’s mental representations as abstraction increases (e.g., social values) (Reyna, 2004).

Furthermore, it has been shown that abstract construals increase attention and sensitivity to affective information (Critcher & Ferguson, 2011). For example, Critcher & Ferguson (2011) manipulated abstract and concrete levels of construal and subsequently measured participants’ reactions to different stimuli. When engaged in an abstract level of construal, individuals demonstrated longer response times when reacting to positively and negatively valenced words compared to individuals in a concrete construal (Study 1b). Additionally, individuals engaged in an abstract level of construal had stronger positive and negative moods following exposure to affective primes compared to individuals engaged in a concrete construal (Study 2). Thus, an abstract level of construal appears to prioritize affect by guiding attention to and extracting affective information in the environment. It was also shown that participants’ attitudes towards a product were more consistent with their behaviors towards that product when engaged in an abstract construal as opposed to a concrete construal (Critcher & Ferguson, 2011). After manipulating construal level, participants were asked about their attitudes towards various candies. When given the chance to eat those candies, individuals who indicated positive attitudes towards the candy ate more of it when engaged in an abstract construal.
than in a concrete construal (Study 3). Thus, abstract construals generally appear to promote the processing of affective information in directing subsequent judgments and behaviors.

Research also suggests that abstract construals are more reflective of the valence and general meaning associated with objects, actions and events. For example, Williams, Stein, and Galguerra-Garcia (2012) tested the theoretical proposition that abstract construals facilitate the generation of reasons for particular outcomes and behaviors, which tend to emphasize the valence and meaning associated with those outcomes (Eyal et al., 2004). After manipulating construal level, the authors gauged individuals’ attitudes about a night out drinking (positive event) and experiencing a hangover the next morning (negative event). It was shown that individuals engaged in an abstract construal demonstrated stronger attitudes towards both events compared to individuals engaged in a concrete construal (Study 4). Thus, in imagining the reasons for experiencing both outcomes, individuals engaged in an abstract construal demonstrated attitudes that more strongly reflected the valence and meaning behind such events. In another study, Williams et al. (2012) showed similar results where individuals engaged in an abstract construal had more positive attitudes towards social action (e.g., greeting someone) than individuals engaged in a concrete construal. Thus, in addition to creating an increased sensitivity to affective information, abstract construals appear to be more generally associated with globalized information processing that highlights the reasons for particular outcomes and the affect associated with them.

Conversely, concrete construals appear to promote a focus upon peripheral, subordinate features (Trope & Liberman, 2010), and prioritize the processing of more
specific, contextual information that has fewer significant consequences on outcomes. Concrete construals thus tend to emphasize detailed, substantive features that work to promote the development of specific contingencies defined by immediate-context aspects (Pham & Taylor, 1999). In other words, concrete construals emphasize the processing of detailed, substantive information that helps to promote step-by-step plans, rather than “seeing the big picture”. For example, McCrea, Liberman, Trope & Sherman (2008) found that individuals engaged in a concrete construal procrastinated less on a task (sending responses via e-mail) than individuals engaged in an abstract construal. By thinking about the task in increasingly specific ways and in smaller segments, participants completed the task more quickly than individuals who approached the task in a more globalized manner. Similarly, Siddiqui, May & Monga (2014) found that when engaged in a concrete construal, individuals thinking about simple tasks (e.g., playing an instrument) in terms of specific, step-by-step plans produced lower time estimates for the completion of the task. That is, individuals were better able to focus specifically on the substantive demands of simple performance tasks when engaged in a concrete construal as opposed to an abstract construal.

Additionally, it has been shown that concrete thinking generally increases attention to cognitive-based, specific details (Hansen & Trope, 2012), works to free cognitive resources and improves task performance (Watkins, 2010), and focuses attention more generally on substantive demands (Leary et al., 2006). Thus, concrete construals appear largely to emphasize substantive, fine-grained processing which forgoes the use of affective information in both encoding and recalling information (Schwarz & Clore, 2007).
The differential processing of affective and substantive information demonstrated by these results provide one account for the effects of abstract and concrete construals often seen upon consumer preferences. As abstract construals promote deeper processing of affective information, more affect-based choices (e.g., reflecting desirability) may consequently emerge in consumer preferences. Likewise, as concrete construals promote deeper processing of substantive information, more substance-based choices (e.g., reflecting feasibility) should be observed in subsequent decision-making. However, whereas preferences for final options or products have been extensively researched within the context of construal level, very few efforts have been made to investigate the effect of construal level upon preferences for evaluative inputs themselves within the judgment and decision-making process. The paths to persuasion often involve many constructs, and understanding the unique contribution of construal level will underline the effects associated with distinct perceptive modes at a more mechanistic level. In other words, it is important to understand the different pathways that construal level engenders in the decision-making process, regardless of the decision itself.

**Affective and Substantive Information in Persuasion**

Ultimate product choices in the decision-making process are typically the focus of study in consumer research. However, the type of information upon which such judgments are ultimately based may also vary across contexts and individuals. Evaluative judgments can be based on two types of information or inputs: (a) substantive information pertaining to the essence of the evaluative target (e.g., strength of product attributes or advertising claims), or (b) subjective affective feelings related to one’s response to the evaluative target (e.g., feelings experienced from exposure to the
advertisement, design aesthetic) (Pham & Avnet, 2004). The tendency to rely on either substantive or affective information may be moderated by several factors. Judgments are more likely to be based on affective inputs (versus substantive inputs) when the consumer has hedonic, experiential motives (e.g., reading a book for enjoyment) than utilitarian, instrumental motives (e.g., reading a textbook to complete an assignment). Similarly, particular types of products (e.g., home furnishings) may be more likely to be evaluated based on affective inputs (versus substantive) than other types of products (e.g., home cleaning products) (Adaval, 2001).

