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A Brief Pause between a Tagline and Brand Increases Brand Name Recognition and Preference

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Summary: This paper explores the outcome of the visual encoding of brands in meaningful sentences (i.e. in taglines) on brand name recognition and preference. In this paper, it is shown that, above and beyond the role of conceptual priming during encoding at increasing recognition memory, there is a role of creating a temporal delay, or pause, between meaningful cues in the sentence and a key word (Experiment 1) or brand (Experiments 2a and 3) on memory. The pause is also associated with increased preference towards brands (Experiment 2b). These findings demonstrate a new way to enhance recognition of brand names that is not due to a pure generation effect but rather by increasing attention, which increases processing fluency of the target. Copyright © 2011 John Wiley & Sons, Ltd.

Taglines and slogans are used as part of a firm's marketing activities to communicate a brand's premise and to draw attention to and enhance consumer memory for the brand. With the advent of newer forms of electronic media, there are vast opportunities for marketers to be creative in the manner in which taglines are visually presented either on a screen (e.g. television, computer, mp4 player, etc.) or in any other form of digital media (e.g. electronic displays on gas station pumps, billboard signs, bus shelters, etc.) to enhance memory of the brand. One of the most common forms of digital media is online advertising, which has grown at a tremendous rate in the last few years. Banner advertising is the most common form of online advertising and is found on most, if not all, websites. Typically, a panel is displayed either at the top or at the bottom or at either side of a website, displaying various advertisements that change from time to time. One example reads 'Unlimited local and long distance calling from Vonage', appearing for only 4 seconds. Would viewers explicitly remember Vonage given such a short duration of visual exposure? The interest in this paper is to examine the exposure conditions that lead to changes in consumers' recognition memory and preference from brief visual exposures to keywords and brands in taglines.

Including a tagline ('Unlimited long distance…') with a brand increases the likelihood of memory-based choice for that brand (Lee, 2002). Memory-based choice occurs when a person must first recall the set of options available before making a choice (Lynch & Srull, 1982). The effect on memory-based choice occurs because visual exposure to elements which are conceptually related to the brand ('long distance') assists in the encoding of the brand ('Vonage') and can cue a person to subsequently recall the brand from memory ('long distance'—Vonage) and include it in the consideration set (Nedungadi, 1990). In terms of stimulus-based choice, where options are present in the environment and a consumer must use recognition memory as the basis for the choice (Lynch & Srull, 1982), does visually presenting a tagline containing meaningful cues alongside the brand in an ad increase recognition memory of the brand?

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There are cases in which marketers have used cleverly placed gaps in a tagline in visual advertisements, in between the tagline and the brand. A billboard display recently displaying an ad of a television network (CTV) provides an example. The billboard was dynamic, having multiple panels which were revealed one at a time, starting from the left-most panel. On the left, the words, 'Vancouver is watching' were revealed slowly, and then there was a blank panel, allowing for a pause, followed by 'CTV News'. Given that this was outdoor media, both the tagline and the brand name were presented in silence, allowing viewers of the ad to read it. Would this brief pause in the ad serve to enhance memory for the brand? Although previous research has examined how brief intervals of time presented between two items of information influence retention of auditory information (e.g. in radio advertisements; Olsen, 1997), the use of an interruption in a visual display has not previously been examined.

In this paper, a novel way to create an effect on a consumer's recognition memory is proposed, namely, by inserting a brief temporal delay between a tagline and a brand. That is, the procedure uses a meaningful sentence with a brand but with a brief pause between the tagline and the brand, causing a perception of discontinuity. Note that the insertion of the pause should not cause any difference to conceptual priming (whether there is a pause or no pause, the tagline creates the same amount of semantic priming for the termination; Lee, 2002), and the pause procedure in no way enhances the person's elaboration of the meaning of the brand. Nor should the pause's influence be noticeable to a person; there should be an influence of the pause in the absence of one's knowledge of that influence. It is proposed that an interruption created by a pause—an indirect manipulation—can cause an increase in consumer memory for a brand, using even explicit tests of memory such as brand recognition.

MODERATE INCONGRUITY IN PERCEPTION: A 'PERCEPTION OF DISCREPANCY'

It is well known in the literature that moderate conceptual incongruity, that is, schema incongruity, can result in an increase in attention to a stimulus and that this increased attention leads to a need to resolve the inconsistency and can

be used as a basis of evaluation (Hastie, 1980, 1981; Mandler, 1982; Meyers-Levy & Tybout, 1989). Schema incongruity must be moderate (rather than completely congruent or extremely incongruous) to create this need because complete congruity to a schema does not attract attention, and extreme incongruity causes frustration. It is a moderate level of incongruity that leads to the greatest pleasantness (Berlyne, 1960, 1967).

