The Repetition-Break Plot Structure: A Tool for Persuasion

Jeffrey Loewenstein (jeffrey.loewenstein@gmail.com)
University of Illinois at Urbana-Champaign, 350 Wohlers Hall, 1206 S. Sixth Street
Champaign, IL 61820, USA

Rajagopal Raghunathan (raj.raghunathan@mccombs.utexas.edu)
McCombs School of Business, 1 University Station B6700
Austin, TX 78712 USA

Chip Heath (chip.heath@stanford.edu)
Stanford Graduate School of Business, 518 Memorial Drive
Stanford, CA 94305 USA

Abstract

The Repetition-Break plot structure, which capitalizes on how people learn through drawing comparisons, generates persuasive narratives. In two experiments, we show that television advertisements using the Repetition-Break plot structure are persuasive, leading to higher brand attitudes and purchase intentions than ads with alternative structures. This effect is partly attributable to comparison-induced surprise. Thus, we have evidence that a theoretically explainable and generic plot structure not only makes for interesting stories, it also makes those stories effective for persuasion.

Keywords: Repetition-Break plot structure; advertisements; persuasion; comparison, narratives.

Introduction

Cognitive science research on how people learn is useful for understanding why advertisements work. Consistent with a variety of research on the importance of stories and examples as a basis for learning (e.g., Gentner, 1989; Rubin, 1995; Schank, 1992), advertisers increasingly seek to persuade consumers by developing involving stories that spur thinking and transport consumers (Adaval & Wyer, 1998; Wang & Calder, 2009; Wentzel, Tomczak & Herrmann, 2010). We show that an old narrative structure found in folktales all around the world (Barbeau, 1960; Chophel, 1984; Zipes, 2002), called the Repetition-Break plot structure (Loewenstein & Heath, 2009), is surprisingly potent in modern advertisements. The plot structure capitalizes on regularities in sequencing examples that foster category and schema learning. It consists of a series of highly similar events (A, A’, A”…) that encourages comparison and forming an expectation of what is to come, followed by a final deviating event (B) that produces surprise and interest (cf., Rozin, Rozin, Appel & Wachtel, 2006). By showing that the Repetition-Break plot structure can be used to persuade, we provide evidence that people can generate broadly valued, exceptionally creative, and effective communications by using recipes built on cognitive science principles (for related approaches studying alternative structures, see Goldenberg, Mazursky & Solomon, 1999; McQuarrie & Mick, 1996; and Pieters, Wedel & Batra, 2010).

For example, one of the top advertising awards, the CLIO, gave its “best in show” Grand Clio award for the best television advertisement in 2010 to an advertisement that used the Repetition-Break plot structure. The ad showed a series of striking transformations when objects entered some purportedly magic Tasmanian water: an old bicycle enters the water and turns into a motorcycle, a simple ukulele enters the water and turns into a stunning guitar, a simple kayak turns into a flashy speedboat, and, in the final key transformation, ordinary beer turns into Boag’s Draught, the Australian beer that is the subject of the advertisement. The repeated series of transformations set a pattern that was then extended, surprisingly, to Boag’s Draught beer.

In prior research, we found that the Repetition-Break plot structure generated compelling jokes and folktales (Loewenstein & Heath, 2009). We found that jokes and folktales with the Repetition-Break plot structure were more likely than others to be socially selected and liked. We argued that these jokes and folktales, like the Boag’s Draught advertisement, used the Repetition-Break plot structure to generate surprise and interest. In the current studies, we extend this work to show that the Repetition-Break plot structure not only generates surprising and interesting stories, it can leverage that interest to shape people’s attitudes about the subjects of those stories. Cognitive science should examine not only cognitive processing, but also the consequences of that processing.

Comparison-Generated Surprise

Prior arguments about why surprising and involving stories are effective emphasize that such stories deviate from viewers’ expectations (Peracchio & Tybout, 1986), leading viewers to resolve the incongruity (Speck, 1990). Deviating from prior expectations to generate surprise is also critical to the effectiveness of counterintuitive cultural narratives (e.g., Boyer & Ramble, 2001; Norenzayan, Atran, Faulknor, & Schaller, 2006). The key difference as to why stories relying on the Repetition-Break plot structure are effective is that they do not rely on people already knowing the background expectation. Repetition-Break stories use
comparison to teach the expectations from which they later deviate.

