

THE MAGAZINE MAXIMIZER: A MODEL FOR LEVERAGING MAGAZINE ENGAGEMENT DYNAMICS

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ABSTRACT

This research examines the impact of media engagement and experiences on advertising effectiveness, using four different magazines and five different advertisements. We confirm the measurement properties of six reader experience metrics for magazines and support the hypothesis that media engagement is best understood as being the consequence of specific underlying experiences. Using an online method of exposing respondents to ads in the context of actual magazine content, we show that engagement with content affects reactions to an ad and the advertised product. We also show that the experiential congruence between an ad and a magazine is related to ad effectiveness. These findings lead us to consider development of a *Context Fit Index* that measures the match in engagement between ads and magazines.

INTRODUCTION

Media provide a context for advertising that may affect consumer responses to advertising. Many studies have investigated possible media context effects, clearly demonstrating the existence of such effects. The most general conclusion is that when consumers are highly *engaged* with a medium they can be more responsive to advertising (e.g. Aaker & Brown, (1972); Bahary & Fielding (2005); Bronner & Neijens, (2006); Coulter, (1998); Cunningham, Hall, & Young, (2006); DePelsmacker, Geuens, & Anckaert, (2002); Feltham & Arnold, (1994); Gallagher, Foster, & Parsons, (2001); Nicovich, (2005); Wang, (2006); Ware, Baron, Edge (2005); Malthouse et al. (2007); Calder et al. (2007)). Yet an industry definition of media engagement currency does not exist.

Recent research by the authors has begun to explore the notion of engagement in more detail and to recognize that it has many forms in media. Bahary & Fielding (2005) isolated 6 engagement factors: reader's relationship, reasons for reading, how the magazines are read, brand imagery, creative execution integration and receptivity to brand messaging. These 6 factors were the basis for Starcom's proprietary ACE platform questions that have been integrated to the US print currency (MRI). Malthouse et al. (2007) and Malthouse et al. (2003), in the case of magazines, have identified 39 *experiences* and shown that they impact advertising effectiveness. These experience dimensions are qualitatively different and combine to form an overall level that Calder and Malthouse (2007) term *media engagement*. This terminology is consistent with the recent definition proffered by the Advertising Research Foundation (ARF): "media engagement is turning on a prospect to a brand idea enhanced by the surrounding context" (ARF, 2006). This definition has gained much attention as advertisers search for ways to overcome the problems of ad clutter and avoidance. One way is to advertise in media with high engagement levels.

The present study extends research on media engagement and its effects on advertising by:

1. Confirming the psychometric properties of a subset of experience metrics (scales) proposed in Malthouse, et al. (2003),
2. Testing the conceptualization of engagement for magazines as a higher-order overall experience based on particular, more basic experiences (Calder and Malthouse 2007),
3. Showing that experiences and overall engagement are related to advertising effectiveness using a procedure for exposing readers to ads in the actual context of magazine content, (Bahary & Fielding, 2005)
4. Operationalizing the notion of *congruence* between an advertisement and a media vehicle in terms of both media experience and the experience of the ad itself, and demonstrating that this congruence is related to advertising effectiveness.

The first three contributions corroborate findings from other research. Specifically, Malthouse et al. (2007) conducted an exploratory study designed to identify and measure media experiences. The present study is confirmatory, applying a wide range of psychometric tests to the measures developed in this work. Our formulation of engagement will be tested specifically for the magazine medium. The third contribution tests the relationship between experiences and ad effectiveness. While this has already been demonstrated for two different test ads in two different media in related previous research, the present study will assess the relationship under more natural usage conditions. If the relationship is supported here using different data-

collection and experimental methodologies, we will have strengthened the internal and external validity of this relationship substantially.

The fourth contribution is new empirical test of the congruence hypothesis and represents an important advance in making media context effects actionable.

Media Engagement and Experiences

The concept of engagement with editorial content and its relationship with advertising has been discussed for at least 50 years. Unfortunately, there is no agreement about what engagement is and, while content producers and advertisers generally agree that is important, they are also unsure about how, specifically, it is quantifiable. We attempt to address these issues.

Calder and Malthouse (2007) and Bahary & Fielding (2005) define viewer engagement as *collective qualitative experiences with content*. Content can engage viewers in many different ways. Some content is engaging because it informs viewers about topics relevant to them. Other content is engaging because it helps the user relax and escape from the pressures of daily life. Content could also engage users by giving advice and tips. Informing the viewer, providing a timeout, and giving advice and tips are examples of three specific *experiences* that people can have with media.

To be engaging, different media products need not deliver all possible experiences or the same experiences – engaging content could deliver high levels of the timeout experience while other content could be more informing. Media products can differentiate themselves by focusing on different experiences. The point is that there are many paths to engagement.

Our formulation of engagement is somewhat different from other definitions, which usually characterize it in ways that we regard as *consequences* of engagement. Marc (1966) defines engagement as “how disappointed someone would be if a magazine were no longer published.” Syndicated market research often asks whether a publication is “one of my favorites,” whether a respondent would “recommend it to a friend” or is “attentive.” Many equate engagement with behavioral usage. That is, they define engaged readers as those who spend substantial time reading or who read many issues (frequency). While all of these outcomes are important, we argue that they are consequences of engagement rather than engagement itself. Our conceptualization is thus more fundamental than these other approaches.