In light of the prior research on moderate schema incongruity, it is necessary to highlight the tenet that incongruity can be based on not only conceptual primes (named 'moderate schema incongruity' in the literature; Meyers-Levy & Tybout, 1989), but also on perceptual features of a stimulus (e.g. a brief pause in time). Thus, a 'perception of discrepancy' is used when describing the latter to avoid confusion between the two (conceptual versus perceptual) bases of incongruity (see also Whittlesea & Williams, 1998, 2000, 2001a, 2001b).

Whittlesea and Williams (2001a, 2001b) attempted to operationally define a perception of discrepancy using a paradigm which consisted of probe items (e.g. *boat*) following constraining sentence stems (able to be completed sensibly by only a limited number of words) and a pause (e.g. The stormy seas tossed the… *boat*). Using this procedure during a recognition test (whereby some probes were presented in isolation during an earlier study phase that had to be recognized), participants were more likely to claim 'old' for probes following a constraining stem and pause as opposed to a constraining stem and no pause. The constraining stem was thought to create a general, indefinite expectation; the pause, which was only brief, was thought to create a fleeting sense of uncertainty; and the probe was experienced as a validation (see also Whittlesea & Williams, 1998). It was the uncertainty, created by the pause, that caused the sense of alertness, and in the context of a recognition decision, the person experienced a feeling of familiarity (see also Whittlesea, 2004). In fact, according to the discrepancy-attribution hypothesis, when a person experiences a fleeting sense of uncertainty, the person experiences a need to resolve the uncertainty by attributing the uncertainty to the immediate environment (e.g. recognition) while consciously experiencing familiarity (Whittlesea & Williams, 2001a, 2001b).

The effect of presentation of a sentence stem with a pause versus no pause before a brand during encoding on later recognition memory for the brand in isolation has not been previously examined (although see Kronlund & Whittlesea, 2006, Experiment 1, for an examination of the effect of a pause at encoding on later recognition of the entire sentence). Therefore, there is no clear answer to the question does visually presenting a tagline containing meaningful cues alongside the brand increase subsequent recognition memory of that brand in isolation? Based on the results of Lee (2002), it was hypothesized that conceptual priming (a meaningful tagline before the brand during encoding) will lead to increased recognition memory of the brand versus simple perceptual priming (seeing the brand in isolation during encoding). In addition, based on the work of Whittlesea and colleagues, it was hypothesized that conceptual priming (a meaningful tagline before the brand during encoding) with a brief temporal delay (a pause) before the brand may create a perception of discrepancy and draw attention to the termination of the sentence, which may lead to increased recognition memory of the brand versus conceptual priming (a meaningful tagline before the brand during encoding) without a brief temporal delay before the brand.

EXPERIMENT 1: LEARNING WITH AND WITHOUT A PERCEPTION OF DISCREPANCY

These predictions were examined using sentence stems instead of taglines and target words instead of brands and using a one-factor [exposure status during the recognition test (exposed versus not exposed)] design, whereby the level of exposed contained three encoding levels (target in isolation versus stem with no pause before the target versus stem with pause in time before the target). It was predicted that targets appearing after a stem and no pause would be more accurate than memory for isolated targets. It was further predicted that recognition memory for targets appearing after a stem and pause would be more accurate than recognition for targets appearing after a stem and no pause.

Method

Participants

Twenty-two students from Simon Fraser University participated in Experiment 1a, and a different group of 19 were recruited for an unspecified experiment and participated in Experiment 1b for either $5 or course credit.

Procedure

Participants were told that they would be viewing a screen and would later participate in an unspecified test. One hundred and twenty predictive sentence stems [e.g. 'The stormy seas tossed the…' and associated target words (e.g. *boat*)] were obtained from the Appendix of Whittlesea and Williams (2001b). The stems were fairly but not completely predictive of the terminations because the stem could be sensibly completed by many words (e.g. *ship*, *raft*, etc.). For Experiment 1a, of the 120 targets, random assignment placed 60 targets each into the conditions of exposed and not exposed. Within the level of exposed, random assignment placed 20 targets each into the three encoding levels: stem and pause before target, stem and no pause before target, and target in isolation. For the targets placed into the two encoding levels containing sentence stems, the associated stem was included as part of the target set.

During the exposure phase, a computer monitor displayed the 60 target sets associated with the three encoding levels in a random order, each target in capital letters and no delay in between trials. When a stem preceded the target, only the first letter of the stem appeared in capital letters; the stem was otherwise in lower case. Each target set (whether containing a stem or not) was presented in the center of the monitor.

For the stem and pause condition, the procedure exactly matched the pause duration used by Kronlund and Whittlesea (2006). For each of the trials in this condition, the stem was presented on the monitor for 3000 milliseconds with three dots following it. After the stem was read (during the 3000 milliseconds), the stem remained on the monitor,

and the three dots were replaced with the target. This allowed for a pause of varying duration (250–750 milliseconds, depending on the person's reading speed; Kronlund & Whittlesea, 2006); the stem and target remained on the monitor for 1000 milliseconds. Thus, the delay in time (pause) between reading the stem and target onset was of varying duration, depending on the length of the sentence and the speed with which the sentence was read. The total exposure time for each trial was 4000 milliseconds (3000 milliseconds for stem + pause and 1000 milliseconds for target).