Creating surprise by teaching expectations that are then disrupted is powerful. It allows stories to be engaging in novel ways and to a broad array of audiences. For example, McQuarrie and Mick (1999) found that some advertisement structures failed to be effective for foreign consumers, and argued that the structures failed because these consumers did not have the requisite background expectations that native consumers did. By first teaching the background expectations on which they will rely, Repetition-Break ads avoid this problem. Further, teaching expectations allows stories using the Repetition-Break plot structure to generate surprises based on novel expectations, such as by constructing a narrative logic relying on the fictional “magic Tasmanian water.”

The Repetition-Break plot structure uses an initial repetition to establish a pattern that a final event extends or breaks in a surprising way (Loewenstein & Heath, 2009). By showing people several highly similar events, the Repetition-Break plot structure leads people to draw comparisons, because surface similarity and close temporal succession foster engaging in comparison (e.g., Loewenstein & Gentner, 2001). Drawing comparisons encourages people to focus on commonalities and form generalizations (Gentner & Markman, 1997). Thus, the initial Repetition phase of the Repetition-Break plot structure encourages people to form an expectation about how subsequent events should unfold. The expectation could be familiar or novel to viewers. Critically though, all viewers should have the information from comparing the initial repeated events to form the expectation, and viewers drawing comparisons to form the expectation is the first reason that Repetition-Break ads should be engaging.

The expectation people derive from comparing initial events provides a basis for a final event to deviate and generate surprise. The final event can extend the generalization to a new and unknown domain and product, as in the Boag’s Draught advertisement, which is a progressive alignment effect (Kotovsky & Gentner, 1996). Or, the final event can depart from the generalization, as in the classic folktales the Three Billy Goats’ Gruff and the Three Little Pigs, which is an alignable difference effect (Markman & Gentner, 1993). In either case, deviating from the similar initial events should lead viewers to try to resolve the incongruity and make sense of the final event and the larger meaning of the narrative. By encouraging people to undertake these cognitive efforts, the narratives spur involvement. This is critical, because it allows advertisers’ stories to persuade consumers and increase their attitudes towards the ad and brand. Further, surprise heightens affective responses (Mellers, 2000), which should strengthen the persuasion effects. Thus, when the Repetition-Break plot structure is used for advertising, it should have the capacity to influence not just consumers’ cognition, but also to involve consumers, to generate strong emotions, and to persuade consumers to like what they are seeing.

Overview of the Studies

We had two goals with these studies. The first was to test whether the Repetition-Break plot structure yields persuasive advertisements. As has long been noted (Greenwald, 1968), learning need not imply persuasion. Accordingly, we test whether ads using the Repetition-Break plot structure generate more favorable attitudes towards the brands in the ads than ads using other structures. The second goal was to generate evidence as to when and for what the plot structure should be useful. This led us to test outcomes distinct from persuasion, to separate the predicted broad engagement account from a more specific humor account, and to test the plot structure’s effectiveness under different processing conditions.

Experiment 1

This study tests whether Repetition-Break ads have a specific advantage in being involving and persuasive. We showed participants ads, and then tested for persuasion (people’s engagement with the ad, liking for the brand, and purchase intentions). We predicted a Repetition-Break advantage. We also tested for mere attention to the ad (can people recall and recognize what brand was advertised), where we do not predict a Repetition-Break advantage. The attention measures allow us to test whether Repetition-Break ads are particularly effective or whether participants are merely disregarding non-Repetition-Break ads. This is plausible, as we examined the effectiveness of target ads embedded in a sequence of mundane ads, such as one might see in a commercial break between television shows.

The target ads varied across participants. For some participants, the target ad was a Repetition-Break ad. Some participants instead saw what we call Contrast controls: the Repetition-Break target ad edited so that it has just one initial event, rather than several. The final event is unchanged. Contrast controls are useful because they are a test of whether comparing initial events is important, as our processing account implies, even though the repeated events provide no substantive new information. (We note that in additional studies and analyses, we have found no effects of duration differences). A further set of participants viewed what we call Alternative controls: an ad from the same campaign as the target Repetition-Break ad, but that did not have a Repetition-Break structure. These controls are a check on the influence of aspects of the ads unrelated to plot structure, such as campaign-wide choices about the people, style, music, tagline, and so forth. In addition, we tested three different sets of Repetition-Break, Contrast and Alternative controls for the sake of empirical generalization. Thus, when we look for a Repetition-Break advantage, we are testing whether participants viewing a Repetition-Break ad generate different outcomes than participants viewing a Contrast or Alternative control ad.
In addition, we made efforts to measure not only the engagement and persuasion that we argue is critical for Repetition-Break ads but also humor, which is just one of multiple possible ends to which Repetition-Break ads can be aimed. Repetition-Break ads are not simply a subset of funny ads. Accordingly, we gathered participants’ assessments of how humorous the ads were and tested humor and engagement as drivers of any effect of the Repetition-Break plot structure on people’s attitudes towards the brands in the ads and their intentions to purchase goods from the brands in the ads.

