

# Using Stylistic Properties of Ad Pictures to Communicate with Consumers

LAURA A. PERACCHIO  
JOAN MEYERS-LEVY\*

Many researchers claim that pictures can impart descriptive concepts through their choice of stylistic properties, such as the orientation of depicted objects or the camera angle used. Yet little empirical research has explored if this is so, how readily or when such concepts are discerned, and/or whether these concepts can affect viewers' perceptions. In two studies we show that stylistic properties of ad pictures can communicate descriptive concepts that affect perceptions. However, this appears to occur only when viewers engage in ample processing of the ad and the accessibility of an appropriate descriptive concept is heightened, independent of the stylistic property.

Researchers have long posited that visual images can communicate ideas beyond those that are depicted literally. They also can convey semantically meaningful, descriptive concepts via their stylistic properties (Messaris 1997; Scott 1994; Scott and Batra 2003). By stylistic properties, we refer to a variety of factors that affect the manner in which visual material is displayed, such as the orientation (e.g., vertical, diagonal) of objects displayed in a scene and various production elements (e.g., camera angle, depth of focus; see also Meyrowitz 1998).

Stylistic properties are generally assumed to communicate descriptive meaning through a learned system of pictorial conventions or analogies that are shared among viewers and can be grounded in common observations (Dondis 1973; Kreitler and Kreitler 1972; Messaris 1997). Hence Scott (1994, 253) suggests that stylistic properties of pictures can be thought of as "information in symbolic form—as messages that must be processed cognitively by means of complex combinations of learned pictorial schemata." To illustrate, repeated exposure to vertically oriented items like sturdy trees, stalwart skyscrapers, and the like may prompt people to develop a shared association between verticality and the notion of strength or potency. Although the partic-

ular concepts conveyed by stylistic properties may vary depending on contextual or even person-specific factors, research suggests that individuals in a given culture often exhibit considerable consensus in the meanings they infer (Hatcher 1974; Kreitler and Kreitler 1972). The present work focuses on meanings that are applicable in Western cultures.

The notion that fairly predictable descriptive concepts can be both imparted by stylistic properties and appreciated by viewers proliferates in the scholarly, applied, and popular literature (e.g., Kress and van Leeuwen 1996; Nelson 1973). Yet, surprisingly, little research has actually tested these propositions empirically (Hatcher 1974). Consumer researchers have explored related issues, such as how the literal features of visual elements might affect product perceptions (e.g., the softness of a kitten shown in a tissues ad; see Mitchell and Olsen 1981) or whether particular cognitive processes are stimulated by the choice of certain stylistic elements (Peracchio and Meyers-Levy 1994, 1997). But scant research has investigated if, when, and how readily consumers truly discern descriptive concepts from subtle stylistic properties of ad pictures, what the particular nature of these meanings may be, or whether, once discerned, these meanings can actually affect consumers' product perceptions and attitudes.

One notable exception is some research by Meyers-Levy and Peracchio (1992). It explored whether a stylistic property, namely, the camera angle used to photograph an advertised product, could influence viewers' attitudes as well as descriptive (i.e., product characteristic-specific) assessments of the product. Drawing on work by Kraft (1987), these researchers hypothesized that individuals would perceive the product as relatively strong or potent when it was photographed from a low, upward-looking camera angle but

---

\*Laura A. Peracchio is professor of marketing at the School of Business, University of Wisconsin–Milwaukee, Milwaukee, WI 53201 (lperacch@uwm.edu). Joan Meyers-Levy is professor of marketing at the Carlson School of Management, University of Minnesota, Minneapolis, MN 55455 (jmeyerslevy@csom.umn.edu). Correspondence: Laura A. Peracchio. This work was supported by the School of Business, the University of Wisconsin–Milwaukee, and a grant from the Carlson School of Management McKnight Foundation. The authors thank Joe Nunes for his assistance in the initial conceptualization of experiment 1, as well as Edward McQuarrie and David Mick for allowing them to use their Web magazine material.

as relatively weak and inferior when shot from a high, downward-looking angle. Presumably, these alternative perceptions reflect people's learned associations to these angles (i.e., because children typically view adults from an upward-looking angle, they may come to associate potency with objects so viewed). Findings revealed that these effects emerged on both types of assessments when the extensiveness of viewers' processing was presumed to be extremely low owing to both situational (i.e., manipulated motivation) and chronic (i.e., Need for Cognition) influences. This was not the case when processing was highly extensive, apparently because such individuals based their judgments on other, seemingly more diagnostic data (e.g., the ad copy; Petty, Cacioppo, and Schumann 1983). Still, the observation that such effects emerged under very low motivation conditions would seem to suggest not only that people discern descriptive concepts from stylistic properties but they do so spontaneously and absent external prompting.

A central contention of this article is that this conclusion, in fact, may be premature. Indeed, it is at odds with the views of one of the foremost theoretical experts on art and perception, Ernest Gombrich (1973), who contends that discerning descriptive meaning from a picture's stylistic properties demands a nontrivial amount of processing. Research has shown that extracting content-specific, descriptive meaning (e.g., a concept like "strong" or "weak") requires time, effort, and processing (Pham et al. 2001; Stapel, Koomen, and Ruys 2002). While research on picture processing has shown that people can and do process pictures fairly effortlessly, this type of picture processing entails interpreting the pictorial data in a holistic, shallow manner whereby only surface representations are apprehended (Goossens 2003; Nordhielm 2002). In contrast, if one is to appreciate the meaning of individual pictorial elements like those represented by stylistic properties, more extensive processing is required (Nordhielm 2002; Raymond 2003). Hence, multiple streams of research cast doubt on the view that discerning descriptive meaning from stylistic properties of pictures will occur spontaneously.

Yet, if this thesis is true, what might account for the outcomes observed in Meyers-Levy and Peracchio's research? Several explanations would seem to be plausible. One is the possibility that respondents discerned the descriptive concept imparted by the camera angle only because the research procedures unwittingly elevated the magnitude of people's motivation and processing to some extent in all conditions, even the extremely low processing condition. Consistent with this, note that all of the respondents were forewarned explicitly at the outset that their judgments of the advertised product would be probed, and they were shown only a single ad, presented in isolation of other material. Both of these factors have been claimed to bolster the magnitude of effort and thus the extensiveness of people's processing (Kover 1995).