For the stem and no-pause condition, the procedure exactly matched that of Kronlund and Whittlesea (2006); the stem and target were shown together for 4000 milliseconds. For the target in isolation condition, the target was presented for 1000 milliseconds.

Once all of the 60 target sets were shown, the monitor read 'Please call the experimenter'; the participant alerted the experimenter. The experimenter told each participant that no stems were to be presented at test; only targets in isolation would appear on the monitor, and they were to indicate whether each target had appeared during the exposure phase or not by pressing a button on a button box. Participants were to press a button labeled 'Old' if the target was shown in the exposure phase, either in isolation or at the end of a stem, and were to press a button labeled 'New' if the target was presented for the first time in the experiment. Due to this explanation, there was a 5-minute delay between the exposure and test phases. During the test, no stems were used. A computer monitor displayed all of the targets shown during exposure (exposed) along with targets not previously shown (not exposed), one by one, in a freshly randomized order. Participants indicated whether each was exposed earlier by pressing a button on a button box.

At the end of the experimental session (for this and all remaining experiments reported in this paper), the experimenter asked participants if they could guess the true purpose of the experiment. No participant was able to deduce the purpose; none noticed the pause manipulation.

Experiment 1b was identical in all ways to Experiment 1a with the exception that the stem and pause condition was replaced by a stem and generate condition. In the stem and generate condition, the monitor displayed the stem for an additional 1000 milliseconds, enough time for participants to actually generate potential completions; participants were asked to make a deliberate mental guess about what single word would be used to complete the sentence, at which point the monitor displayed the actual target for 1000 milliseconds.

Results and discussion

Probabilities of claiming 'old' for Experiment 1a are presented in the top row of Table 1. When an exposed target was attributed an 'old' response, it is a hit. When a non-exposed item was attributed an 'old' response, it is a false alarm. Three comparisons using analysis of variance were carried out. The first compared the exposed/target in isolation condition with the not exposed condition, which acted as a manipulation check and established that participants were accurate at discriminating between exposed and not exposed targets (0.54 vs 0.24), $F(1, 21) = 51.13$, $MSE = 0.02$, $p < .0001$, $\eta^2 = 0.77$. The second comparison compared the exposed/stem and no-pause condition with the target in isolation condition, which established that participants had higher hits after seeing targets with stems versus in isolation (0.68 vs 0.54), $F(1, 21) = 11.84$, $MSE = 0.02$, $p = .002$, $\eta^2 = 0.36$. The third compared the exposed/stem and pause with the exposed/stem and no-pause conditions, which showed that participants had higher hits for targets with stems shown after a pause as opposed to no pause (0.74 vs 0.68), $F(1, 21) = 4.84$, $MSE = 0.01$, $p = .039$, $\eta^2 = 0.18$.

This finding is especially surprising given that participants had only 1000 milliseconds to view the target in the pause condition but had full view of the target for the entire 4000 milliseconds in the no-pause condition. Returning to the Vonage banner ad, it seems reasonable to suggest that the optimal use of the 4-second exposure duration would be to employ a pause between the stem and the brand. In addition, it seems to be the case that the brief pause used in the CTV ad would be effective at increasing memory for CTV relative to if there were no such pause.

This novel finding suggests that there is an effect—created simply by adding a pause—of encoding above and beyond conceptual priming (encoding a brand with a sentence; Lee, 2002) or perceptual priming (encoding a brand with no sentence; Lee, 2002). It is believed that the pause has an influence on memory because it causes a perception of discrepancy, causing increased attention to the target, making the target more likely to be remembered later, even though during the test the target was shown in isolation and so did not have an additional cue to reinstate the encoding process.

One possible criticism of this experiment is that the stem and a pause, instead of simply increasing attention, might allow participants to accurately guess the termination before it is actually presented, which would also lead to better accuracy in the pause condition (the read/generate effect: Slamecka & Graf, 1978; see also Sengupta & Gorn, 2002). That is, performance may be higher because the pause allowed people to generate the termination, which also leads to superior

Table 1. Experiments 1 and 2: recognition claims of terminal targets

Experiment	Condition at exposure				Not exposed
	Generate target after tagline	Tagline with pause before target	Tagline with target	Target only	
1a	n/a	.74 (.03)	.68 (.03)	.54 (.04)	.24 (.03)
1b	.82 (.04)	n/a	.64 (.04)	.54 (.05)	.09 (.02)
2a	n/a	.92 (.02)	.84 (.02)	.75 (.03)	.04 (.01)

Note: Experiment 1 used words as the target; Experiment 2 used brand names as the target. Standard errors are reported in parentheses.

memory performance. A generation process would not entail a role for a perception of discrepancy. Experiment 1b was conducted to test between these two possibilities. It was identical to Experiment 1a except that, when the termination was missing, participants were given extra time to guess what would be used to complete the sentence.