Prior research has shown that external messages are perceived as more persuasive when their contents match more broadly the motivation and/or attitudes of the perceiver (e.g., Avnet & Higgins, 2006; Fabrigar & Petty, 1999; Haddock, Maio, Arnold, & Huskinson, 2008; Wood, Kalgren & Preisler, 1985). That is, the affective or substantive information present in a message may be perceived as more persuasive to the extent that such information complements an individual’s accessible goals and attitudes. For example, Edwards (1990) manipulated affect-based and cognition-based attitudes within individuals and subsequently exposed them to affective and cognitive persuasion appeals. Those with affect-based attitudes were more persuaded by affective means of persuasion, whereas those with cognition-based attitudes were more persuaded by cognitive means of persuasion. This matching effect was also demonstrated for chronic needs for affect and cognition, where individuals high in need for affect were more persuaded by affective appeals and individuals high in need for cognition were more persuaded by cognitive appeals (Haddock et al., 2008). Similarly, individuals with accessible ideal goals (more affect-based) have been shown to be more persuaded by messages containing affective
information, whereas individuals with accessible ought goals (more rule-based) are more persuaded by messages containing substantive information (Pham & Avnet, 2004). Thus, beyond situational factors like product type or opportunity to process information, broad motivational states and traits demonstrate content-based matching effects of the reliance on affect versus substance in persuasion.

A similar phenomenon is predicted here within the context of construal level. We hypothesize that, in a persuasion context, an abstract construal will increase reliance on subjective affective responses, whereas a concrete construal will increase reliance on substantive assessments. That is, messages containing affective information should be more persuasive under an abstract construal, because individuals engaged in an abstract construal should process affective information more deeply than substantive information, whereas the opposite is true for concrete construals. Hence, it is likely that construal level also promotes an increased reliance on affective versus substantive information in making evaluative judgments.

Previous research appears to support the idea that abstract and concrete construals should demonstrate content-based matching effects with affective and substantive information in persuasion, respectively. It has been shown that abstract construals increase interest in emotionally appealing products, social activities and donations to charity, enhance felt emotions that promote helping behaviors (Williams et al., 2012), and promote the positivity of anticipated actions and experiences (Liberman, Sagristano, & Trope, 2002). In contrast, it has been shown that concrete thinking reduces interest in emotionally appealing products and activities (Williams et al., 2012), reduces the use of affect in moral judgments (Eyal et al., 2008) and temporal loss aversion.
(Malkoc & Zaubermann, 2006), and increases focus more broadly on substantive demands in decision-making (Leary et al., 2006). In general, abstract construals appear to be more affect-based and have largely affective consequences on judgment and decision-making. Conversely, concrete construals appear to be more substance-based and have more cognitive consequences on subsequent judgments. It therefore stands to reason that within a persuasion context, abstract construals should demonstrate matching effects with affective information, whereas concrete construals should demonstrate matching effects with substantive information. That is, affective information should be more persuasive under an abstract construal, whereas substantive information should be more persuasive under a concrete construal.

**Current Research**

The two studies reported here tested the prediction that construal level will moderate the reliance on affect versus substance in a persuasion context; specifically, that an abstract construal will increase reliance on affective information, whereas a concrete construal will increase reliance on substantive information. The current research also reports evidence which suggests that the effects of abstract and concrete construals on the reliance on affect versus substance are unique from effects of involvement, mood, need for cognition, and accessible goals. Additionally, the use of a generalized mindset manipulation provides a means of exploring more generalized characteristics of distinct mindsets that have not been investigated in the context of evaluative preferences. That is, the current research focused only on manipulating abstract and concrete modes of thought that are consistent with abstract and concrete levels of construal. Manipulations of subjective, psychological distance from an object have often been used to engender
different levels of construal. When a stimulus is experienced as close to the self (e.g., in time or space), more detailed information is available and individuals are therefore oriented to a concrete level of construal and think in more detailed, substantive ways about the stimulus. Conversely, when a stimulus is experienced as subjectively distant from the self, fewer concrete details are available, and individuals are oriented to an abstract level of construal and tend to think more globally and affectively about that stimulus (for a review of psychological distance and construal level, see Trope & Liberman, 2010; Trope, Liberman & Wakslak, 2007). However, the current research emphasizes a broader manipulation focused on more generalized modes of thinking and engaging with stimuli (i.e., mindsets) that are associated with abstract and concrete construals.

Experiment 1

Methods

Participants and design. One hundred sixty undergraduates (74 male, 86 female) enrolled in introductory psychology courses participated in exchange for course credit, and were randomly assigned to the conditions of a 2 (attractive or unattractive ad) x 2 (strong or weak claims) x 2 (abstract or concrete construal) design. Each participant was tested individually within the laboratory for an experiment investigating “consumer preferences.” The experiment was run in sessions that lasted approximately 30 minutes. Data from eight participants were excluded from analysis due to language issues which prevented participants from completing the tasks properly.