A second possibility suggests that the very measures used at judgment to ascertain whether respondents discerned the descriptive concepts themselves may have caused viewers

to consider and apply those concepts to the product, even though viewers otherwise would not have thought to do so (Johar 1995). In other words, the explicit probing of the dependent measures may have activated the descriptive concept in viewers' minds, heightened people's sensitivity to it, and, in effect, led viewers to perceive the product in accord with that concept. To address this possibility and explore whether viewers can discern the descriptive concepts implied by stylistic properties at encoding as opposed to judgment, several things are needed. One would need to vary independently of the stylistic property whether or not thoughts that are consistent with the stylistic property's imparted descriptive concept are made accessible to viewers. For example, an ad picture could be framed with ad claims that are either semantically consistent or inconsistent with the descriptive concept in question (e.g., Edell and Staelin 1983). Then using a nonleading indicator, one could assess whether people in fact discerned the descriptive concept in the absence of semantically consistent concept activation. Such an indicator might entail using an open-ended, implicit measure that taps perceptions indirectly. The observation of treatment effects on this implicit measure would be informative for it would suggest that the process by which people discern and apply the descriptive concept imparted by a stylistic property indeed can occur at encoding as opposed to judgment.

In summary, the foregoing discussion suggests that there is reason to question whether viewers will discern spontaneously without any prompting the descriptive concepts that may be conferred by stylistic properties. Indeed, we propose that people will discern such descriptive concepts only if two conditions are met: (a) they engage in a nontrivial degree of processing of the stimulus, and (b) they are sensitized to the appropriate descriptive concept independently of the stylistic property. Two studies will be reported that assess this thesis.

## EXPERIMENT 1: OVERVIEW AND HYPOTHESES

### Design

Experiment 1 explored the preceding notion for a particular stylistic property, the vertical versus diagonal orientation (i.e., position) of the advertised product in an ad picture.<sup>1</sup> It is commonly asserted that a vertical orientation conveys the descriptive concept of potency or powerfulness, perhaps learned from people's associations to firmly grounded trees or formidable skyscrapers that reach upright

<sup>1</sup>A second stylistic property, whether the items in a visual composition were arranged in a balanced or unbalanced manner, also was varied in a second target ad. A balanced composition is thought to evoke the descriptive concept of propriety, while an unbalanced one connotes the concept iconoclastic (Messaris 1997). To streamline this article, we report results for only the product-orientation stylistic property. Nonetheless, the outcomes observed on the second stylistic property mimicked those obtained on the first on all measures, including the implicit indicators taken to tap the relevant descriptive concepts.

toward the sky (Dondis 1973; Hatcher 1974). On the other hand, diagonally oriented items purportedly impart the concept of dynamism or activity, an association that might develop from the diagonals evident upon observing ascending birds or falling trees (Dondis 1973; Hatcher 1974; Kreitler and Kreitler 1972).

Respondents who varied in Need for Cognition (NFC) were shown a target ad that was embedded among three filler ads. Six versions of the target ad were created. The target ad photo depicted the focal product either vertically or diagonally within a larger context. Each ad photo was paired with copy that was semantically consistent with, inconsistent with, or immaterial to the descriptive concept portrayed in the ad photo.

## Hypotheses

As outlined previously, we expected individuals to be responsive to the concept implied by an ad picture's stylistic property only if they engaged in somewhat extensive processing (i.e., NFC is relatively high) and contextual material (e.g., ad claims that frame the ad picture) sensitizes them to the stylistically imparted descriptive concept by activating thoughts that are semantically consistent with rather than either inconsistent with or immaterial to that descriptive concept. Thus, three-way interactions of NFC, the concept made accessible by the ad copy, and the descriptive concept imparted by the ad picture stylistic property were anticipated on respondents' product attitudes and the valence of their thoughts. Specifically:

**H1:** Respondents who engage in more extensive ad processing (high NFC) should produce more favorable product attitudes and thoughts only when the ad copy heightens the accessibility of a concept that is consistent with that implied by the ad picture's stylistic property, namely, the copy activates the potency concept and the product orientation is vertical versus diagonal, or it activates the dynamism concept and product orientation is diagonal versus vertical. Treatment effects should be absent, however, when respondents employ less extensive processing (low NFC).

Two specific aspects of respondents' ad drawings were coded and served as implicit indicators of whether and when respondents apprehended the stylistically imparted descriptive concepts. The first aspect was the size of the focal product in respondents' ad drawings. The choice of this measure was based on extensive research in art theory (Arnheim 1988) and psychology (Josephs, Giesler, and Silvera 1994) that suggests that people commonly perceive size to be an indicator of an item's potency. The second aspect of respondents' ad facsimiles that was assessed was the number of bogus embellishments that respondents added to their ad drawings. The selection of this measure was based on research indicating that the concept of dynamism (i.e., activity) often is expressed by embellishing visual items with su-

perfluous, off-the-cuff flourishes (Kress and Leeuwen 1996). For example, visual analysts contend that dynamism can be communicated by the inclusion of superfluous additions in print art (Nelson 1973).

Interactions involving NFC, the concept made accessible by the ad copy, and the descriptive concept imparted by the ad picture stylistic property were predicted on the two implicit visual memory measures. These effects should reveal that particular descriptive concepts conferred by a stylistic property are not discerned spontaneously but are discerned only when people's processing is fairly extensive and the accessibility of the appropriate descriptive concept is heightened independently. Specifically:

**H2:** Respondents who engage in more extensive ad processing (high NFC) should discern the descriptive concept of potency (dynamism) implied by the stylistic property of verticality (diagonality) and reveal evidence of this by drawing the target product larger in size (adding a greater number of bogus embellishments) only when the ad copy that frames the ad picture heightens respondents' access to the same concept that is communicated stylistically. Such effects should be absent, however, when respondents engage in less extensive ad processing (low NFC).

## EXPERIMENT 1: METHOD

### Stimuli

Using digital manipulation, two versions were created of a full-color photo of a watch. Both versions displayed a close-up of a person's wrist resting in a pocket, with the advertised watch adorning the wrist. The stylistic property manipulated in the photo was the physical orientation of the watch, which was either vertical or diagonal. Further, three versions of ad copy were developed for each ad photo. Each version was accompanied by the words "Gordon Watches," which identified the product's brand name and category. The three ad copy versions were printed in a fairly large typeface, and their semantic content was either relatively consistent with, inconsistent with, or, in a control condition, silent about the descriptive concept presumably imparted by the ad picture's stylistic property.

