

Promoting Pi Day: Consumer Inferences about Special Day-Themed Promotions

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Abstract

In the age of the Internet, where marketers can ensure that a promotion is distributed on a specific day, firms increasingly offer promotions around “special days” (e.g., a 31.4% discount for Pi Day on March 14th). This research explores the effectiveness of such special day promotions. Across field and lab studies, we demonstrate that when consumers infer marketers to be creative for offering special day promotions, this inference results in more positive evaluations of the promotion and increased purchase intentions.

Keywords: marketplace metacognition, inference-making, promotions

Using promotions to attract customers is so prevalent that it takes something special for a given promotion to stand out (Kalwani and Yim 1992). In the age of the Internet, where marketers can ensure that a promotion is distributed on a specific day, firms now offer more promotions around “special days” (e.g., a 31.4% discount for Pi Day on March 14th) in addition to typical holiday promotions (e.g., standard Christmas discounts). Are such special day appeals effective? This research explores the effectiveness of special day promotions and outlines important boundary conditions for their effectiveness. In doing so, we seek to understand a new type of creativity in promotions where marketers attach such appeals to temporal events that are not typically associated with promotions.

THEORETICAL BACKGROUND

Research on “marketplace metacognition” demonstrates that consumers often think about and draw inferences from marketers’ actions and intentions (Wright 2002). The broadest

example of a consumer employing marketplace metacognition is within the context of persuasion knowledge. When consumers are exposed to an advertisement, they might make an inference about the marketer's intention—was the marketer trying to be helpful, just trying to make a sale, etc. (Friestad and Wright 1994)? Similarly, if a firm spends heavily on advertising costs, consumers might infer that the marketers have confidence in their product and ultimately conclude that it must be a high quality product (Kirmani and Wright 1989). We propose that special day promotions lead consumers to make inferences about the marketer's creativity, which then affect their evaluation of the promotion itself and ultimately their intentions to use the promotion. The literature on metacognition more broadly illustrates that people are particularly likely to draw inferences about experiences that unexpected/atypical (Schwarz 2004). Because consumers perceive special day promotions to be atypical (confirmed in a pretest below), we propose that consumers are especially likely to make inferences about the marketers behind them.

Specifically, we suggest that consumers infer that the marketer is creative when they encounter a special day promotion (subject to boundary conditions on which we elaborate below). In other words, consumers perceive the marketers to have put some creative effort into the promotion by linking it to a special day. Based on past work showing that consumers often reward marketers for their effort (e.g., by adopting an increased willingness-to-pay for products when they think marketers put extra effort into designing product displays; Morales 2005), we predict that consumers reward marketers for their creative effort in offering special day promotions. That is, when consumers infer marketers to be creative for offering special day promotions, this inference results in more positive evaluations of the promotion itself and increased purchase intentions.

PILOT STUDY

To begin, we conducted a pilot study to confirm that offering promotions on special days is seen as atypical, which should make it more likely for consumers to draw inferences about the marketer behind the promotion (Schwarz 2004).

All participants ($n = 150$ Mturkers) viewed a randomized list of eleven holidays, which included five traditional holidays that have historically been used for promotions (Labor Day, Memorial Day, Fourth of July, Black Friday, and Christmas), and five special days not typically associated with promotions (Pi Day, Star Wars Day, National Go Barefoot Day, and National Food Day). As a final special day, the list also included “a company-specific holiday (e.g., the birthday of a company mascot).” Participants first indicated how many companies they typically see using each of the holidays for promotions ($1 = I$ see no companies using this holiday for promotions, $7 = I$ see many companies using this holiday for promotions) as a measure of how atypical each holiday was. Next, they indicated how creative it would be for a company to use each of the holidays for a promotion ($1 = Not$ creative at all to use this holiday, $7 = Very$ creative to use this holiday).

First, we conducted factor analyses to provide support for the list of traditional holidays versus special days. Factor analysis using participants’ report of how many companies use each holiday yielded two factors (eigenvalues > 1). Indeed the five traditional holidays loaded onto one factor while the six special days, including the company-specific special day, loaded onto a second factor. The same two factors emerged using participants’ report of how creative it would be to offer a promotion on each of the days.