As shown in the second row of Table 1, the resulting pattern of recognition claims was very different from that observed in Experiment 1a. First, there were higher hits for the generate condition in Experiment 1b than the pause condition in Experiment 1a. Second, there were lower false alarms when compared to Experiment 1a. The data pattern of Experiment 1b resembles generation effects reported in the literature (Slamecka & Graf, 1978). An independent samples *t*-test of the difference scores (a measure of discrimination ability; see also Table 2 for signal detection theory measures of discrimination and bias) was carried out between the pause and new conditions for Experiment 1a (no generate instruction; 0.50) versus those between the generate and new conditions for Experiment 1b (generate instruction; 0.73), which revealed a difference in discrimination, $t\,(37) = 3.1$, $p = .004$. Therefore, what happens when the participants are asked to make deliberate guesses about the targets appears to have qualitatively different effects on memory than when there is only a brief pause between the stem and target.

Nonetheless, it is still difficult to rule out the possibility that a 'partial-generation effect' underlies the increased memory performance in Experiment 1a. It may be possible that what occurred in Experiment 1b, with deliberate instructions to generate a completion and with ample time, was that this 'partial-generation effect' was allowed to play out its full potential and therefore there was even better memory performance in Experiment 1b than in Experiment 1a. Taken together, participants had superior memory for targets following a stem and pause, which acted to increase attention to the target, increasing its memorability.

EXPERIMENT 2: REMEMBERING THE SPECIFIC BRAND NAME AFTER A PERCEPTION OF DISCREPANCY

The results of Experiment 1 suggest an effect of encoding (with the insertion of a pause in time) above and beyond conceptual priming (encoding a brand with a sentence; Lee, 2002) or perceptual priming (encoding a brand in isolation; Lee, 2002) and highlights the value of drawing attention to concepts like brand names using cleverly placed perceptual discontinuities. However, it is possible that, rather than simply increasing attention, the pause allows partial generation of the theme of the sentence such that any termination (i.e. any brand) that fits in with that theme may be better remembered. Even if (or maybe especially if) participants partially generated the wrong brand, there could be a surprise effect at work, leading to increased attention, and even higher memory for these mis-predicted brands (Whittlesea & Williams, 2001b). If that is the case, increasing attention to these brands (presented after a pause in time) may lead to higher processing fluency of the brand, which can be indexed by the relative ease of processing these brands during the remembering test (Whittlesea & Leboe, 2003) versus the brands that earlier appeared with a tagline and no pause.

To test this notion, random assignment placed one of three potential brands to the end of each tagline while keeping the conceptual meaning of the tagline the same. For example, the tagline, 'Unlimited long distance' could be completed by many different brands (AT & T, Verizon, etc.) although still being the same theme (telecommunications). Using this method of random assignment of a brand to a tagline makes it unlikely for participants to generate the specific brand name that is actually used in the pause condition; however, it could create a partial generation that is subsequently violated. This sense of surprise may lead to increased attention towards the brand, leading to better encoding and subsequently higher processing fluency. Would the effect of a pause in time after a tagline but before a brand serve to increase processing fluency of the brand?

Experiment 2a used a one-factor [exposure status during the recognition test (exposed versus not exposed)] design, whereby the level of exposed contained three encoding levels (brand in isolation versus tagline with no pause before brand versus tagline with pause before brand). It was predicted that brands appearing after a tagline and no pause would be remembered more accurately than isolated brands would be. It was further predicted that recognition memory for brands appearing after a tagline and pause would be more accurate than recognition for brands appearing after a tagline and no pause.

Many of the same variables that affect recognition also affect preference (e.g. presentation duration, primes, etc.;

Table 2. Experiments 1 and 2: d_L and C_L

Experiment	Condition at exposure							
	Generate target after tagline		Tagline with pause before target		Tagline with target		Target only	
	d_L	C_L	d_L	C_L	d_L	C_L	d_L	C_L
1a	n/a		2.54	.08	2.14	.28	1.51	.59
1b	3.19	−.55	n/a		1.82	.12	1.23	.42
2a	n/a		6.48	.23	5.52	.66	4.78	1.02

Note: Experiment 1 used words as the target; Experiment 2 used brand names as the target. d_L and C_L are signal detection theory measures of discrimination and bias, computed using the logistic distribution (Snodgrass & Corwin, 1988). A higher d_L represents better discrimination ability, and a higher C_L represents more liberal bias.