The ad copy that was consistent with the presumably potency-implicating, vertically oriented watch read, "Successful, Confident, and Admired. A Powerful Statement of Who You Are," while the copy that was consistent with the diagonally oriented watch that presumably implied dynamism read, "Spirited, Spontaneous, and Expressive. A Provocative Statement of Who You Are." In conditions where the ad copy was relatively inconsistent with the descriptive concept imparted by the ad's stylistic property, the ad picture was paired with the ad copy version that was consistent with the alternative version of the ad picture (e.g., the vertically oriented and thus potency-implicating visual of the watch was accompanied by the ad copy that activated the concept of

FIGURE 1

WATCH AD: POTENCY AD COPY WITH POTENCY STYLISTIC PROPERTY



**Successful, Confident, and Admired.  
A Powerful Statement of Who You Are.**

**Gordon Watches.**

dynamism). Finally, a control condition omitted all copy except for the brand name and category.

In sum, six versions of the target ad were produced by combining the vertically or diagonally oriented ad picture

with one of the three versions of ad copy. Selected versions of the watch ad are presented in figures 1 and 2.

A pretest assessed the perceived consistency between the concepts activated in the ad copy versions and those im-

FIGURE 2

WATCH AD: DYNAMISM AD COPY WITH DYNAMISM STYLISTIC PROPERTY



**Spirited, Spontaneous, and Expressive.  
A Provocative Statement of Who You Are.**

**Gordon Watches.**

parted by the ad pictures' stylistic properties. Fifty-six respondents viewed a single ad that contained one of the two concept-implying ad copy versions and an ad picture that featured the stylistic property thought to be consistent or inconsistent with the copy. On two, seven-point items respondents rated how consistent the ad photo was with the ad copy and how consistent the product's physical position in the photo was with the meaning of the copy. These two

items were correlated,  $r = .86$ , and thus were averaged to form a single index.

The consistency ratings revealed a significant two-way interaction of the concept activated by the ad copy and the concept implied by the stylistic property of the ad picture ( $F(1, 52) = 10.46, p < .01$ ). The anticipated relationship between the ads' verbal and visual elements was confirmed. Specifically, the verbal and visual components of the ad were

viewed as more consistent when the ad copy activated the potency concept and the watch was oriented vertically rather than diagonally in the ad picture ( $M = 4.94$  vs.  $4.13$ ;  $F(1, 52) = 4.08$ ,  $p < .05$ ). But when the ad copy for the watch activated the dynamism concept, the verbal and visual ad components were perceived to be more consistent when the watch was oriented diagonally rather than vertically in the ad picture ( $M = 4.93$  vs.  $3.86$ ;  $F(1, 52) = 6.83$ ,  $p < .01$ ).

## Respondents

Respondents consisted of 150 students enrolled in marketing classes. Each was randomly distributed a booklet that contained the target ad interspersed among ads for unrelated products.

## Measures

After viewing the ads, respondents reported both their overall attitude toward the target product and any thoughts that had occurred to them upon viewing the ads. The order of these tasks was varied. Product attitudes were assessed on four, seven-point scales labeled extremely unappealing/appealing, inferior/superior product, inconsistent/consistent product quality, and a product I am unlikely to/might buy. These four items loaded on single factor and were averaged to form an attitude index ( $\alpha = .75$ ).

Next, respondents' recall of the target ad's visual content and ad copy was assessed by asking respondents to reproduce the target ad in a blank rectangular frame. Two aspects of respondents' drawings of the watch ad were coded, serving as implicit indicators of whether and when respondents discerned the descriptive concept imparted by the ad picture's stylistic property and ascribed it to the target product. Two judges who were blind to the treatments coded both aspects reliably ( $r = .96$ ).

The first aspect was the size of the watch measured to the nearest tenth of an inch. To the extent that respondents' drawings of the target product are larger in size, this would suggest that respondents perceived the target watch as potent. The second aspect of such drawings that was assessed was the quantity of bogus visual flourishes added in their ad facsimiles. To the extent that respondents add significantly more bogus embellishments in their product drawings, this would suggest that they perceived the target watch to be dynamic. Further, given the nonleading nature of these implicit indicators, such perceptions most likely originate at encoding.

Respondents' inclination to engage in extensive processing was measured on Cacioppo, Petty, and Kao's (1984) NFC scale. Using a mean split ( $M = 104$ ), respondents were classified as either relatively high or low in NFC. Average scores of the two groups were significantly different ( $M = 121$  and  $88$ , respectively;  $F(1, 150) = 253.00$ ,  $p < .01$ ).

## EXPERIMENT 1: RESULTS

Preliminary analysis revealed no significant treatment effects involving the order in which the attitude and thought-listing tasks were administered. Thus, the data were collapsed across these variables and analyzed as a 2 (NFC: high or low)  $\times$  3 (concept activated by the ad copy: potency, dynamism, or control condition)  $\times$  2 (concept implied by the ad picture stylistic property: potency was implied by a vertical product orientation or dynamism by a diagonal product orientation) between-subject factorial design. The degrees of freedom were 2 and 138 for all interactions and 1 and 138 for all main effects of NFC and simple effects. Treatment means for all measures are reported in table 1.

## Manipulation Checks

Consistent with the notion that NFC captures differences in the degree to which people engage in extensive processing, respondents' recall of the ad copy revealed a main effect of NFC ( $F = 10.42$ ,  $p < .01$ ). As would be expected, high versus low NFC individuals recalled more ad copy ( $M = 1.74$  vs.  $1.29$ ), suggesting that the former engaged in more extensive processing.

## Product Attitudes and Thoughts

Respondents' attitudes and the valence of their thoughts were examined to shed light on whether and when individuals were sensitive to the meaning imparted by the stylistic property. Two judges who were blind to the treatments classified the valence of respondents' thoughts ( $r = .94$ ). The proportion of respondents' positive minus negative thoughts about the product was combined into a net favorable thoughts index, and this was subjected to arc sin transformation for purpose of analysis.