**Methods**

**Participants** In all, 220 undergraduates participated for course extra credit (mean age: 20.7 years; 61% female; 44% white; 68% native English speakers). Exploratory data analysis provided no support for these demographic variables moderating the relationships between the ad structures and the dependent measures, so we do not consider them further.

**Materials, design and procedure** We used a 3 (Structure: Repetition-Break, Contrast, Alternative) X 3 (Brand: Adidas, Fiat, Cotton) factorial design. Participants saw one of the nine possible target ads resulting from this design embedded in the middle of six filler advertisements. After viewing all seven ads, participants engaged in an unrelated task for an average of eight minutes and then answered a series of questions about the ads.

Participants answered attention questions first. They recalled all the brands for which they saw advertisements, and we tallied whether they correctly wrote the target brand as a measure of brand recall. We then gave participants a list and asked them to identify their degree of confidence that they did or did not see an ad for each brand as a measure of brand recognition. Half the brands they had seen before, half they had not, and we included as foils brands from the same product category as the target brands.

Participants next answered persuasion questions. We showed participants three frames from the target ad and then asked them to answer a standard brand attitude scale (\(A_{\text{brand}}\); e.g., how appealing is the advertised brand; \(\alpha = .94\)) and an engagement scale (e.g., how surprising was the ad, how appealing was the story in the ad; \(\alpha = .87\)). We assessed participants’ purchase intentions by asking the degree to which they agreed with two statements (\(\alpha = .94\)): The next time I need [product type], I intend to consider [brand]; and The next time I consider buying [product type], I intend to purchase a [brand] product. We also asked them to rate how funny the ad was (1=Not at all Funny to 7=Very Funny), as well as whether they had seen the ad before.

**Results**

Repetition-Break ads yielded higher evaluations than the Contrast and Alternative controls on the persuasion measures but not on the attention measures (Figure 1). To reach this assessment, we conducted a series of 3 (Structure: Repetition-Break, Contrast, Alternative) X 3 (Brand: Adidas, Cotton, Fiat) ANOVAs to examine each measure—brand attitudes, engagement, purchase intentions, brand recognition, and brand recall. These showed consistent main effects of Structure as well as predictable orthogonal main effects of Brand (e.g., participants found Adidas a more appealing brand than Cotton). To save space, we emphasize planned contrasts between Repetition-Break and Contrast ads and between Repetition-Break and Alternative ads.

Repetition-Break ads (\(M = 5.50, SE = 0.17\)) yielded more favorable brand attitudes than Contrast ads (\(M = 5.00, SE = 0.19\)), \(F(1, 219) = 2.09, p < .05\), and Alternative ads (\(M = 4.86, SE = 0.18\)), \(F(1, 219) = 2.86, p < .01\). Repetition-Break ads (\(M = 4.32, SE = 0.21\)) yielded higher levels of engagement than Contrast ads (\(M = 3.62, SE = 0.22\)), \(F(1, 219) = 2.91, p < .01\), and Alternative ads (\(M = 3.51, SE = 0.18\)), \(F(1, 219) = 3.66, p < .001\). Repetition-Break ads (\(M = 3.42, SE = 0.22\)) yielded stronger purchase intentions than Contrast ads (\(M = 2.82, SE = 0.22\)), \(F(1, 219) = 2.27, p < .05\), and a trend towards stronger purchase intentions than Alternative ads (\(M = 3.00, SE = 0.21\)), \(F(1, 219) = 1.69, p = .09\). Thus, Repetition-Break ads generate higher levels of persuasion than Contrast and Alternative ads.

![Figure 1: Persuasion and Attention measures (transformed to z-scores for comparability) for Alternative, Contrast and Repetition-Break advertisements from Experiment 1.](image-url)
assessing multiple mediators, we found a positive coefficient for the indirect effect of Repetition-Break through engagement on brand attitudes, .30 (SE = .11, 95% CI: .11 to .53), and a negative coefficient for the indirect effect of Repetition-Break through humor on brand attitudes, -.12 (SE = .06, 95% CI: -.26 to -.03). Similarly, we found a positive coefficient for the indirect effect of Repetition-Break through engagement on purchase intentions, .20 (SE = .08, 95% CI: .06 to .44), and a negative coefficient for the indirect effect of Repetition-Break through humor on purchase intentions, -.23 (SE = .09, 95% CI: -.47 to -.07). Thus, Repetition-Break ads do need not be funny to be effective.