Procedure. Upon arrival, each participant was individually greeted and shown into a laboratory room for the administration of the study, which was completed entirely on a personal computer. After reading and signing the consent form, participants
completed the construal manipulation task. Participants were then shown an advertisement for a dictionary and were directed to read it as if they were considering buying a dictionary. After reading the ad (exposure time was 60 seconds), participants reported brand evaluations and completed manipulation checks. Lastly, the participants completed a short series of questionnaires. When the experiment was completed, participants were thanked and debriefed.

**Construal manipulation.** In the first part of the study, participants were given a construal level manipulation based on the task originally developed by Freitas, Gollwitzer and Trope (2004). This manipulation task directs participants to focus on either the “hows” or “whys” of a given goal; that is, they are asked to consider questions regarding how they performed certain actions (specifying subordinate means of a behavior) or why they performed certain actions (abstracting the superordinate ends accomplished by a behavior). As noted above, this task was used as a means of manipulating construal level independently of psychological distance. That is, participants were not exposed to a stimulus at varying distances from the self in order to engender different levels of construal. Rather, participants were asked to answer questions in a fashion that would orient them towards a generalized mode of abstract or concrete thinking.

Participants in the abstract construal condition were asked to consider why they would pursue a given goal: to achieve academically. First, they were asked to list three goals that improving and maintaining academics could help them to achieve. For each goal, participants were asked to indicate on a 5-point Likert scale (1 = *very little* to 5 = *very much*) the extent to which improving and maintaining academics would help them to meet their given goal. They were then asked to list increasingly superordinate, higher-
order goals through a series of “why” questions and answers regarding the same goal of academic achievement (e.g., “What important life goal could the goal ‘to achieve academically’ help you meet?” → “To become more knowledgeable.” → “What important life goal could your reason/goal ‘to become more knowledgeable’ help you meet? In other words, why would you do what you listed?” → “To obtain a job”). Four responses were obtained in this fashion.

Participants in the concrete construal condition were also asked to consider the goal of academic achievement. First, they were asked to list three behaviors which could help to improve and maintain academics. Consequently, participants were asked to indicate for each behavior on a 5-point Likert scale (1 = very little to 5 = very much) the extent to which engaging in that given behavior would help to improve and maintain their academics. They were then asked to list increasingly subordinate, lower-order behaviors through a series of “how” questions and answers (e.g., “What behavior could you do to ‘achieve academically’”? → “Study every day.” → “What behavior could you do to complete the behavior ‘study every day’? In other words, how could you do what you listed?” → “Keep an academic planner”). As with the abstract construal condition, four responses of this kind were obtained.

**Ad attractiveness and claim strength.** After completing the construal level manipulation, participants were shown an advertisement for a print dictionary. The fictional ad manipulated claim strength by featuring five product claims which were shown to be either weak or strong (Pham, 1996). These claims referred to the up-to-date nature of the dictionary’s revisions, the number of entries and breadth of topics, reviewer expertise, illustrations and diagrams, and the user guidance system. Ad attractiveness
was manipulated through variations of the ad’s layout, illustrations, and color scheme. Attractive ads included full-color illustrations and layouts, while unattractive ads were shown in a simpler greyscale layout with no illustrations.

**Measures.** Brand evaluation was assessed through three 7-point items asking participants, “What is your overall evaluation of the dictionary in the ad?” These three items were anchored at “good/bad,” “like/dislike,” and “favorable/unfavorable” ($\alpha = .90$). Affective responses to the ad’s design were assessed through four 7-point items asking participants, “How were you feeling as you were reading this ad?” These items were anchored at “exciting/boring,” “appealing/not appealing,” “enjoyed/didn’t enjoy reading,” and “pleasant/not pleasant to look at” ($\alpha = .91$). Substantive assessments of the claims were measured by three 7-point items asking participants, “How would you evaluate the information provided about the dictionary?” These items were anchored at “compelling/not compelling,” “convincing/not convincing,” and “strong/weak” ($\alpha = .89$). Participants also rated the salience of both high-level ($\alpha = .87$) and low-level features of the ad ($\alpha = .73$) on six 7-point Likert scales ($1 = did\ not\ stand\ out\ at\ all$ to $7 = stood\ out\ a\ lot$). High-level features included the professionalism of the dictionary, the educational value of the dictionary, and the usefulness of the dictionary. Low-level features included the number of illustrations in the dictionary, the visual appeal of the dictionary’s ad, and its source credibility. Lastly, involvement was also assessed through three 7-point Likert scales: “I really read the ad as if I actually needed to buy a dictionary,” “I took extra care in making a sound evaluation of the dictionary,” and “I did not take the task of evaluating the dictionary seriously” (reversed scored) ($\alpha = .70$).

After completing these measures, participants also completed the Big Five
Personality Inventory (John & Srivastava, 1999), Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), Need for Cognition Scale (Cacioppo & Petty, 1982), and Regulatory Focus Questionnaire (Higgins et al., 2001). Because the predicted effects of construal level are broadly consistent with other effects seen in the persuasion literature, these measures were included to demonstrate that the effects of construal level on the reliance on subjective affective responses versus substantive assessments were empirically independent of effects of involvement, mood, need for cognition, and regulatory focus. More specifically, these measures were used to rule out pertinent bases of processing involved in the Elaboration Likelihood Model and the Heuristic-Systematic Model, two prominent dual-process theories of persuasion (Petty & Cacioppo, 1986; Chaiken, Liberman & Eagly, 1989) (see results and general discussion).