We now provide a detailed discussion of experiences, which, again, are the specific manifestations of engagement. We emphasize that experiences are not concerned with the editorial content itself, but rather the reader’s reactions to the content. For example, the utilitarian experience characterizes the extent to which readers feel they get good tips and advice from a magazine, which is not the same as having any particular type of editorial content or even to the amount of space devoted to such information. An occasional good tip could generate this experience without an entire magazine being devoted to such content. Experiences thus reflect the role that media serve in peoples’ lives.

Media experiences can be described at different levels. At the most basic level of course there is the concrete experience of the particular content of a given magazine or other media product. While this level of description may well be of interest, it is too saturated with details specific to the content and other unique characteristics of the particular content to be useful for comparison purposes. If our goal is to evaluate experiences across different magazines to maximize advertising effectiveness, as in the present case, we need a more abstract or generalized description of experiences.

We approached this in the following way. As a first step qualitative research, in the form of individual, in-depth interviews with users, was conducted. Each interview focused on a specific magazine. But we sought to describe the experiences talked about in the interviews at a level that is common across magazines. Specifically, we sought to paraphrase the specific things that people report experiencing with specific magazines in a way that preserves the common essence, or gist, across sites but does not include details peculiar to individual sites. Exactly what people say about *Better Homes and Gardens* is different from exactly what they say about *Parents*, but at a higher-level people may be describing the same experience. They may be describing, for example, the extent to which they would say, paraphrasing across users, that “I get ideas from this magazine.” We refer to this description as an *experience item*. The ideas could be about designing a flower bed or keeping a toddler occupied on a long trip – in either case the magazine is playing a *Utilitarian* role in the reader’s life.

The logic of our approach is thus as follows. From qualitative interviews we induce a large number of experience items. Then we employ quantitative methods to explore the relationships among the items. If some experience items are highly interrelated, this indicates that they are alternative measures of the same experience. No single item is a perfect measure in that no one item captures a single experience in total. Experiences are not single-attribute objects that could be measured with a single item (see Bergkvist and Rossiter, 2007), but are sets of related items, or factors, that can provide a reliable measure of an experience. We refer to these sets of items as experience scales and use them to measure online media experiences.

In previous work we have applied this approach to traditional media such as magazines and newspapers. Starcom Worldwide ACE platform measures reader experience across titles which are applied for title selection. Malthouse, et al (2003) and Malthouse, et al (2007), for instance, measured experiences across a sample of 100 magazines. Ware et al (2005) analyzed the involvement with readers of 25 magazines and Calder and Malthouse (2004) applied this approach to newspapers. Calder and Malthouse (2005) and Calder, et al (2008) apply it to web sites. Peer et al. (2007) apply it to television news.

The Effect of Media Context on Advertising

The introduction cited several articles that have demonstrated a relationship between general involvement with a medium and advertising effectiveness. Here we specifically focus on media experiences and effectiveness. Malthouse et al (2007) and Calder et al (2007) previously investigated the relationship between experiences and advertising effectiveness by relating experiences to ratings of a test ad for a bottled-water in one study and a test ad for Orbitz (an on-line travel agency in the US) in the second. Malthouse et al. (2007) showed that the relationship between experiences and ad effectiveness held across 100 magazines and a wide range of experiences. Calder et al (2007) showed that the relationship held across eleven online news sites. Both studies exposed respondents to the ad stimulus during the survey rather than while the respondent was actually reading – and experiencing – the magazine or web site. To strengthen internal validity, both included a context-free control group, which was asked about experiences with magazines or web sites in general. The relationship between experiences and ad ratings was stronger when the respondent was told the water ad would appear in a specific magazine than in some unknown magazine.

Bronner and Neijens (2006) used a similar approach to measuring experiences and compared the experiences of different types of media with the experiences of advertising content. Their results are consistent with those above. They find, for instance, that the experience of usefulness with a site is related to the ads on that site being experienced as useful.

The present study will test the experiences-ad effectiveness relationship using five real ads and a more realistic experimental procedure than previous studies. We formally hypothesize

Hypothesis 1: Experiences and engagement are associated with the effectiveness of an advertisement, after controlling for potential confounding variables.

Moreover, we also seek to go beyond providing stronger evidence for the experiences-ad effectiveness relationship by examining how the ad itself might enhance the relationship. That is, do some ads benefit even more from media experiences and overall engagement than others?

Congruence Between an Advertisement and the Media Vehicle

To examine the question of whether some ads benefit from experiences and engagement more than others we turn to the idea of congruence between an ad and content. Dahlén (2005) reviewed the literature on media context effects and identified possible theoretical rationales for why context should affect reactions to ads. One is the congruity principle: “the medium and the advertised brand converge and become more similar in consumers’ minds (p. 90).” Defining congruity is difficult because there are many different, and potentially conflicting, ways that an ad can be congruent to a vehicle. An ad could be congruent to a vehicle in one respect and dissimilar on another. For example, a vehicle and an ad could both have a consistently emotional executional tone, but the vehicle could have more of a traditional look while the ad has a more modern look. Congruency could even be viewed simply in terms of “endemicness,” whether the ad is for a product that fits the literal subject matter of the magazine, e.g., table saws in woodworking magazines.