ANOVA then revealed that participants see significantly fewer companies offering promotions on the special days ($M = 2.13$) than on the traditional holidays ($M = 5.98$; $F(1, 149) = 1010.82, p < .0001$). Therefore, in support of our theorizing, participants perceived offering promotions on the special days to be more atypical. Participants also perceived offering a promotion on special days to be significantly more creative ($M = 4.82$) than on the traditional holidays ($M = 2.82$; $F(1, 149) = 102.66, p < .0001$), providing initial support for our theorizing that special day promotions lead consumers to infer that the marketer is creative.

STUDY 1

The goal of study 1 was to provide an initial test of our hypothesis in a field setting. We test the effectiveness of a special day promotion (versus a standard promotion) using a company-specific special day. Customers ($n = 239$) of a small company that sells dog gear received one of two versions of a promotional email. In the special day promotion condition, they saw a 25% discount on dog gear in honor of the anniversary of the day the company rescued its mascot (a dog). The email in the standard promotion condition contained a 25% discount for a standard one-day sale, with no mention of the special day. We then examined unique clicks on a “shop now” link in the email.

Customers in the special day promotion condition were significantly more likely to click on the shop now button compared to those in the standard promotion condition (19.30% vs. 10.00%; $\chi^2 = 4.16, p < .05$). Furthermore, the 19.30% click rate in the special promotion condition is greater than the average click rate of all past standard promotions by the company (which the owner indicated was approximately 10%). Additionally, although we are unable to

statistically analyze the aggregate sales data provided, the special day promotion condition yield \$95 in sales, compared to \$0 in the standard promotion condition. Given the small customer distribution list, the owner reported being pleased with this conversion. These results provide initial support that special day promotions lead to increased purchase intentions compared to standard promotions.

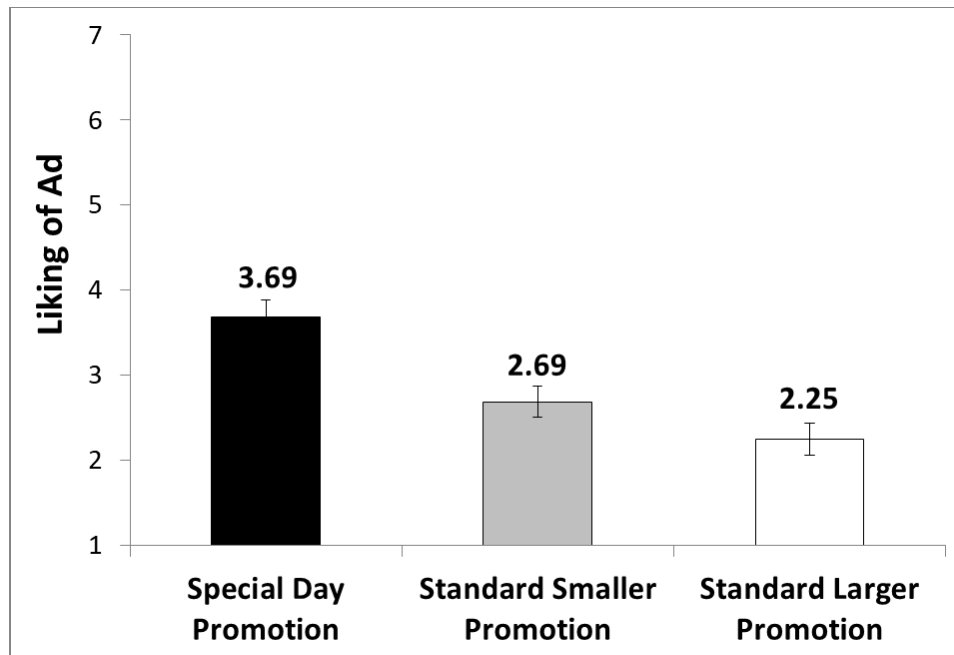
STUDY 2

Study 2 tests how consumers evaluate a special day promotion compared to (1) a standard promotion that is a slightly smaller percentage discount and (2) a standard promotion that is a slightly larger percentage discount. This study was conducted in early April and uses Pi Day (March 14th) as the special day. Participants ($n = 171$ undergraduates) in all three conditions imagined receiving an email promotion for a clothing retailer on March 14th. In the special day promotion condition, participants saw a 31.4% discount for an “Ultimate Pi Day” one-day sale. In the standard smaller [larger] promotion condition, they saw a 30% [35%] discount for just an “Ultimate” one-day sale. Participants then reported how much they liked the promotional ad (1 = *Not at all*, 7 = *Very much so*).