Discussion
Repetition-Break ads were persuasive. Participants found them particularly engaging, and thereby reported higher brand attitudes and purchase intentions relative to Contrast versions that eliminate the opportunity to draw comparisons and Alternative ads from the same campaign that did not use Repetition-Break plot structures. People paid attention to all the ads; we found mixed performance for Repetition-Break ads on the attention measures of brand recognition and recall. Thus, Repetition-Break ads are useful for high involvement, persuasion concerns such as attempts at increasing brand attitudes and purchase intentions. We also found that humor was distinct from engagement, and that Repetition-Break ads did not need to be funny to be effective. The broader implication is that people encountering stories should be more likely to experience those stories using the Repetition-Break plot structure as particularly powerful and influential.

Experiment 2
Our account of the Repetition-Break plot structure is that the repeated events generate a potentially novel expectation that can be used to set up a break that generates surprise and interest. This means Repetition-Break ads require moderately sophisticated cognitive processing over the course of the ad, rather than being immediately perceptible, like catchy music, attractive actors or exotic scenery. For the plot structure to be effective, people have to have the cognitive capacity to become engaged and translate that engagement (or lack of engagement) into brand attitudes. Making a related argument, McQuarrie and Mick (2003) noted that consumers must have the ability, opportunity and motivation to process an ad that uses rhetorical figures. Also related, Ahn and colleagues (2009) found that cognitive load diminished people’s processing and memory of repeated patterns of events in a slide show. To be clear, we are differentiating between boredom and disinterest as reasons not to process ads—Experiment 1 showed that Repetition-Break ads can stand out from a sequence of mundane ads—and limited ability to process information due to high cognitive load. In this study, we examine whether the Repetition-Break plot structure advantage is reduced or eliminated if people are placed under cognitive load.

The primary motivation to examine the effects of cognitive load is that there is an alternative account for the Repetition-Break plot structure advantage that should be impervious to cognitive load. Rozin and colleagues (2006) highlighted the effectiveness of what they called the AAB pattern. They found the AAB pattern was prevalent in music and jokes, and that the AAB pattern was more frequent and more effective than the AB pattern (and more frequent but equally effective as the AAAB pattern). These findings are consistent with our claims about the importance of initial repetition. Where the accounts diverge is in explaining what the repetition and break are doing to generate surprise. Rozin and colleagues highlighted the role of automatic, potentially innate expectations for patterns to repeat, and hence explain the presence of multiple initial events as establishing repetition, which should then automatically trigger surprise if the repetition is broken. This account is geared towards explaining why people might enjoy hearing the same piece of music repeatedly, even after the breaks can be expected. Also, in music the repetitions are often identical, as the same melody or phrase literally repeats. Repeated, identical perceptual patterns may provide immediately compelling expectations. However, we suggest that the narrative plot structures found in advertisements (as well as jokes, folktales and other narratives) are more conceptual than perceptual. The repetitions are of similar, but not identical, events, and so are likely to require deliberate cognitive processing to derive generalizations. The break is also more conceptual than perceptual, and likely requires some deliberation to decode. Thus, our account predicts that cognitive load will dampen engagement, whereas the automatic expectations account from Rozin and colleagues (2006) should predict null effects of cognitive load.

Methods
Participants A total of 252 junior and senior undergraduates participated for course extra credit (mean age 21.0 years; 54% female; 51% white: 87% native English speakers). Exploratory data analysis revealed no notable relationships between these demographic variables and the attitude about the brand attitude dependent measure.

Materials, design and procedure Participants saw three target advertisements, interspersed with three filler advertisements. We used a 3 (Structure: Repetition-Break, Contrast, Alternative) X 2 (Cognitive load: Load, No load) X 3 (Brand: Adidas, Cotton, Fiat) mixed measures design. For each participant, the three target ads were all of the same type, so a given participant saw three Repetition-Break ads, or three Contrast ads, or three Alternative ads. In the Load condition, participants were shown an 8-digit number and asked to memorize it (as in, e.g., Shiv & Huber, 2000). Then they were shown an ad. Next they recalled the number, and if they were incorrect, were told so. Then they rated their attitude towards the brand in the advertisement and whether they had seen the ad before. In the No load
condition, participants were simply shown the ads and immediately asked for their ratings.

**Results**

We first examined participants’ efforts at remembering the 8-digit numbers, which served as our cognitive load manipulation. Participants mostly (71%) recalled the numbers accurately. Even when they were inaccurate, they recalled an average of five of the eight digits correctly, implying that they were attempting to retain the number. Consequently, we have evidence that participants in the cognitive load condition were not ignoring the load task.