Results

**Manipulation checks.** Two judges unaware of condition coded each participant’s level of construal based on their responses to the construal manipulation task. Higher-order, abstract responses (superordinate ends) were coded with a score of +1. Lower-order, concrete responses (subordinate means) were coded with a score of -1. Responses that did not fit either criterion were coded with a score of 0. Ratings of the participants’ four responses were then summed to create an index of construal level which ranged from -4 to +4, with higher ratings reflecting greater abstractness. The ratings of the two judges were highly correlated ($r = .94$) and were averaged together. Participants in the abstract condition ($M = 3.47$, $SD = 1.43$) reported higher levels of construal than those in the concrete condition ($M = -3.87$, $SD = .53$), $t (150) = 42.00$, $p < .001$. 

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It was also shown that the attractive ad elicited more positive affective responses ($M = 3.35$, $SD = 1.54$) than the unattractive ad ($M = 2.52$, $SD = 1.56$) $F(1, 150) = 11.87$, $p = .001$. The ad with strong claims was also rated as more convincing ($M = 4.50$, $SD = 1.44$) than the ad with weak claims ($M = 3.94$, $SD = 1.48$), $F(1, 150) = 5.80$, $p = .017$.

**Brand evaluations.** The results are based on two 2 x 2 ANOVA models. Prior research has suggested that abstract and concrete construals produce diametrically opposed effects upon information processing and decision-making (e.g., Critcher & Ferguson, 2011; Freitas et al., 2004; Trope & Liberman, 2003; 2010). That is, abstract and concrete construals tend to engender oppositional effects based on the same principle (level of mental representation) and therefore do not interact. Thus, two two-way interactions between construal level (abstract construals) and ad attractiveness (affective information) and construal level (concrete construals) and claim strength (substantive information) were predicted. Additionally, there is currently little to no evidence to suggest the possibility of a three-way interaction between construal level, ad attractiveness and claim strength. Rather, it is likely that consumers use averaging rules as opposed to additive rules in evaluative processes concerning dual inputs; in other words, an increase on the reliance of one type of evaluative input would consequently decrease reliance on the other (Pham & Avnet, 2004; Troutman & Shanteau, 1976). Therefore, no three-way interaction was predicted and no significant three-way interaction was found. The relationships of interest are thus between abstract construals and ad attractiveness, and concrete construals and claim strength.

**Attractiveness.** A main effect was found for ad attractiveness, $F(1, 148) = 6.17$, $p = .014$, where participants rated the attractive ad ($M = 4.43$, $SD = 1.11$) more highly than
the unattractive ad ($M = 3.97, SD = 1.35$). An attractiveness x construal interaction, $F(1, 148) = 4.81, p = .031$, was also found, indicating that the attractiveness of the ad influenced brand evaluations more heavily in the abstract condition ($M_{\text{attractive}} = 4.70$, $M_{\text{unattractive}} = 3.86$), $F(1, 148) = 8.95, p = .003$, than in the concrete condition ($M_{\text{attractive}} = 4.15$, $M_{\text{unattractive}} = 4.09$), $F < 1$ (see Figure 1). This supports the first hypothesis that an abstract construal increases reliance on subjective affective responses to the ad. Simple effects analyses also revealed that the effect of abstract construals (versus concrete construals) was more prominent when the ad was attractive, $F(1, 148) = 3.85, p = .05$, than when it was unattractive, $F < 1$.

**Claim strength.** A main effect was also found for claim strength, $F(1, 148) = 23.70, p < .001$, where participants rated the ad with strong claims ($M = 4.66, SD = 1.24$) more highly than the ad with weak claims ($M = 3.74, SD = 1.09$). Additionally, a claim strength x construal interaction, $F(1, 148) = 10.08, p = .002$, was found, indicating that the strength of the ad’s claims influenced brand evaluations more heavily in the concrete condition ($M_{\text{strong}} = 4.87, M_{\text{weak}} = 3.37$), $F(1, 148) = 33.02, p < .001$, than in the abstract condition ($M_{\text{strong}} = 4.48, M_{\text{weak}} = 4.11$), $F(1, 148) = 1.63, p = .204$ (see Figure 2). This supports the second hypothesis that a concrete construal increases reliance on substantive assessments of the ad. Interestingly, simple effects analyses also showed that the effect of a concrete construal (versus abstract construal) was more prominent when the ad had weak claims, $F(1, 148) = 33.02, p < .001$, than strong claims $F(1, 148) = 1.63, p = .204$.

The two interaction effects found also held across conditions with conflicting information (i.e., ads with positive affective information and negative substantive information/ads with negative affective information and positive substantive information)
in that those in the abstract condition rated the attractive ads higher than the unattractive ads regardless of claim strength, and those in the concrete condition rated the ads with strong claims higher than the ads with weak claims regardless of ad attractiveness (see Table 1). This may suggest that only one tendency exists in which increased reliance on either affective or substantive information necessarily decreases reliance on the other, rather than two separate tendencies to weight certain information more heavily.

**Alternative models. Involvement.** There were no apparent differences across construal level in levels of participant involvement. Reported levels of involvement were similar in both the abstract ($M = 4.47, SD = 1.09$) and concrete conditions ($M = 4.33, SD = 1.19$), $t(150) < 1, p = .434$. Thus it appears that the effect of construal level upon the reliance on affect versus substance occurs independently of changes in involvement. Additionally, we did not find any significant interactions between involvement and the reliance on affective information, $F(1, 148) = .96, p = .602$, or substantive information, $F(1, 148) = 1.11, p = .368$ on brand evaluations.