Reber, Schwarz, & Winkielman, 2004), such as indirect factors including the expectations developed about the stimulus and the attributions that are made in light of those expectations (Willems, van der Linden, & Bastin, 2007). For example, solving anagrams leads to increases in both recognition memory and preference of brands (Kronlund & Bernstein, 2006). Previous research shows that including a meaningful, predictable context to a brand which immediately follows it increases brand evaluations (Lee & Labroo, 2004). However, the question that remains is whether visually presenting a tagline containing meaningful cues alongside the brand, with a pause (versus no pause), increases subsequent preference ratings towards that same brand when the brand is encountered in isolation. In addition, does adding a pause between a tagline and a brand increase preference fluency, which is the subjective feeling that forming a preference is easy (Novemsky, Dhar, & Schwarz, 2007)? As such, Experiment 2b used the exact same design and procedures as Experiment 2a, with the exception that participants were asked to make a preference judgment instead of a recognition decision.

Method

Participants

In Experiment 2a, a different group of 25 students from Simon Fraser University (from those who participated in Experiment 1) participated for either $5 or course credit. In Experiment 2b, 26 students from Brock University participated for either $5 or course credit.

Procedure

In Experiment 2a, 60 brand name categories (e.g. jeans, cola, detergent, etc.) were compiled. For each of the 60 categories, a tagline was created that involved a sentence stem with a conceptual cue that implies a product category (e.g. 'Her dad's favorite jeans are his pair of…'). Three exemplars per category were also chosen. For example, the tagline 'Mom buys all her groceries at…' was associated with the exemplars 'Safeway', 'Extra Foods' and 'Superstore'[1]. Random assignment of one of the three exemplars per category per participant took place, whereby participant #1 may have been assigned Levis, Safeway, Tide and Craven A, and participant #2 may have seen Wrangler, Pepsi, Sunlight and Marlboros and so on, along with the tagline for that category. Of these 60 exemplars, random assignment placed 30 exemplars each into the conditions of exposed and not exposed. Within the exposed condition, random assignment placed 10 exemplars each into the following encoding conditions: tagline and pause before brand, tagline and no pause before brand and brand in isolation. The procedure was identical to that of Experiment 1a, with the exception that in the instructions, 'words' was replaced with 'brands.' Latencies for making the recognition decision were also recorded.

For Experiment 2b, the stimuli and procedure were identical to Experiment 2a, with the exception that participants were asked to indicate their preference rating for the brand instead of recognition. For the preference rating, the procedure matched that used by Kronlund and Bernstein (2006). Participants typed their response on a computer keyboard to 'How much do you prefer this brand over a competing brand of the same category? 1 = not at all; 7 = very much.' The test phase was self-paced. Latencies for making the preference ratings were also recorded.

[1] Interested readers can contact the author for the full list of taglines and brands.

Results and discussion

The results of Experiment 2a fully replicated those of Experiment 1a. Probabilities of claiming 'old' are presented in the bottom row of Table 1. Three comparisons using analysis of variance were carried out: the first was a manipulation check and compared the exposed/brand in isolation with the not exposed condition, which established that participants were accurate at discriminating between exposed and non-exposed brands (0.75 vs 0.04), $F(1, 24) = 324.60$, $MSE = 0.02$, $p < .0001$, $\eta^2 = 0.93$. The second compared the exposed/tagline and no pause with the brand in isolation condition, which established that participants benefited from seeing brands with taglines versus in isolation (0.84 vs 0.75), $F(1, 24) = 12.87$, $MSE = 0.01$, $p = .001$, $\eta^2 = 0.36$. The third compared the exposed/tagline and pause with the exposed/tagline and no-pause conditions. Participants had higher hits for brands with taglines after a pause versus no pause (0.92 vs 0.84), $F(1, 24) = 8.40$, $MSE = 0.01$, $p = .008$, $\eta^2 = 0.24$.

Given that one of three potential candidates was employed (chosen at random for each category, for each participant) after each tagline, although keeping the conceptual meaning of the sentence the same, it is unlikely that participants could have generated the specific brand name that was actually presented in the pause condition; however, it is possible that participants may have partially generated the completion, and although the theme was correctly expected, the specific brand name was not entirely predicted from the tagline. This process may have created a feeling of surprise upon seeing the termination, causing increased attention towards the brand in the pause condition. This finding replicates Experiment 1a, demonstrating that a brief pause during the encoding process enhances memory above and beyond conceptual priming alone (encoding a brand with a sentence; Lee, 2002). Returning to the example introduced at the outset of the paper, these data suggest that the most effective use of the total exposure time of the 4-second Vonage ad would be to present the tagline, followed by a brief pause in time, and end with 'Vonage'. These conditions lead to better memory for the brand as opposed to presenting the entire message all at once. By using the results of this research, marketers can tailor their communications in a fashion to better allocate marketing dollars.