Analysis of respondents' product attitudes as well as their net favorable thoughts revealed a three-way interaction of NFC, the concept activated by the ad copy, and the concept implied by the stylistic property of the ad picture (attitudes and net thoughts,  $F = 2.98$ ,  $p < .05$ , and  $F = 5.23$ ,  $p < .001$ ). As anticipated, the interaction of the concept activated by the ad copy and that implied by the ad picture's stylistic property was significant when respondents' NFC was high (attitudes and net thoughts,  $F = 4.35$ ,  $p < .02$ , and  $F = 14.95$ ,  $p < .001$ ). However, no such effects emerged when respondents' NFC was low ( $F$ 's  $< 1$ ).

Further examination of high NFC respondents' attitudes and net favorable thoughts revealed support for the predictions. In the ad copy control condition, which did not activate the concept imparted by the ad picture's stylistic property, high NFC individuals' attitudes and thoughts were unaffected by variations in the stylistic property ( $F < 1$ ). However, when the ad copy activated a concept that was consistent rather than inconsistent with the concept imparted by the ad picture's stylistic property, high NFC individuals produced more favorable product attitudes and a larger proportion of net favorable thoughts. Specifically, high NFC

respondents produced more favorable attitudes ( $F = 20.16, p < .001$ ) and more net favorable thoughts ( $F = 20.16, p < .001$ ) when the ad copy activated the potency concept and the ad picture's stylistic property conveyed this same concept (i.e., potency) by displaying the watch vertically as opposed to diagonally. Likewise, high NFC respondents generated more favorable attitudes ( $F = 5.50, p < .02$ ) and more net favorable thoughts ( $F = 13.33, p < .001$ ) when the ad copy activated the dynamism concept and the stylistic property of the ad picture imparted a consistent concept (i.e., dynamism) by displaying the watch diagonally rather than vertically.

### Memory for the Visual Ad Data

Analysis of the watch size in respondents' ad facsimiles revealed a significant three-way interaction of NFC, the concept activated by the ad copy, and the concept imparted by the ad pictures' stylistic property ( $F = 3.19, p < .04$ ). Further examination of this effect revealed that among high NFC respondents, the interaction of the latter two factors was marginal ( $F = 2.74, p < .07$ ), but no effect emerged among respondents who were low in NFC ( $F < 1$ ).

Follow-up analysis revealed that among high NFC individuals in the control condition, where the ad copy failed to activate a concept that was pertinent to the ad picture's stylistic property, the size of respondents' drawings of the watch was constant across treatments ( $p > .29$ ). The same was true when, regardless of the ad picture's stylistic properties, the ad copy for the watch activated thoughts that pertained to the concept of dynamism ( $F < 1$ ). Also consistent with expectations, when respondents' NFC was high and the ad copy for the watch activated the concept of potency, respondents drew the watch larger when the stylistic property of the ad picture implied a consistent concept (i.e., potency) rather than an inconsistent (i.e., dynamism) one by displaying the product vertically rather than diagonally ( $F = 18.58, p < .01$ ).

The quantity of bogus, idiosyncratic embellishments that respondents added to their target product drawings also was examined. Although the overall three-way interaction did not achieve significance ( $p > .18$ ), the expected two-way interaction of the concept activated by the ad copy and the concept imparted by the ad pictures' stylistic property emerged on the quantity of such embellishments produced by high NFC individuals ( $F = 3.14, p < .05$ ). This interaction was nonsignificant, however, among low NFC individuals ( $p > .24$ ).

Follow-up analysis of the two-way interaction supported the predictions. In the control condition where the ad copy did not activate a concept that was relevant to the ad picture's stylistic property, high NFC individuals included comparable amounts of bogus superfluities in their ad drawings, regardless of variations in the stylistic property of the ad picture ( $F < 1$ ). Similarly, such embellishments did not vary when the ad copy activated the potency concept ( $F < 1$ ). However, when high NFC individuals viewed the ad copy that activated the concept of dynamism, they inserted more

bogus embellishments in their ad drawings when the stylistic property of the ad picture imparted this same versus an inconsistent concept by displaying the watch diagonally rather than vertically ( $F = 10.89, p < .01$ ).

### EXPERIMENT 1: DISCUSSION

The results of experiment 1 shed light on whether and when viewers discern the descriptive concepts imparted by stylistic properties of visual images. Two key insights emerge. One is that these concepts do not appear to be discerned spontaneously. Instead, the findings suggest that viewers may discern such descriptive concepts and apply them to featured products provided that two conditions are met: that viewers process the images somewhat extensively and that they be sensitized to the appropriate concept by, for example, verbal ad claims. In the absence of either of these conditions, people appear to be insensitive to such concepts. Note that such findings add to dual processing theories by showing that under the earlier noted conditions, seemingly incidental, peripheral cues (i.e., visual stylistic properties) can serve somewhat like central arguments by conveying descriptive concepts that people regard as reasonably diagnostic. While evidence of the preceding effect obtained on attitudes and the valence of thoughts, such measures cannot distinguish unambiguously whether individuals encoded and discerned per se the descriptive concepts imparted by the stylistic properties. More compelling testimony for the latter insight emerged on the implicit measures obtained from viewers' ad drawings.

A second important insight obtains from the finding that the earlier noted outcomes emerged on the implicit measures, which employed seemingly inconsequential subtleties in respondents' drawings to detect discernment of the descriptive concepts implied by the stylistic properties. That, under the hypothesized conditions, the outcomes emerged on such nonleading indicators suggests that, in all likelihood, viewers discerned the stylistic property-imparted descriptive concepts during stimulus presentation, not retrieval.