**Mood.** There were also no significant differences in mood across levels of construal. In terms of positive affect, reported levels were similar in the abstract ($M = 27.28, SD = 8.32$) and concrete conditions ($M = 28.88, SD = 8.98$), $t(150) = -1.14, p = .255$. Similarly, there was little difference among reported levels of negative affect for the abstract ($M = 17.35, SD = 8.46$) and concrete conditions ($M = 15.12, SD = 6.92$), $t(150) = 1.89, p = .06$.

**Need for cognition and regulatory focus.** Self-reported need for cognition showed no significant differences between the abstract ($M = 58.5, SD = 11.12$) and concrete conditions ($M = 57.18, SD = 9.89$), $t(150) < 1, p = .42$. Similarly, construal
level was uncorrelated with both chronic promotion ($r = -.03, p = .72$) and prevention orientations ($r = .08, p = .29$).

**Discussion**

The results of the first experiment support the hypothesis that construal level moderates the reliance on affect versus substance in persuasion. That is, individuals primed with an abstract construal (as opposed to a concrete construal) rely more on affective information because it is relatively more compatible with their mode of processing and perceiving information. Similarly, individuals primed with a concrete construal (as opposed to an abstract construal) rely more on substantive information because such information complements the mode of processing and perceiving information in which they are engaged.

Experiment 2 was designed to replicate and extend the results of Experiment 1. In particular, because construal level engenders greater reliance on the use of particular information, it should also logically follow that individuals should perceive such information as more diagnostic. In other words, an increased reliance on the use of affective or substantive information should also be accompanied by a corresponding increase in the perceived usefulness and relevance of that information. Therefore, individuals engaged in an abstract construal should perceive affective information to be more diagnostic than those engaged in a concrete construal, whereas those engaged in a concrete construal should perceive substantive information to be more diagnostic than those engaged in an abstract construal. Furthermore, this accompanying change in perceived diagnosticity may in fact mediate the relationship between construal level, the affective and substantive information of the ad, and subsequent brand evaluations. As
noted above, brand evaluations for individuals engaged in abstract construals reflect the ad’s affective information more strongly than those engaged in concrete construals. Conversely, the brand evaluations for individuals engaged in concrete construals reflect the ad’s substantive information more strongly than for those engaged in abstract construals. If the perceived diagnosticity of affective and substantive information increases when engaged in abstract and concrete construals, respectively, then it may be this change that accounts for such differences in subsequent brand evaluations.

Experiment 2

Methods

Participants and design. One hundred twelve undergraduates (47 male, 65 female) enrolled in introductory psychology courses participated in exchange for course credit, and were randomly assigned to the conditions of a 2 (attractive or unattractive ad) x 2 (strong or weak claims) x 2 (abstract or concrete construal) design as in Experiment 1.

Procedure. The procedure was nearly identical to that of Experiment 1. However, after reading the ad (exposure time was 60 seconds) and reporting brand evaluations, participants were also asked to assess the diagnosticity of both their subjective affective responses to the ad as well as the diagnosticity of their substantive assessments of the ad’s claims. Participants were first asked to assess their feelings regarding the ad’s design: “What are your reactions to this layout? In other words, how do you feel about this layout?” These affective responses were collected on two seven-point scales anchored at “my feelings are positive/negative” and “the ad is pleasant/unpleasant to look at.” The perceived diagnosticity of these affective responses
was then measured by two subsequent questions: “To what extent do you think your reactions to this layout are relevant for you to form an opinion of this dictionary?” (1 = not relevant at all to 7 = very relevant); and “How useful do you find your feelings toward this layout? In other words, how much do your feelings toward this layout help you in judging this dictionary?” (1 = not useful at all to 7 = very useful). Responses to these two questions (r = .64) were averaged into a single measure of perceived diagnosticity of feelings toward the ad’s design.

The perceived diagnosticity of participants’ substantive assessments of the claims was then assessed in a similar fashion. Participants were first asked to assess the ad’s substantive claims: “What is your assessment of these claims? In other words, how would you evaluate the product information provided about this dictionary?” These substantive assessments were collected on two seven-point scales anchored at “the claims are very convincing/not convincing at all” and “these are strong/weak reasons to buy the dictionary.” The perceived diagnosticity of these substantive assessments was then measured by two subsequent questions: “To what extent do you think your assessment of these claims is relevant for you to form an opinion of this dictionary?” (1 = not relevant at all to 7 = very relevant); and “How useful do you find your assessment of these claims? In other words, how much does your opinion toward these claims help you in judging this dictionary?” (1 = not useful at all to 7 = very useful). Responses to these two questions (r = .77) were averaged into a single measure of perceived diagnosticity of the substantive assessments of the ad’s claims. The participants then completed a short series of additional
questionnaires. When the experiment was completed, participants were thanked and debriefed.

**Results**

**Manipulation checks.** The results of the manipulation checks were similar to those of Experiment 1. Participants in the abstract condition ($M = 3.94, SD = .22$) reported higher levels of construal than those in the concrete condition ($M = -3.44, SD = .29$), $t (110) = 58.23, p < .001$. It was also shown that the attractive ad elicited more positive affective responses ($M = 3.61, SD = 1.51$) than the unattractive ad ($M = 1.99, SD = 1.12$), $F (1, 110) = 38.66, p < .001$. The ad with strong claims was also rated as more convincing ($M = 4.38, SD = 1.47$) than the ad with weak claims ($M = 3.57, SD = 1.33$), $F (1, 110) = 9.12, p = .003$.