The overall ANOVA model was significant ($F(2, 168) = 15.00, p < .0001$). Pairwise comparisons using Bonferroni adjustments revealed that participants in the special day promotion condition had significantly more positive evaluations ($M = 3.49$) compared to participants in the standard, smaller promotion condition ($M = 2.29; t(168) = 5.30, p < .0001$), and participants in the standard, larger promotion condition ($M = 2.14, t(168) = 5.88, p < .0001$). Participants in the two standard promotion conditions showed no difference in their evaluations

($t(168) = 1.66, ns$). Thus, consumers appear to even like a special day promotion more than an objectively better promotion not attached to a special day. Results are illustrated in figure 1.

Figure 1. Study 2: Participants like special day promotion more than a standard smaller promotion and a standard larger promotion



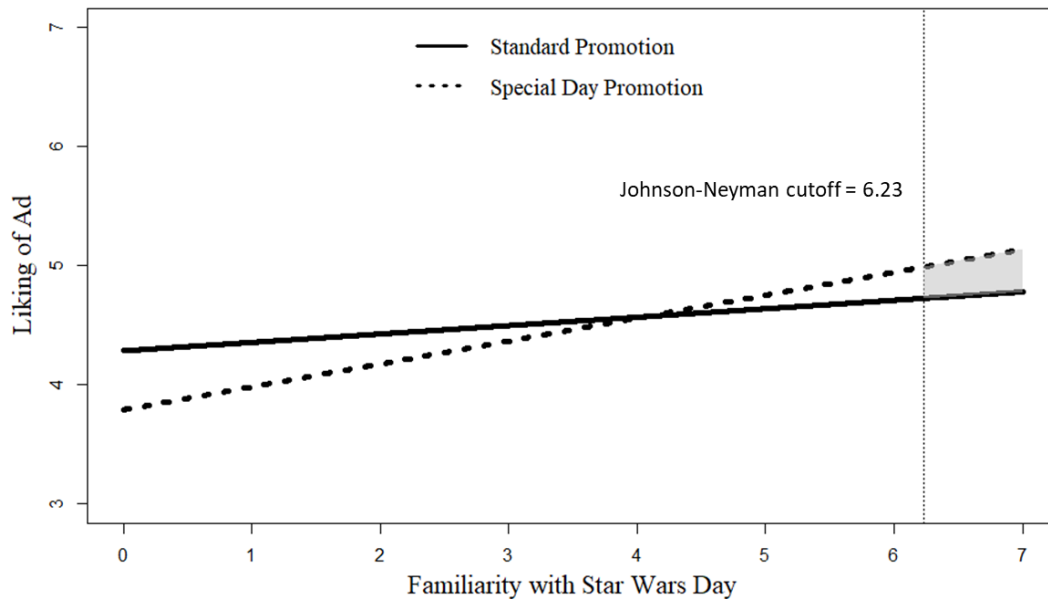
STUDY 3

Study 3 extends the findings using a different special day (Star Wars Day) and a non-percentage discount held constant across conditions. It was conducted in real-time on the actual special day (May 4th). We also provide initial evidence for the underlying process by presenting an important boundary condition. If consumers do not understand the marketer's creativity in delivering a promotion around the special day, they should not evaluate a special day promotion more favorably. We operationalize this by measuring consumers' familiarity with the special

day; only consumers who are familiar with Star Wars Day should understand a marketer's creativity in offering the special day promotion.