Response latencies corresponding with claims of 'old' are presented in Table 3. Of interest were the latencies for recognition for the exposed/tagline and pause condition (1325.15), which were reliably faster than latencies for the exposed/tagline and no-pause condition (1527.44), $F(1, 24) = 4.73$, $MSE = 511473.67$, $p = .04$, $\eta^2 = 0.18$. This finding demonstrates the possible role of processing fluency, created by the

Table 3. Experiment 2a: response latencies in milliseconds for recognition decision on brands

Condition at exposure			Not exposed
Tagline with pause before brand	Tagline with brand	Brand only	
1325.15 (77.18)	1527.44 (101.05)	1514.32 (84.93)	1622.49 (16.64)

Note: Standard errors are reported in parentheses.

Table 4. Experiment 2b: preference ratings and response latencies towards brand names

	Condition at exposure			Not exposed
	Tagline with pause before brand	Tagline with brand	Brand only	
Preference ratings (out of 7)	4.05 (.26)	3.79 (.28)	3.89 (.27)	3.27 (.24)
Response latencies (in milliseconds)	2619.17 (523.83)	2840.40 (568.08)	2659.54 (106.36)	2824.54 (564.80)

Note: Standard errors are reported in parentheses.

pause during encoding. The remaining latencies were not reliably different from one another (all $ps > .15$).

Preference ratings for Experiment 2b are depicted in the top row of Table 4. These data closely matched the recognition data and demonstrate that there is an effect of the pause on brand evaluation. Three comparisons using analysis of variance were carried out: the first compared the exposed/brand in isolation with the not exposed condition, which established that participants had higher preference for exposed than non-exposed brands (3.89 vs 3.27), $F(1, 25) = 5.15$, $MSE = 0.98$, $p = .032$, $\eta^2 = 0.17$ (a basic mere exposure effect; Zajonc, 1968). The second compared the exposed/tagline and no pause with the brand in isolation conditions, which showed the same level of preference (3.79 vs 3.89), $F(1, 25) < 1$. The third compared preference ratings for the exposed/tagline and pause with the exposed/tagline and no-pause conditions. Participants had higher preference for brands with taglines after a pause versus no pause (4.05 vs 3.79), $F(1, 25) = 5.00$, $MSE = 0.18$, $p = .035$, $\eta^2 = 0.16$.

Thus, participants had higher brand evaluations for brands following a tagline and pause versus when there was no pause. This finding suggests an effect of presentation method (the pause) above and beyond conceptual priming (encoding a brand with a sentence; Lee, 2002) or perceptual priming (encoding a brand in isolation; Lee, 2002) on brand evaluation (Lee & Labroo, 2004) and highlights the value of drawing attention to concepts like brand names using cleverly placed perceptual discontinuities.

Is the effect of the pause on preference ratings related to preference fluency? One possible index of preference fluency is reaction time to making a preference judgment. Response latencies corresponding with preference ratings are presented in the bottom row of Table 4. Of interest were the latencies for preference ratings for the exposed/tagline and pause condition (2619.17), which were faster than latencies for the exposed/tagline and no-pause condition (2840.40), $F(1, 24) = 3.49$, $MSE = 611772$, $p = .07$, $\eta^2 = 0.26$, although this finding failed to reach conventional levels of statistical significance. This finding demonstrates the possible role of preference fluency, created by the pause during encoding, in creating the effect in preference towards the brand[2]. The remaining latencies were not reliably different from one another (all $ps > .10$).

The finding of increases in both recognition and preference of brand names from having a brief pause in time between a tagline and a brand during the initial encounter with the brand can be added to the growing literature on enhancing memory for brands (Kronlund & Bernstein, 2006; Mantonakis & Yoon, 2009). Returning to the Vonage and CTV ads mentioned earlier, it seems reasonable to suggest that not only would introducing a brief pause between the tagline and the brand lead to increased recognition rates for these brands, but it would also lead to increased preference ratings towards these brands.

EXPERIMENT 3: REPEATED BRAND NAMES

In typical marketplace conditions, presumably when a slogan is first encountered by a consumer, the consumer encodes it and processes it. As the results of Experiment 2 demonstrate, brands appearing after a tagline and pause are remembered better relative to when there is no such pause. However, what about a situation when a consumer subsequently encounters the same slogan with a pause, on a second occasion? Is there the same memory advantage for that brand, as opposed to the case of a repetition for a brand with a tagline and no pause? Judgments of repetition *per se* are not of interest, but rather, the interest is in people's responses to situations where they see a brand twice, with a pause on both occasions.