**Brand evaluations. Attractiveness.** A main effect was found for ad attractiveness, $F (1, 108) = 12.45, p = .001$, where participants rated the attractive ad ($M = 4.55, SD = 1.60$) more highly than the unattractive ad ($M = 3.75, SD = 1.13$). An attractiveness x construal interaction was also found, $F (1, 108) = 11.47, p = .001$, indicating that the attractiveness of the ad influenced brand evaluations more heavily in the abstract condition ($M_{attractive} = 5.00, M_{unattractive} = 3.16$), $F (1, 108) = 20.27, p = .001$, than in the concrete condition ($M_{attractive} = 4.11, M_{unattractive} = 4.08$), $F < 1$. This provides additional support for the first hypothesis that an abstract construal increases reliance on subjective affective responses to the ad. Again, it was also found that the effect of abstract construals (versus concrete construals) was more prominent when the ad was attractive, $F (1, 108) = 6.71, p = .011$, than when it was unattractive, $F (1, 108) = 5.03, p = .027$. 
**Claim strength.** A main effect was also found for claim strength, $F(1, 108) = 6.09, p = .015$, where participants rated the ad with strong claims ($M = 4.43, SD = 1.12$) more highly than the ad with weak claims ($M = 3.62, SD = 1.48$). Additionally, a claim strength x construal interaction, $F(1, 108) = 18.09, p < .001$, was found, indicating that the strength of the ad’s claims influenced brand evaluations more heavily in the concrete condition ($M_{strong} = 4.73, M_{weak} = 3.00$), $F(1, 108) = 25.97, p < .001$, than in the abstract condition ($M_{strong} = 4.56 M_{weak} = 4.42$), $F(1, 108) = 1.41, p = .687$. This finding also supports the second hypothesis that a concrete construal increases reliance on substantive assessments of the ad. Again, it was also found that the effect of a concrete construal (versus abstract construal) was more prominent when the ad had weak claims, $F(1, 108) = 19.05, p < .001$, than strong claims, $F(1, 108) = 2.84, p = .096$.

**Perceived diagnosticity.** The perceived diagnosticity of substantive assessments of the ad’s claims and the perceived diagnosticity of subjective affective responses to the ad were treated as a repeated factor in a mixed ANOVA. As expected, an interaction between perceived diagnosticity and construal level emerged, $F(1, 108) = 11.63, p = .001$. As seen in Figure 3, participants felt that affective arguments were more diagnostic when engaged in an abstract construal ($M = 4.57, SD = 1.34$) as opposed to a concrete construal ($M = 3.79, SD = 1.39$), $F(1, 148) = 7.97, p = .003$. In contrast, they perceived their substantive arguments to be more meaningful when engaged in a concrete construal ($M = 5.01, SD = 1.26$) rather than an abstract construal ($M = 4.25, SD = 1.62$), $F(1, 148) = 7.57, p = .007$. Additionally, this effect held regardless of attitudinal strength, which was similar for both abstract ($M = 4.91, SD = 1.13$) and concrete construals ($M = 4.69, SD = 1.24$). These findings suggest that in addition to moderating the reliance on
affective versus substantive information, construal level also affects the perceived usefulness and relevance of that information. These results therefore support the idea that construal level affects individuals’ relative preferences for evaluative inputs in decision-making.

Additionally, conditional indirect effect (moderated mediation) analyses (Muller, Judd, & Yzerbyt, 2005) provided support for the mediating effect of perceived diagnosticity of affective and substantive information (see Figure 4). Following the bootstrapping technique outlined in Preacher, Rucker & Hayes (2007; i.e., PROCESS macro v2.041, model 15), two conditional indirect effect analyses were conducted. The first analysis specified the construal level manipulation as the independent variable (X), perceived diagnosticity of affective information as the mediator (M), ad attractiveness as the moderator (V), and brand evaluation as the dependent variable (Y). Results revealed a significant conditional indirect effect of the construal manipulation on brand evaluation via perceived diagnosticity of affective information when the ad was attractive, conditional indirect effect estimate (CIE) = 0.47, 95% CI [0.19, 0.92], but not when the ad was unattractive, conditional indirect effect estimate (CIE) = -0.09, 95% CI [-0.45, 0.28]. In other words, increases in perceived diagnosticity of affective information appear to mediate the relationship between construal level and brand evaluations, but only when the ad is attractive (i.e., when there is positive affective information). This finding is consistent with the simple effects of construal level reported in Experiments 1 and 2, where the effects of abstract construals (versus concrete construals) on the reliance on affective information were more pronounced when the ad was attractive rather than unattractive.
The second conditional indirect effect analysis specified the construal level manipulation as the independent variable (X), perceived diagnosticity of substantive information as the mediator (M), strength of the ad’s claims as the moderator (V), and brand evaluations as the dependent variable (Y). Results revealed a significant conditional indirect effect of the construal manipulation on brand evaluation via perceived diagnosticity of substantive information when the ad had weak claims, conditional indirect effect estimate (CIE) = 1.29, 95% CI [0.02, 0.50], but not when the ad had strong claims, conditional indirect effect estimate (CIE) = -.07, 95% CI [-0.37, 0.12]. Thus, increases in perceived diagnosticity of substantive information appear to mediate the relationship between construal level and brand evaluations, but only when the ad has weak claims (i.e., when there is negative substantive information). This finding is also consistent with the simple effects of construal level reported in Experiments 1 and 2, where the effects of concrete construals (versus abstract construals) on the reliance on substantive information were more pronounced when the ad had weak claims rather than strong claims.