Although the data from experiment 1 are consistent with our theorizing, certain questions remain. One is whether the observed findings generalize to other stylistic properties, for example, the earlier discussed types of camera angles investigated by Meyers-Levy and Peracchio (1992). A second issue concerns the means that were used to assess the propositions of interest. In particular, would the same outcomes have obtained had independent activation of the descriptive concept imparted by the stylistic properties been prompted in a distal manner not related directly to the product? A third and perhaps most critical lingering question is whether the descriptive meaning imparted by a given stylistic property is singular and stable or whether it can vary depending on the particular context. For example, although extant research assumes that a high, downward-looking camera angle imparts reliably the unfavorable concept of weakness (e.g., Kraft 1987), could it be that in a different context this same camera angle would impart the relatively favorable notion of naturalness, owing to the fact that most natural, organic

**TABLE 1**

TREATMENT MEANS AND STANDARD DEVIATIONS FOR STUDY 1

	Less extensive processing						More extensive processing					
	Potency ad copy		Dynamism ad copy		Control ad copy		Potency ad copy		Dynamism ad copy		Control ad copy	
	Potency stylistic property	Dynamism stylistic property										
Attitudes	4.95 (1.69)	5.44 (.85)	4.82 (1.22)	4.98 (1.63)	4.61 (1.11)	5.28 (1.04)	5.53 (1.00)	4.55 (1.03)	4.82 (1.13)	5.87 (.81)	4.81 (1.26)	5.02 (1.05)
Total number of thoughts	5.63 (2.45)	5.39 (2.02)	4.59 (1.37)	4.60 (1.43)	3.93 (1.64)	4.36 (2.29)	4.88 (2.78)	4.64 (2.25)	4.43 (2.30)	4.92 (1.61)	3.81 (2.04)	4.92 (2.18)
% positive–negative thoughts	.02 (.39)	-.12 (.36)	-.02 (.30)	.02 (.25)	.09 (.14)	.04 (.09)	.32 (.47)	-.24 (.49)	-.19 (.31)	.32 (.34)	-.06 (.25)	.03 (.23)
Total ad copy recall	1.44 (1.42)	1.92 (1.19)	1.59 (1.81)	1.10 (.99)	.79 (.43)	.82 (.41)	2.47 (1.33)	2.55 (1.04)	2.71 (.49)	2.31 (.75)	.43 (.63)	.62 (.51)
Size of watch in visual ad drawing in inches	1.92 (.73)	1.94 (.46)	2.22 (.76)	1.73 (.82)	2.30 (.61)	2.14 (.32)	2.71 (.79)	1.80 (.47)	2.11 (.43)	1.92 (.62)	2.13 (.35)	1.87 (.48)
Quantity of bogus embellishments added to visual ad drawing	.67 (.87)	.31 (.48)	.53 (.62)	.50 (.85)	.36 (.50)	.64 (.81)	.35 (.70)	.18 (.41)	.29 (.49)	1.08 (.64)	.19 (.54)	.31 (.63)
Number of respondents	10	12	16	9	14	10	17	11	9	13	16	13

**TABLE 2**

TREATMENT MEANS AND STANDARD DEVIATIONS FOR STUDY 2

	Less extensive processing						More extensive processing					
	Strength prime		Nature prime		Control		Strength prime		Nature prime		Control	
	Low camera angle	High camera angle	Low camera angle	High camera angle	Low camera angle	High camera angle	Low camera angle	High camera angle	Low camera angle	High camera angle	Low camera angle	High camera angle
Attitudes	2.33 (2.06)	1.67 (1.56)	3.00 (1.66)	2.71 (1.33)	2.25 (2.11)	2.43 (1.74)	4.67 (1.25)	2.00 (1.04)	2.50 (1.31)	4.17 (1.18)	2.83 (2.44)	3.14 (2.45)
Total number of thoughts	5.33 (2.87)	4.50 (1.98)	4.43 (2.88)	4.86 (3.06)	3.88 (2.75)	6.07 (4.16)	7.67 (2.87)	5.57 (3.18)	5.17 (3.04)	8.17 (1.11)	6.17 (2.66)	6.67 (3.28)
% positive–negative thoughts	.11 (.25)	.10 (.11)	.12 (.21)	.09 (.11)	.18 (.20)	.15 (.15)	.41 (.34)	.15 (.18)	.17 (.16)	.21 (.22)	.27 (.36)	.26 (.33)
Brand name recall	.17 (.39)	.50 (.52)	.14 (.36)	.29 (.47)	.25 (.45)	.14 (.36)	.67 (.78)	.00 (.00)	.00 (.00)	.33 (.49)	.50 (.52)	.50 (.52)
Size of product in visual ad drawing in inches	3.27 (1.12)	3.83 (1.33)	2.89 (2.69)	3.29 (1.46)	3.22 (1.93)	2.82 (1.95)	5.04 (1.70)	2.67 (1.97)	2.92 (3.12)	3.88 (0.99)	4.54 (0.55)	3.46 (1.57)
Amount of detail in visual ad drawing	2.17 (1.53)	2.50 (.80)	2.17 (1.95)	1.50 (.80)	2.83 (.94)	2.71 (1.44)	1.14 (1.03)	1.57 (1.09)	1.50 (1.16)	2.43 (.94)	2.67 (.49)	1.00 (1.04)
Number of respondents	12	12	14	14	16	14	12	12	12	12	12	14

objects grow in or are found on the ground below eye level (e.g., soil, vegetation, bodies of water, etc.)?

We explore these issues in a second study. Specifically, we examine whether individuals who engage in more extensive processing (owing to manipulated, not measured influences) will regard an advertised cereal more favorably, better recall its brand name, and perceive it to be more natural if a priming task activates this concept (i.e., naturalness) and an ad photo that displays the product is shot from a high, downward-looking versus a low, upward-looking camera angle. Further, we explore whether such individuals will perceive the product to be potency-enhancing when the distal priming task activates thoughts pertaining to the potency concept and the product photo is shot from a low, upward-looking versus a high, downward-looking camera angle.

## EXPERIMENT 2: METHOD

### Stimulus

A target ad was developed for a fictitious new cereal called Vicore. The ad featured a headline as well as a large box of the cereal photographed from either a low, upward-looking or a high, downward-looking camera angle. The graphics on the box displayed the brand name, a bowl of the cereal, the golden head of an Egyptian pharaoh atop shadows of feathers, a seal that certified the cereal's ancient grain ingredient, and two ad claims, which stated that the cereal was fortified with calcium and folic acid and was low in fat. Below the cereal box was a short paragraph of copy that encouraged product trial.

### Procedure

One hundred and fifty-six students enrolled in marketing classes completed the computer-administered study. They began by providing two types of background information about themselves and their habits. In reality, this material served dual purposes: to manipulate the extensiveness of ad processing that respondents engaged in and to vary whether the descriptive concept presumably conferred by the ad picture's stylistic property (i.e., camera angle) was activated. After this, respondents were told that they would be shown and asked their opinions about a Web magazine. This magazine contained the target as well as other ads.