[2] An analysis was conducted to determine whether there was evidence that reaction time could be interpreted as a mediator of the effects of the pause manipulation on reaction times. One approach was hierarchical linear multilevel modeling (Hox, 2002). This involved comparing a series of regression model equations to test, first, for an effect of reaction time on preferences, within pause conditions ($t(24) = 1.46$, $p = .14$, non-significant) and second, testing whether the difference between pause conditions is reduced in value or no longer significant when controlling for reaction time ($t(24) = 2.20$, $p = .04$, significant). These results are inconsistent with the conclusion that reaction time mediates the effects of the pause manipulation on preferences (an alternative analysis was also conducted, following the proposal in Judd, Kenny, & McClelland, 2001. This analysis confirmed the essential conclusions of the analysis report here.).

To investigate this, the once-versus-twice task was employed (Kronlund & Whittlesea, 2005, 2006). Brand names were presented at exposure after taglines, either after a pause in time or no pause and either once or twice. Thus, Experiment 3 used a two-factor within-subjects design with 'repetition' ('once' versus 'twice') and pause (tagline with no pause before brand versus tagline with pause before brand) as factors, producing four conditions: once presented sentence with a pause; once presented sentence with no pause; twice presented sentence, both occurrences with pauses; and twice presented sentence, both occurrences with no pause.

Method

Participants

A different group of 25 students from Simon Fraser University (from those who participated in Experiments 1 and 2a) participated for either $5 or course credit.

Procedure

The stimuli were identical to those used in Experiment 2a. The procedure matched that of Kronlund and Whittlesea (2006, Experiment 2b). The monitor displayed a complete sentence on every trial in the exposure phase, half on only one occasion and half on two occasions. Crossed with that manipulation, the monitor displayed both of the occurrences of a twice presented sentence, or the only occurrence of a once presented sentence, with a pause on half of the trials. On trials without a pause, the monitor displayed the tagline and brand together for 4000 milliseconds. On the trials with a pause, the monitor displayed the tagline for 3000 milliseconds before displaying the brand, in capital letters, for 1000 milliseconds. The four conditions of Experiment 3 were: single presentation of a sentence without a pause; single presentation of a sentence with a pause; double presentation of a sentence, with a pause on both occasions; and double presentation of a sentence, without a pause on either occasion. Random assignment placed brands into conditions and determined presentation order. During the test phase, the monitor displayed all brands shown during exposure (in a freshly randomized order). Brands were presented in isolation during the test phase; participants responded 'yes' or 'no' to 'Did this brand occur twice?' When a brand was presented twice, a 'yes' was a hit; when a brand was presented once, a 'yes' was a false alarm (Kronlund & Whittlesea, 2006).

Results and discussion

Results are summarized in Table 5. As a manipulation check, it was observed that participants were successful at the discrimination task, judging twice presented brands to have occurred twice more often than once presented brands (0.74 vs 0.09), $F(1, 24) = 274.41$, $MSE = 0.04$, $p < .0001$, $\eta^2 = 0.92$. Compared to the no-pause condition, presenting a pause on both occurrences of twice presented brands increased hits (0.80 vs 0.68), $F(1, 24) = 18.41$, $MSE = 0.01$, $p < .0001$, $\eta^2 = 0.43$; but presenting a pause with once presented brands did not increase false alarms (0.09 vs 0.08), $F(1, 24) < 1$. Thus, the pause serves to increase accurate remembering in the absence of creating illusions of repetition.

GENERAL DISCUSSION

In three experiments, it was demonstrated that (a) meaningful cues can lead to increases in recognition memory, which is involved in stimulus-based choice (Lee, 2002); (b) above and beyond the role of meaningful cues, there is a role of a temporal delay (a pause) within the meaningful cues, which increases recognition memory and preference towards brands; and (c) the pause has an effect on recognition memory by creating a perception of discrepancy. It is argued that a perception of discrepancy from the environment can act to increase attention towards a brand, allowing it to be processed more easily at a later time, such that it is remembered more accurately (Experiments 1a, 2a, and 3) and is associated with higher preference (Experiment 2b). The results add to the literature the notion that a brief perception of discontinuity can act to enhance brand name recognition and evaluation.

It is important for marketers to consider all the various ways in which recognition memory for brands can be influenced. In this paper, it is argued that adding a pause between a tagline and a brand is one new way to enhance the remembering process and to increase preference. This finding adds to the literature on consumer memory, which has established that memory for brands can be enhanced through revelation (solving an anagram prior to the recognition decision; Kronlund & Bernstein, 2006), generating the brand in an ad (cf. Slamecka & Graf, 1978; Sengupta & Gorn, 2002; McCann, 1995), creating encoding variability (presenting the same brand in different ways; Singh, Linville, & Sukhdial, 1995; Unnava & Burnkrant, 1991), enhancing encoding specificity (matching the type of cue and affect during encoding and remembering; Friestad & Thorson, 1993; Morrin & Ratneshwar, 2003; Tulving & Thompson, 1973) and spacing versus massing the exposure of brands (Appleton-Knapp, Bjork, & Wickens, 2005).