**Alternative models.** As in Experiment 1, we found that involvement, mood, and need for cognition did not differ across conditions.

**Involvement.** There were no significant differences across construal level in levels of participant involvement. Reported levels of involvement were similar in both the abstract ($M = 4.39$, $SD = 1.15$) and concrete conditions ($M = 4.11$, $SD = 1.09$), $t(110) = 1.30$, $p = .198$. Again, changes in involvement appear to be unrelated to the effect of construal level upon the reliance on affect versus substance.
**Mood.** There were again no significant differences in mood across levels of construal. Reported levels of positive affect were similar in the abstract ($M = 26.54$, $SD = 8.02$) and concrete conditions ($M = 28.79$, $SD = 8.59$), $t(110) = -1.41$, $p = .162$. Similarly, there was little difference among reported levels of negative affect for the abstract ($M = 14.46$, $SD = 5.53$) and concrete conditions ($M = 16.62$, $SD = 7.21$), $t(110) = 1.73$, $p = .087$.

**Need for cognition and regulatory focus.** Self-reported need for cognition showed no significant differences between the abstract ($M = 55.21$, $SD = 5.12$) and concrete conditions ($M = 56.73$, $SD = 5.96$), $t(110) = -1.43$, $p = .16$. Similarly, construal level was also uncorrelated with chronic promotion ($r = .04$, $p = .64$) and prevention orientations ($r = .08$, $p = .37$).

**Discussion**

Experiment 2 replicated and extended the first experiment. Again, it was found that messages were more persuasive when the type of information in the advertisement matched the person’s primed construal level. Message strength was found to be more persuasive by individuals primed with a concrete construal, whereas attractive ads were more persuasive to individuals who were primed with an abstract construal. Beyond that, it was found that these effects were based on the perceived diagnosticity of the information. That is, being primed with an abstract construal increased the value of affective information, and being primed with a concrete construal level increased the value of substantive information. Additionally, it was shown that the perceived diagnosticity of affective information mediated the relationship between construal level and brand evaluations, but only when the ad was attractive rather than unattractive.
Conversely, the perceived diagnosticity of substantive information mediated the relationship between construal level and brand evaluations, but only when the ad had weak claims rather than strong claims. These results appear to suggest that perceived diagnosticity of affective and substantive information mediates the relationship between construal level and brand evaluations, but only when the nature of such information is complementary to the mode of construal in which one is engaged.

**General Discussion**

The goal of these two experiments was to test the effect of construal level on the reliance on affect versus substance in a persuasion context. As expected, the results show that abstract and concrete construals influence the reliance on affect versus substance. Participants were more influenced by the attractiveness of the ad when primed with an abstract construal as opposed to a concrete construal, suggesting that abstract construals increase reliance on affective information. It was also found that participants were more influenced by the substantive claims of the ad when primed with a concrete construal as opposed to an abstract construal, suggesting that concrete construals increase reliance on substantive information. That is, affective content appears to be more consistent with an abstract mode of construing information, whereas substantive content is more consistent with a concrete mode of construal. Construal level thus has implications not only for the processing or attention to particular types of information, but also for the degree to which such information is relied upon in making evaluative decisions. Individuals appear to assign more weight to evaluative inputs to the extent that such information underscores the more generalized mode of thought in which one is engaged. Therefore, altering one’s
level of construal can also change the extent to which one considers particular types of information as worth using in the decision-making process.

An interesting phenomenon also occurred in which the influence of an abstract (versus concrete) construal was more prominent when the ad was attractive than unattractive. This result is consistent with previous research which suggests that abstract construals are strongly linked with positive affect, tend to increase perceived desirability of actions and events (Wesp et al., 2009) and increase the salience of positive aspects of actions and events (Williams et al., 2012). Thus it appears that abstract construals not only increase reliance on affective information, but also promote a general focus on positivity in judgment and decision-making. Interestingly, it was also found that the influence of a concrete (versus abstract) construal was more prominent when the ad’s claims were weak than strong. This finding is also consistent with previous research which suggests that concrete construals are strongly linked with negative affect, and tend to increase the salience of negative aspects of actions and events.

It was also shown that individuals engaged in an abstract construal perceived affective information to be more diagnostic than those engaged in a concrete construal. In contrast, individuals engaged in a concrete construal perceived substantive information to be more diagnostic than those engaged in an abstract construal. That is, construal level influenced the extent to which affective and substantive information were seen as relevant and useful for making evaluative decisions. Furthermore, it was shown that these increases in perceived diagnosticity conditionally mediated the relationship between construal level and brand evaluations. Perceived diagnosticity of affective information mediated the relationship between construal level and brand evaluations, but only when
the ad was attractive. This finding is also consistent with previous research suggesting that abstract construals promote a greater focus on positivity and are more sensitive to positive, desired aspects of actions and events. Thus, abstract construals do appear to predict brand evaluations through increases in the perceived diagnosticity of affective information, but only in the presence of positive affective information which is notable in an abstract mode of construal.