A 3 (Structure: Repetition-Break, Contrast, Alternative) X 2 (Cognitive load: Load, No load) X 3 (Brand: Adidas, Cotton, Fiat) mixed measures ANOVA found an effect of Structure, $F(2,726) = 8.66, p < .001$, no main effect of Cognitive load, $F(1,726) = 0.47, p = .49$, an effect of Brand, $F(2,726) = 31.12, p < .001$, and an interaction between Structure and Load, $F(2,726) = 5.27, p < .01$ (Figure 2). We followed up by running separate analyses for participants in the Load and No Load conditions. For participants under cognitive load, there was no effect of Structure, $F(2,315) < 1$, as participants’ attitudes towards the brands were comparable after seeing Repetition-Break ads ($M = 5.52, SE = .12$), Contrast ads ($M = 5.54, SE = .11$) and Alternative ads ($M = 5.40, SE = .11$). These numbers hardly change if we include their recall accuracy from the cognitive load manipulation as a covariate.

![Figure 2: Attitude about the Brand ratings for Alternative, Contrast and Repetition-Break advertisements by participants under cognitive load and not under cognitive load.](image)

As in Experiment 1, for participants not under cognitive load, there was an effect of Structure, $F(2,324) = 11.04, p < .001$. Participants’ brand attitudes were higher after seeing the Repetition-Break ads ($M = 5.73, SE = .11$) than after seeing either the Contrast ads ($M = 5.38, SE = .11$), $F(1,324) = 4.26, p < .05$, or the Alternative ads ($M = 5.06, SE = .11$), $F(1,324) = 21.95, p < .001$. Because we found an interaction with cognitive load and because the plot structure advantage held without but not with cognitive load, it appears that cognitive load suppressed the effect of plot structure on participants’ brand attitudes.

We found reliably different brand attitudes for the different brands. Adidas ($M = 5.77, SE = .07$) was more highly rated than Cotton ($M = 5.57, SE = .07$), $F(1,726) = 2.02, p < .05$, and Cotton in turn was more highly rated than Fiat ($M = 4.94, SE = .08$), $F(1,726) = 7.61, p < .001$. There was no interaction between Cognitive load and Brand; the overall means for each brand hardly changed if people were under load or not (Adidas: 5.81 / 5.72; Cotton: 5.61 / 5.52; Fiat: 4.93 / 4.95). These results are important because they show that load was not eliminating everything that contributes to participants’ brand attitude ratings, but selectively eliminating plot structure effects.

**Discussion**

The Repetition-Break plot structure is persuasive, provided people can engage with the stories. If people have the cognitive capacity to follow the plot in an advertisement, it has the potential to contribute to, or take away from, their impressions of the brand. However, if people are strongly straining with another task, then other concerns, presumably those contributing to the immediate surface appeal of the ad, likely predominate.

The results also have implications for separating the account we offered for why the Repetition-Break plot structure is effective and the account Rozin and colleagues (2006) offered for why the AAB pattern is effective. It is possible that perceptual patterns can rely on simple comparisons and be engaging even in the presence of cognitive load. It follows from our results though that more conceptual repetitions rely on more effortful cognitive processing to generate effects.

**General Discussion**

Cognitive science research on learning by comparison is instructive for understanding why, how and when stories will be engaging and persuasive. Advertisements using the Repetition-Break plot structure to create narratives were engaging and led to more favorable attitudes towards the brands in the ads and higher purchase intentions for the ads in the brands. Removing the initial repetition from Repetition-Break ads led people to derive lower brand attitudes and weaker purchase intentions, consistent with our claim of the importance of comparing initial events. Repetition-Break ads also generated higher brand attitudes and purchase intentions than ads with different plot structures from the same campaign, providing further support that there is value to the plot structure over and above other choices about the ads. Thus, we have evidence of the value of the Repetition-Break plot structure for generating persuasive stories.

We found that people’s level of engagement with the narrative in the ads mediated the persuasion effect. Repetition-Break ads are more engaging than otherwise similar ads, despite being no better attended. A strong secondary task, however, selectively eliminated the plot structure advantage, implying that the plot structure requires at least a moderate degree of deliberate processing. Finally, we found the Repetition-Break plot structure was effective
when people viewed ads and immediately evaluated them as well as when people viewed ads within a block and only later evaluated them. Thus, the Repetition-Break plot structure requires effort, but is apparently worth it.

More broadly, cognitive science provides a basis for explaining how to structure information to increase the likelihood that people will acquire it. The Repetition-Break plot structure capitalizes on these cognitive tendencies. Not only does it make the stories it conveys more likely to spread (Loewenstein & Heath, 2009), it also seems to make those stories more likely to be influential.

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References