Understanding consumer memory is important for managers, especially those developing strategies for branded items (Aaker, 1991; Keller, 1993, 1998). Making a brand accessible in memory substantially increases that brand's likelihood of

Table 5. Experiment 3: judgments of prior re-occurrence of brand names presented after taglines

Number of presentations	Sentence with	Sentence	Marginal Means
	Pause before Target	With Target	
One (false alarms)	.09 (.02)	.08 (.02)	.09
Two (hits)	.80 (.04)	.68 (.04)	.74
Marginal means	.45	.38	

Note: Standard errors are reported in parentheses.

being included in the consideration set (Nedungadi, 1990); such salience (or which brands consumers are likely to think about; Miller & Berry, 1998) drives market share differences (Ehrenberg, Barnard, & Scriven, 1997; Miller & Berry, 1998).

In addition, it is important for marketers to consider all the various ways in which brand evaluation can be influenced. In many situations, the same variables that influence brand recognition also influence brand preference. For example, solving an anagram in the context of a brand leads to increases in both brand name recognition and preference (Kronlund & Bernstein, 2006). In this paper, it is argued that adding a brief temporal delay between a tagline and a brand is one new way to enhance both brand recognition and brand evaluation. This finding adds to the literature on brand evaluation, which has established the effects of conceptual and perceptual priming on brand evaluation (Lee & Labroo, 2004) and consumer choice (Berger & Fitzsimons, 2008).

Limitations and future directions

In these studies, brands were presented only visually. It is not clear how the results of these studies extend to the usefulness of a pause in voice ads (Chattopadhyay, Dahl, Ritchie, & Shahin, 2003) or how the pause interacts with spoken versus written sentences (Tavassoli, 1995). If there is repetition using a pause in voice ads, would the effect of the pause disappear? Exploring the use of a pause in these domains is an important direction for future work in this area. Another important question is to what extent the pause effect is different from any other attention-enhancing manipulations, such as when a brand is presented in bold, with a larger font or with flickering.

This is not to say that the results of these experiments are not important; brands that have increased memory accessibility have an advantage to less accessible brands (Nedungadi, 1990); advertisers are interested in ways to enhance memory for actual brand names in ads, as opposed to the actual ad itself (Kirshnan & Shapiro, 1996). Very little work in cognitive psychology has examined illusions of preference (Kronlund & Bernstein, 2006).

Managerial implications

Many forms of digital media offer the opportunity for marketers to use dynamic forms of display. Television and web advertisements often contain written sentences ending with key words (e.g. Minivan) or brand names (e.g. Windstar). The results of the current research introduce the notion that marketers should consider the basic perceptual processes that consumers engage in when reading such ads. This is especially important in light of recent trends for traditional ad agencies offering 'automated ad creation': where some ad agencies, such as Omnicom Group, offer automotive advertisers a 'Pick 'n' Click' option to tailor their online messages.

The spot for the Toyota Camry provides an example of an ad employing copy with a tagline to present the brand name in question. At the end of each spot of the campaign, the tagline 'The modern family sedan' appears, and following a brief pause in time, the brand name 'Camry' appears adjacent to the tagline. Both the tagline and the brand name are presented in silence, allowing viewers of the ad to read it and to encode the brand in a way that can later be remembered. There are additional areas where there are additional managerial applications for these findings. For example, traditional print media, including billboard signs, are now encompassing digital elements. Many outdoor billboards now have panels that are revealed one at a time. Many print ads using such panel displays employ a tagline followed by a major brand. Once all panels are revealed, the process of revealing begins again—featuring the offering—after only seconds. It is suggested that the optimal exposure method, given only about 4 seconds, would be to present the tagline, followed by a brief pause, and end with the brand. These conditions lead to better memory for the brand as opposed to presenting the entire message all at once. By using the results of this research, marketers should be able to tailor their marketing efforts in a fashion to better allocate marketing dollars in an era of shrinking budgets.

Conclusion

The effectiveness of the presentation of brand names in taglines, although used as a technique in advertisements, has not been examined empirically. The experiments reported provide insights into the underlying cognitive mechanisms involved when consumers encounter such words and brands in ads, and suggest that the optimal presentation method for brands with taglines is through the use of a pause between the tagline and the brand. The effect on consumer memory and preference of encountering a brief temporal delay, creating a perception of discrepancy during an original encounter with a word or brand, was investigated. This experience of seeing a pause increased the accuracy of recognition and preference of the brands even though the total exposure time of the brand with a pause (1 second) was shorter relative to the exposure time for the brand in the no-pause condition (4 seconds). It was found that adding a pause before a brand name increases the speed with which recognition judgments as well as preference judgments are made. This finding is important for practitioners as many consumer buying decisions are made in the moment, without much time for deliberation. In conclusion, a perception of discrepancy in an initial encounter with a keyword or brand in an ad is a valuable aid to memory and can lead to increases in preference.

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