In contrast, perceived diagnosticity of substantive information mediated the relationship between construal level and brand evaluations, but only when the ad’s claims were weak. This finding is again consistent with research suggesting that concrete construals promote a greater focus on negative affect and are more sensitive to negative, undesired aspects of actions and events. Therefore, concrete construals also appear to predict brand evaluations through increases in the perceived diagnosticity of substantive information, but only when there is negative substantive information which is notable in a concrete mode of construal. Lastly, these increases in perceived diagnosticity occurred regardless of attitudinal strength. Thus, regardless of the intensity of one’s formed attitudes, individuals appear to follow content-based routes to evaluative decision-making that are ultimately consistent with one’s level of construal.

Considering the broad resemblance to previous persuasion research, several alternative explanations do exist for the current findings. Changes in involvement (i.e., motivation for accuracy) have been shown to affect the reliance on affect versus substance. High levels of involvement foster more central/systematic processing and tend to increase reliance on substantive information, whereas low levels of involvement foster more peripheral/heuristic processing and tend to increase reliance on affective
information. Thus, participants in a concrete construal may have relied more on the substantive claims of the ad because they were more involved and more motivated to be accurate than those in an abstract construal. Conversely, participants in an abstract construal may have relied more on the attractiveness of the ad because they were less involved and less motivated to be accurate than those in a concrete construal. However, the results do not appear to support this interpretation. The construal level manipulation did not show any effect upon participant reports of involvement, suggesting that construal level does not affect level of involvement.

Similarly, it has been suggested that changes in mood also affect reliance on affect versus substance. Positive mood has been shown to foster peripheral/heuristic processing and increase reliance on affective information, whereas negative mood has been shown to foster more central/systematic processing and increase reliance on substantive information. Thus, participants in an abstract construal may have been in a more positive mood than those in a concrete construal. Again, this interpretation does not appear to be supported by the results. Reports of both positive and negative mood were similar in the abstract and concrete construal conditions, suggesting that construal level does not affect mood.

Need for cognition and regulatory focus also represent two chronic measures which have been shown in previous research to affect the reliance on affect versus substance. High need for cognition has been shown to promote more central/systematic processing and increase reliance on substantive information, whereas low need for cognition has been shown to promote more peripheral/heuristic processing and increase reliance on affective information. Similarly, a prevention focus promotes more vigilant,
risk-averse processing and increases reliance on substantive information, whereas a promotion focus promotes more eager, risk-seeking processing and increases reliance on affective information. Neither of these interpretations were supported by the results. Self-reported levels of need for cognition were similar in both the abstract and concrete construal conditions, and both promotion and prevention foci were uncorrelated with construal level. Thus, it appears that both need for cognition and regulatory focus are unrelated to construal level, and cannot account for the effects reported here.

It should also be emphasized that the results are consistent with research investigating the effects of abstract and concrete construals as distinct modes of thought independent of psychological distance. Although abstract construals are often associated with psychological distance, the results showed that participants in abstract construals used and relied more heavily on affective information when making evaluative judgments. Conversely, those in concrete construals weighted substantive information more heavily when making evaluations. Though this may appear somewhat contrary to existing studies investigating CLT, the current experiments build on previous research which suggests that abstract and concrete construals can have effects on individuals’ reactions and perceptions that differ from those of psychological distance, particularly in terms of affect.

In general, psychological distance tends to attenuate the influence of affect; thus, individuals are less likely to use and rely on affective information when actions, objects and events are perceived as psychologically distant. However, abstract construals appear to increase sensitivity to affective information (Critcher & Ferguson, 2011) and generally increase breadth and emotional awareness (Pennebaker, 1989). It has also been shown
that abstract construals prioritize attention to affective stimuli (consciously and pre-consciously) and that those engaged in abstract thinking ultimately behave toward stimuli in ways that are consistent with their affective responses to those stimuli (Critcher & Ferguson, 2011). Similarly, abstract construals tend to engender social behaviors and increase the salience of positive aspects of objects, actions and events compared to concrete construals (Williams et al., 2012).

Consistent with these findings, the current research also suggests that abstract construals increase reliance on affective information; that is, individuals attend to and use affective information more frequently in making evaluative judgments when in an abstract rather than a concrete construal. Thus, although the effects of psychological distance and construal level often converge within the literature, the current research adds to a growing body of work suggesting that the consequences of distance and construal level are not always concordant. In this way, the current experiments extend upon typical research inspired by CLT by more broadly investigating the perceptions and reactions of individuals engaged in abstract and concrete construals.
References


self-control by diminishing the influence of the self. *Journal of Personality, 74*(6), 1803-1832.


Table 1

*Cell Means across Construal Level, Ad Attractiveness, and Claim Strength*

<table>
<thead>
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<th>Measure</th>
<th>Abstract Construal</th>
<th></th>
<th>Concrete Construal</th>
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<td>Attractive Weak</td>
<td>Unattractive Strong</td>
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<td>4.67</td>
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<td>4.72</td>
<td>3.80</td>
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Figure 1. Brand evaluations as a function of construal level and attractiveness of the ad in Experiment 1.
Figure 2. Brand evaluations as a function of construal level and strength of the ad’s claims in Experiment 1.
Figure 3. Perceived diagnosticity as a function of construal level and type of information in Experiment 2.
Figure 4. Pathways diagram of moderated mediation analyses in Experiment 2.