The first set of questions served to vary how extensively respondents processed the cereal ad. Specifically, respondents answered 11 questions that probed either their breakfast or their Internet usage habits ("How routinely do you eat breakfast/surf the Web?"). It was expected that respondents would process the cereal ad more extensively if these questions asked them to consider their breakfast as opposed to their Internet usage habits.

A second set of 10 questions served as a prime intended to activate thoughts that either were or were not related to the descriptive concept thought to be conferred by the ad picture's high or low camera angle. Specifically, these ques-

tions assessed respondents' interest in activities that (1) required or built strength (e.g., body building, running or marathons, wrestling), (2) involved interacting with nature (e.g., camping, gardening, fishing), or (3) entailed leisure pursuits that did not involve strength or nature (e.g., attending concerts, art museums, live theater). The first two versions of these questions were expected to prime thoughts about potency and nature/naturalness, respectively, while the third set served as a control condition in which neither concept was activated.

After completing this background information, respondents were asked to examine a prototype of a Web magazine called "College World." This magazine was derived from one developed by McQuarrie and Mick (2003) except that it was presented online and included the cereal ad. The magazine consisted of a cover that displayed a classroom with students and highlighted several featured articles, filler ads for nuts, and a mini flashlight; an article about how to impress one's boss; the target cereal ad; a filler ad for a dessert; and an article about the history of the T-shirt. Full-color photos accompanied each article and most of the ads.

After examining the magazine, respondents completed a filler task to clear short-term memory. Then they were asked to record all visual and verbal material that they could remember from the target ad by drawing an ad facsimile in a frame printed on a sheet of paper. Two aspects of respondents' drawings of the target ad served as implicit indicators of whether respondents discerned the descriptive concepts (e.g., potency or naturalness) conferred by the ad pictures' camera angles and ascribed them to the target product. Two judges who were blind to the treatments coded these aspects reliably ( $r = .94$ ).

One aspect was the same as that employed in experiment 1, namely, the size of the target product (i.e., the cereal box) in respondents' ad drawings. Because people often use size as an indicator of potency (e.g., Arnheim 1988) and a low, upward-looking camera angle is thought to impart potency (e.g., Kraft 1987), we predicted that only respondents who engaged in more extensive processing and who were sensitized to this concept by means of a consistent prime would draw the product larger when the product was shot from a low versus high camera angle.

The second aspect of respondents' ad drawings that was examined was the overall amount of stimulus detail included in their drawings. Two judges who were blind to the treatments rated the amount of such detail on a five-point scale labeled 1 = not at all detailed and 5 = extremely detailed. This measure was selected because, as extant research verifies, people tend to ascribe greater naturalness to representations that include greater amounts of detail (Massironi 2002; Walford 2002). In light of this relationship, and because a high, downward-looking camera angle is thought to impart naturalness, we expected that individuals who engaged in more extensive processing and were sensitized to this concept via a consistent priming task would produce more detail in their renderings of the advertised product when the ad picture displayed the product from a high,

downward-looking versus a low upward-looking camera angle.

A second filler task was administered next, after which respondents reported their attitudes and thoughts about the cereal using the same measures employed in experiment 1. The order of these latter two tasks was rotated. Because the attitude items loaded on a single factor and formed a reliable index ( $\alpha = .88$ ), they were averaged to form a single index.

Similar to experiment 1, we hypothesized that respondents would reveal evidence on the implicit measures that they discerned the descriptive concept imparted by the ad picture's camera angle, respond more favorably to the target product on the attitude measure, and perhaps elaborate more on the ad and product brand name only when they engaged in a more extensive processing of the ad and the priming task activated thoughts that were consistent with versus immaterial to the descriptive concept imparted by the ad picture's camera angle. The logic for exploring whether respondents would elaborate more on the product and better recall its brand name in the specified condition is that the joint and sequential sets of questions manipulating extensiveness of processing and activation of the relevant descriptive concepts might prompt respondents to elaborate more on ad content. Further, note that if viewers of the ad picture that was shot from a high, downward-looking angle perceived the target product to be natural and, accordingly, regarded it favorably, this would suggest an important insight: whereas all previous work has posited and shown that a high camera angle results in unfavorable responses, presumably because this angle imparts weakness and/or inferiority (e.g., Meyers-Levy and Peracchio 1992), this study would indicate that the particular concept conferred by a stylistic property (e.g., camera angle) in fact can be variable depending on the prevailing context.

## EXPERIMENT 2: RESULTS

No significant treatment effects emerged for the order in which the attitude and thought-listing tasks were administered. Hence, the data were collapsed across these variables and analyzed as a 2 (amount of processing: more extensive, less extensive)  $\times$  3 (concept activated by priming task: strength, nature, or control condition)  $\times$  2 (concept implied by the camera angle: potency for low angle, naturalness for high angle) between-subject factorial design. The degrees of freedom were 2 and 144 for interactions and 1 and 144 for main effects of amount of processing and simple effects. Treatment means for all measures are reported in table 2.

### Manipulation Checks

Respondents prompted to think about their breakfast versus Internet usage habits and routines prior to viewing the target ad were expected to process the ad more extensively. Supporting this notion, a main effect of amount of processing emerged on ad recall ( $F = 9.09, p < .003$ ), revealing that individuals who were queried about their breakfast

versus Internet habits and thus engaged in more extensive processing exhibited greater ad recall ( $M = 1.00$  vs.  $.59$ ).

### Product Attitudes, Thoughts, and Brand Name Recall

The findings revealed that when individuals processed the target ad more extensively and the priming task activated thoughts that were pertinent to the descriptive concept imparted by the ad picture's stylistic property (e.g., potency or nature/naturalness), individuals not only regarded the product more favorably but elaborated more greatly on specific ad content. No treatment effects emerged on the net valence of respondents' thoughts about the target product ( $p > .29$ ). Nonetheless, three-way interactions of amount of processing, the concept activated by the priming task, and the concept imparted by the ad picture's camera angle approached or achieved significance on respondents' attitudes toward the target product ( $F = 4.08, p < .02$ ), the number of thoughts they generated about the product ( $F = 7.05, p < .001$ ), and their recall of the product's brand name ( $F = 2.41, p < .09$ ). On each measure, the interaction of the latter two factors was significant when respondents engaged in more extensive processing (attitudes,  $F = 9.91, p < .001$ ; number of thoughts,  $F = 5.15, p < .01$ ; brand name recall,  $F = 7.99, p < .001$ ), but not when processing was less extensive ( $p$ 's  $> .17$ ).