All participants ($n = 152$ Mturkers) viewed a promotion for Lego valid on May 4th only: "Buy any 3 Star Wars Lego items, Get the 4th Star Wars Lego item FREE." In the special day promotion condition, the promotion was linked to "Star Wars Day" and the accompanying slogan, "May the Fourth Be With You." In the standard promotion condition, the advertisement included no mention of this special day or slogan. Participants then evaluated the promotional ad using the same measure from study 1. They also indicated how familiar they were with Star Wars Day (1 = *Not at all familiar*, 7 = *Very familiar*). As expected, regression revealed a significant interaction between the promotion manipulation and participants' familiarity with the special day ($\beta = 0.12$, $t(148) = 2.44$, $p < .05$). Among participants who were familiar with the special day (above 6.23; ~38% of participants), those who viewed the special day promotion had significantly more positive evaluations than those who viewed the standard promotion. This pattern attenuated as familiarity declined and began to reverse at low levels of familiarity (below 1.15; ~18% of participants). Thus, special day promotions are only effective when consumers can understand the marketer's creativity and might actually backfire otherwise. Results are illustrated in figure 2.

Figure 2. Study 3: Participants like a special day promotion more than a standard promotion only when they understand the marketer's creativity



STUDY 4

In study 4, we establish direct process evidence that inferences about the marketer’s creativity drive consumers’ liking of special day promotions. This study further extends the findings using a different special day (National Go Barefoot Day) and a percentage discount held constant across conditions. It was conducted in real-time on the actual special day (June 1st). We also show the effect of special day promotions on downstream purchase behavior by testing a full serial mediation model. Finally, we rule out the possibility that consumers react more favorably towards a promotion attached to any event (specifically a more traditional promotional occasion—a start of summer sale). We expect that participants like a special day promotion more than both a traditional event promotion and a promotion not attached to any event.

All participants viewed a one-day 30% discount for a shoe store. Participants in the

special day promotion condition viewed a National Go Barefoot Day sale with the tagline “You might not need shoes today, but we’ve got you covered for tomorrow!” Participants in the traditional event promotion condition viewed a Start of Summer sale (“With summer in sight, we’ve got you covered for new shoes!”). In the no event promotion condition, participants saw a standard 30% off sale not linked to any event. Participants reported their liking using the same measure from previous studies. Next, they reported their perceptions of the marketer’s creativity (1 = *Not at all*, 7 = *Extremely*; $r = .88, p < .0001$): “The advertiser is creative,” and “The advertiser is clever.” They also indicated their likelihood of clicking on the Shop Now button in the email (1 = *Extremely unlikely*, 7 = *Extremely likely*).

To analyze the between-subjects conditions, we created two orthogonal between-subjects contrasts comparing (1) the special day promotion to both the traditional event promotion and no event promotion and (2) the traditional event promotion to the no event promotion condition (table 1). We expected to observe greater liking for the ad in the special day promotion condition compared to both the traditional event promotion and no event promotion conditions and no difference in liking between the traditional event promotion and no event promotion conditions.