Follow-up analysis showed that respondents in the control condition exhibited no treatment effects on any of the aforementioned measures ( $F$ 's  $< 1$ ). However, individuals who engaged in more extensive processing and received a priming task that activated thoughts about strength judged the target product more favorably ( $F = 14.31, p < .001$ ), generated more thoughts about the product ( $F = 3.31, p < .07$ ), and more frequently recalled its brand name ( $F = 14.12, p < .001$ ) when the ad picture was shot from a low, upward-looking camera angle rather than a high, downward-looking angle. Further, when such individuals received a priming task that activated thoughts about nature, they judged the target product more favorably ( $F = 5.59, p < .02$ ), produced more product-related thoughts ( $F = 6.30, p < .01$ ), and more frequently recalled the product's brand name ( $F = 3.28, p < .07$ ) when the ad picture was viewed from a high, downward-looking camera angle rather than a low, upward-looking angle. Hence, these data are consistent with the thesis that the concept imparted by a stylistic property can be variable and, accordingly, either a high or a low camera angle can evoke a favorable response.

### Memory for the Visual Ad Data

Analysis of the target product's size revealed several lower order effects that were qualified by a three-way interaction of amount of processing, the concept activated by the priming task, and the concept imparted by the ad picture's camera angle ( $F = 2.93, p < .06$ ). The latter two factors interacted when processing was more extensive ( $F = 5.06, p < .01$ ), but not when it was less extensive ( $F < 1$ ).

Follow-up analysis of this two-way interaction revealed that when the priming task activated thoughts about nature ( $p > .19$ ) or, in the control condition, failed to activate a relevant concept ( $p > .13$ ), respondents' drawings did not differ in size. However, when respondents who engaged in extensive processing received a priming task that activated thoughts about strength, they drew the cereal box larger when the ad picture was shot from a low, upward-looking camera angle rather than a high, downward-looking angle ( $F = 10.67, p < .001$ ).

Analysis of the stimulus detail included in respondents' ad drawings revealed several lower order effects that were qualified by a three-way interaction of amount of processing, the concept activated by the priming task, and the concept imparted by the ad picture's camera angle ( $F = 3.25, p < .04$ ). An interaction of the latter two factors emerged only when processing was more extensive ( $F = 3.31, p < .04$ ), not less extensive ( $F < 1$ ). Further examination of the interaction confirmed expectations. When respondents' processing was more extensive and the priming task activated the concept of strength ( $F < 1$ ) or, in the control condition, failed to activate an applicable concept ( $p > .16$ ), the amount of detail included in respondents' ad picture drawings did not vary as a function of camera angle. However, when the priming task activated thoughts concerning nature, individuals who engaged in more extensive processing produced more detail in their drawings when the cereal was viewed from a high, downward-looking camera angle rather than a low, upward-looking angle ( $F = 4.80, p < .03$ ).

## GENERAL DISCUSSION

Together, the results of experiments 1 and 2 indicate that descriptive concepts can be imparted by stylistic properties of pictures, discerned by viewers, and ascribed to objects (e.g., advertised products). However, the findings revise a critical inference implied by Meyers-Levy and Peracchio's (1992) research by revealing that such concepts are unlikely to be discerned and used spontaneously. Instead, stylistically imparted descriptive concepts appear to be ascertained only when viewers engage in somewhat extensive processing of the visual stimuli and the concepts conferred by the stylistic properties are otherwise activated. The characterization that processing must be "somewhat," presumably moderately, extensive for this process to occur is noteworthy. This is so because Meyers-Levy and Peracchio's findings observed that viewers whose extensiveness of processing was extremely high actually may make little use of such stylistically imparted descriptive concepts. Instead, they are likely to give greater credence to other conceptual data, such as ad copy, that tend to be perceived as more substantive and diagnostic than the implications of stylistically imparted descriptive concepts. Hence it seems that an inverted U-shaped relationship may exist between the extensiveness of processing and both discernment and use of stylistically imparted descriptive concepts.

The results of experiment 2 add another critical insight to our understanding of stylistic properties. They reveal that the

particular concept imparted by a stylistic property may not be singular and invariable. Specifically, the results of experiment 2 counter extant research by demonstrating that a high, downward-looking camera angle in fact can impart either a relatively negative concept like weakness, as Meyers-Levy and Peracchio (1992) found, or a fairly positive one like naturalness. Which meaning is imparted appears to depend on which concept is cognitively more accessible and on the applicability of the concept to the stimulus.

Together, experiments 1 and 2 also highlight the potential value of examining implicit measures like people's drawings of previously observed stimuli. Such measures can address whether people draw certain inferences spontaneously or merely in response to demand characteristics inherent in explicit measures. Indeed, part of the unique value of such implicit measures lies in the fact that they are relatively free of artifactual biases that often are present in explicit measures. Finally, experiment 2 suggests a novel insight concerning the presence of sequential primes that activate both motivation to process a later presented ad and a descriptive concept that matches the one imparted subsequently by that ad's stylistic property. Such primes may prompt a search for and heightened elaboration of data, namely product-relevant ad material, that potentially could enhance one's understanding of the stylistically imparted descriptive concept that has been ascribed to the product. We suggest that this process accounts for the treatment effects on product-related thoughts and brand name recall that were observed uniquely in experiment 2.

At the same time, the preceding insight draws attention to some challenges and limitations that arise in our work and when studying such issues. One is that multiple, perhaps related descriptive concepts may be activated by a particular stylistic property, making it difficult to identify unambiguously the concept that has been imparted. For example, exposure to a diagonally oriented object may relay not only the concept of dynamism but also the somewhat related concept of creativity. Another challenge that must be grappled with is that an implicit measure that may be employed to tap the descriptive concept imparted by a stylistic property may tap not one but related concepts as well. To illustrate, the implicit measure of the size of an object in a drawing may capture the viewer's apprehension of the stylistically communicated concept of power or, alternatively, that of propriety, a possibly related concept. Such duality may frustrate attempts to identify the precise concept that viewers discerned. Hence, future work is needed to identify methods that will alleviate these sorts of challenges.