Table 1

Study 4: Orthogonal Between-Subjects Contrast Codes

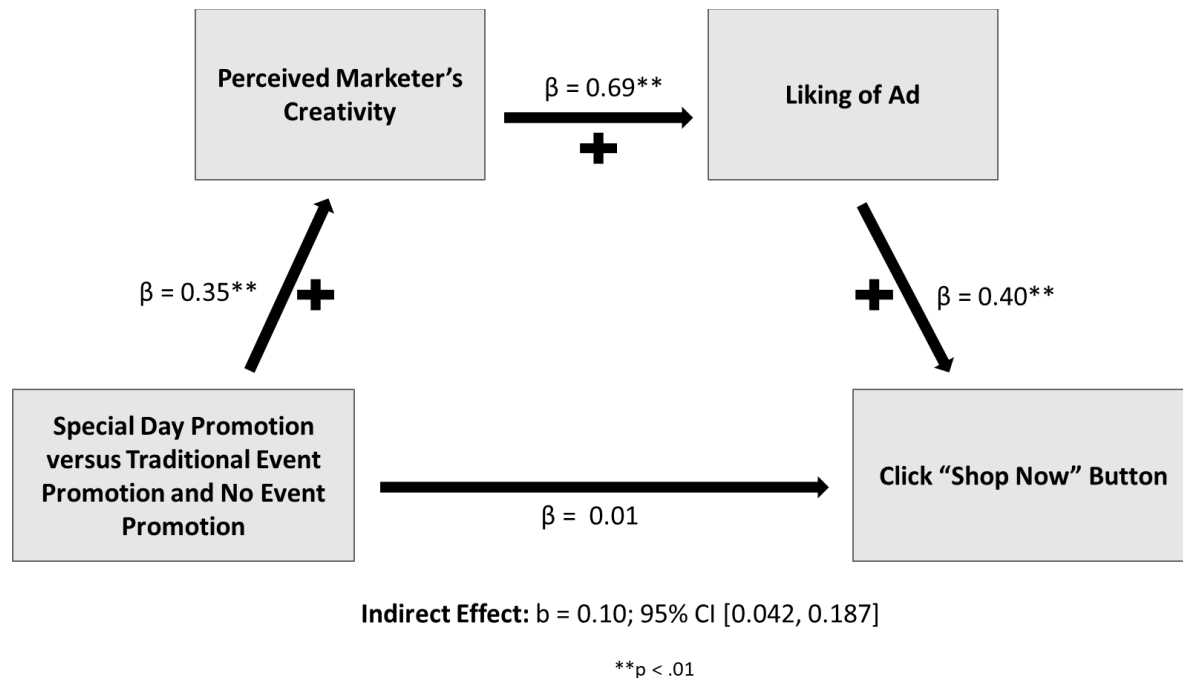
	Special Day Promotion	Traditional Event Promotion	No Event Promotion
Contrast Code 1 Special Day Promotion versus Traditional Event Promotion and No Event Promotion	2	-1	-1
Contrast Code 2 Traditional Event Promotion versus No Event Promotion	0	1	-1

As expected, regression revealed a significant main effect of the first contrast code ($t(162) = 2.50, p = .01$), such that participants in the special day promotion condition ($M = 4.84$) liked the promotional ad significantly more than those in the traditional event promotion ($M = 4.33$) and no event promotion ($M = 4.02$) conditions. The second contrast was not significant ($t(162) = 1.01, ns$); participants in the traditional event promotion and no event promotion conditions had equal evaluations.

Next, we regressed participants' perceptions of the marketer's creativity onto the two between-subjects contrasts. A significant main effect of the first contrast emerged ($t(162) = 3.97, p = .0001$). Participants in the special day promotion condition perceived the marketer to be significantly more creative ($M = 4.59$) compared to participants in the traditional event ($M = 3.75$) and no event promotion ($M = 3.30$) conditions. The second contrast was not significant ($t(162) = 1.45, ns$), showing no difference in perceptions of the marketer's creativity between the traditional event and no event promotion conditions.

Finally, a serial mediation model (Figure 1) revealed that increased perceptions of the marketer's creativity in the special day promotion condition led to greater liking of the promotion, which then led to greater purchase intentions, compared to both the traditional event condition and no event condition ($b = 0.10, SE = 0.04, 95\% CI: 0.042, 0.187$). In further support of our predictions, the serial mediation model did not hold when the order of the mediators was reversed ($b = 0.02, SE = 0.02, 95\% CI: -0.002, 0.065$). Additionally, the serial mediation model did not hold when using the second between-subjects contrast.

Figure 3. Study 4: Full serial mediation model showing process evidence and downstream purchase behavior



GENERAL DISCUSSION

Together, these studies provide evidence that special day promotions boost participants' evaluations and lead to increased purchase intentions, even compared to standard promotions that are more favorable financially. As long as consumers can understand the marketer's creativity, consumers infer that marketers are creative by offering special day promotions and ultimately reward marketers for their creative effort in offering such promotions. These findings document a new type of creativity in promotions (i.e., simply capitalizing on atypical temporal events) and add to the literature on marketplace metacognition (Wright 2002). Our research also suggests the variety of special day promotions that marketers can potentially use successfully,

including “national” days such as National Go Barefoot Day, special days that are rooted in consumer fandom such as Pi Day and Star Wars Day, and company-specific special days such as a company mascot’s birthday.

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