Finally, the notion that stylistic properties of visuals can create and relay meaning suggests several fruitful avenues for future research. For example, how do people reconcile the potentially conflicting concepts that complex visual displays may communicate via their many stylistic properties (e.g., their camera angle, lighting, depth of focus, physical orientation)? Further, although we observed that stylistic properties failed to communicate meaning if the concept they imparted was not already fairly accessible in memory,

might exceptions exist whereby the communication of meaning is immune to such moderation? Indeed, suppose that the components of a visual composition were arranged in a dramatically unbalanced manner such that viewers experienced a physiological reaction to the disconcerting imbalance. Might viewers' spontaneous bodily reaction to the imbalance cause the descriptive concept that imbalance communicates (i.e., iconoclasm) to be discerned even in the absence of independent activation of this concept? We hope that other research will pursue these and other questions.

[Dawn Iacobucci served as editor for this article.]

## REFERENCES

- Arnheim, Rudolf (1988), *The Power of the Center*, Berkeley: University of California Press.
- Cacioppo, John T., Richard E. Petty, and C. Kao (1984), "The Efficient Assessment of Need for Cognition," *Journal of Personality Assessment*, 48 (June), 306-7.
- Dondis, Donis A. (1973), *A Primer of Visual Literacy*, Cambridge: MIT Press.
- Edell, Julie A. and Richard Staelin (1983), "The Information Processing of Pictures in Print Advertisements," *Journal of Consumer Research*, 10 (June), 45-61.
- Gombrich, Ernest H. (1973), "Illusion and Art," in *Illusion in Nature and Art*, ed. Richard L. Gregory and Ernest H. Gombrich, London: Gerald Duckworth.
- Goossens, Cees (2003), "Visual Persuasion: Mental Imagery Processing and Emotional Experiences," in *Persuasive Imagery*, ed. Linda M. Scott and Rajeev Batra, Mahwah, NJ: Erlbaum, 129-38.
- Hatcher, Evelyn Payne (1974), *Visual Metaphors: A Methodological Study in Visual Communication*, Albuquerque: University of New Mexico Press.
- Johar, Gita Venkataramani (1995), "Consumer Involvement and Deception from Implied Advertising Claims," *Journal of Marketing Research*, 32 (August), 267-79.
- Josephs, Robert A., R. Brian Giesler, and David H. Silvera (1994), "Judgment of Quantity," *Journal of Experimental Psychology: General*, 123 (March), 21-32.
- Kover, Arthur J. (1995), "Copywriters' Implicit Theories of Communication: An Exploration," *Journal of Consumer Research*, 21 (March), 596-611.
- Kraft, Robert N. (1987), "The Influence of Camera Angle on Comprehension and Retention of Pictorial Events," *Memory and Cognition*, 15 (July), 291-307.
- Kreitler, Hans, and Shulamith Kreitler (1972), *Psychology of the Arts*, Durham, NC: Duke University Press.
- Kress, Gunther and Theo van Leeuwen (1996), *Reading Images*, London: Routledge.
- Massironi, Manfredo (2002), *The Psychology of Graphic Images: Seeing, Drawing, Communicating*, Mahwah, NJ: Erlbaum.
- McQuarrie, Edward F. and David Glen Mick (2003), "Visual and Verbal Rhetorical Figures under Directed Processing versus Incidental Exposure to Advertising," *Journal of Consumer Research*, 29 (March), 579-87.
- Messaris, Paul (1997), *Visual Persuasion: The Role of Images in Advertising*, Thousand Oaks, CA: Sage.
- Meyers-Levy, Joan and Peracchio, Laura A. (1992), "Getting an Angle in Advertising: The Effect of Camera Angle on Product Evaluations," *Journal of Marketing Research*, 29 (November), 454-61.
- Meyrowitz, Joshua (1998), "Multiple Media Literacies," *Journal of Communication*, 48 (Winter), 96-108.
- Mitchell, Andrew A. and Jerry O. Olsen (1981), "Are Product Attribute Beliefs the Only Mediator of Advertising Effects on Brand Attitude?" *Journal of Marketing Research*, 18 (August), 318-32.
- Nelson, Roy Paul (1973), *The Design of Advertising*, Dubuque, IA: Brown.
- Nordhielm, Christie (2002), "The Influence of Level of Processing on Advertising Repetition Effects," *Journal of Consumer Research*, 29 (December), 371-82.
- Peracchio, Laura and Joan Meyers-Levy (1994), "How Ambiguous Cropped Objects in Ad Photos Can Affect Product Evaluations," *Journal of Consumer Research*, 21 (June), 190-204.
- (1997), "Evaluating Persuasion-Enhancing Techniques from a Resource-Matching Perspective," *Journal of Consumer Research*, 24 (September), 178-91.
- Petty, Richard E., John T. Cacioppo, and David Schumann (1983), "Central and Peripheral Routes to Advertising Effectiveness: The Moderating Role of Involvement," *Journal of Consumer Research*, 10 (September), 135-46.
- Pham, Michel Tuan, Joel B. Cohen, John W. Pracejus, and G. David Hughes (2001), "Affect Monitoring and the Primacy of Feelings in Judgment," *Journal of Consumer Research*, 28 (September), 167-88.
- Raymond, Jane E. (2003), "When the Mind Blinks: Attentional Limitations to the Perception of Sequential Visual Images," in *Persuasive Imagery*, ed. Linda M. Scott and Rajeev Batra, Mahwah, NJ: Erlbaum, 57-74.
- Scott, Linda M. (1994), "Images in Advertising: The Need for a Theory of Visual Rhetoric," *Journal of Consumer Research*, 21 (September), 252-73.
- Scott, Linda M. and Rajeev Batra (2003), *Persuasive Imagery*, Mahwah, NJ: Erlbaum.
- Stapel, Diederik A., Willem Koomen, and Kirsten I. Ruys (2002), "The Effects of Diffuse and Distinct Affect," *Journal of Personality and Social Psychology*, 83 (July), 60-74.
- Walford, John (2002), *Great Themes in Art*, Saddle River, NJ: Prentice Hall.