Consistent with our focus here on media experience, we will examine one form of congruence – the congruence between the experiences with a magazine and the experiences with the ad itself. We apply the same logic of measuring experiences with ads that has been used for media vehicles and ask whether congruence between the two experiences impacts advertising effectiveness. After presenting our results, we will propose that his approach could be used to develop a *Context Fit Index* as a tool for advertisers and media companies.

Formally, we shall assume that some set of p experiences has been identified for use in evaluating congruity. Let $a_i = a_{i1}, \dots, a_{ip}$ denote the mean-centered¹ measures of these experiences for some ad i and $v_j = v_{j1}, \dots, v_{jp}$ be mean-centered measures of experiences with the media vehicle j . We seek a distance metric $d(a_i, v_j)$ that quantifies how congruent the ad is to the vehicle. If an ad is congruent with a vehicle, metric d will take a small value indicating the two are “close” in proximity. Likewise, if an ad and a vehicle are incongruent, d will assign a large value indicating dissimilarity. A possible way to define d is to use Euclidean distance:

$$d(a_i, v_j) = \sqrt{\sum_{k=1}^p (a_{ik} - v_{jk})^2}.$$

Defining congruity in this way with the preceding metric, we hypothesize:

Hypothesis 2: The experiential congruity of an ad and a magazine vehicle is associated with the effectiveness of the ad after controlling for advertised product category usage and reader engagement with the publication.

¹ Mean-centered indicates that the average of a_i is 0 across ads, i.e., $\sum_i a_i = \mathbf{0}$.

Methods

The research design consists of two independent studies using Meredith's online reader panels of four consumer magazines. The first study, called the *main study*, measures reader Experiences and usage of a particular magazine and reactions to specific ads that the respondent was told appeared in the magazine. The second study, called the *ad study*, asks respondents to rate the ads independent of the context, i.e., respondents are not told that an ad appeared in a specific magazine.

The section is organized as follows. We first discuss how we selected magazines and the experiences in those magazines. Next, we discuss how we selected the particular ads used as stimuli. We then discuss the two studies.

Magazine and Experience Selection

Titles were selected from three genres including health (*Fitness magazine*), shelter (*Country Home* and *Better Homes and Gardens*), and parenthood (*Parents*). To inform our selection of experiences and ads, we reviewed the May and June issues and profiled the experiences offered by each using the same data as Malthouse et al. (2003). We looked for experiences that seemed to be central to the concepts of the media brands. The question wording is given in Table 3 and specific experiences are as follows:

- *Utilitarian*. The reader believes that the magazine gives advice and tips that are useful. For example, cooking magazines (or magazines with some cooking content) often expose people to new techniques, ingredients, recipes, and so on. A gardening magazine could help a person decide what flowers to plant in a shady location. An astronomy Web site could tell the reader how to find certain objects. A fitness segment of a program could provide the viewer with diet and exercise suggestions.
- *Inspirational*. This experience is also closely related to utilitarian, yet is distinct. The inspiration experience is about making readers believe they can do something while the utilitarian experience is about giving specific advice to do something. A good example of the inspirational experience is in the "I Did It!" column of the *Better Homes and Gardens* magazine, featuring normal people who completed impressive projects around their homes. The emphasis is not on how they did it, but rather on the fact that they did it. A woman may read a fitness magazine to be *inspired* to visit the gym and believe doing so will transform her body. In contrast, a utilitarian experience would give her specific exercises, regimes and diets.
- *Positive Emotional*. Readers feel touched emotionally by stories they read. For example, a story about a mother who's child has asthma during school and was saved by a fast acting teacher. The positive-emotional experience is similar in some ways to the inspirational experience, but the latter tends to inspire the person to take action, while this experience has more to do with feeling good about the world.
- *Visual*. Many magazines have high-quality photography. The printed quality of images in a magazine can be much better than those on web sites or in newspapers. Travel magazines may feature photography that make readers feel as if they are "there." Shelter magazines often feature pictures of beautiful homes and gardens intended to give people ideas.
- *Ad receptivity*. With some publications, the advertising can be an important part of the content and can be an important reason for buying the publication, visiting the site or viewing the program. Looking at the ads is a core part of the experience of reading a fashion magazine. Likewise, the ads in hobby magazines could be highly relevant to readers. For example, the reader of a knitting magazine may be interested in learning where she can order certain yarns. The viewer of a cooking show could be attentive to advertisements for new cooking utensils, pans.
- *Timeout*. For example, people have a fundamental need for relaxation that can be satisfied in many different ways. For some, reading a magazine after the kids are in bed and the dishes are done can provide this "timeout."

Ad Selection

Having selected the magazines and experiences, the next step was to select advertising stimuli from the June, 2007 issues of the magazines. We decided that each respondent would be shown one ad. Five ads were selected for this pilot test. We had two criteria in selecting ads: (1) the ad must plausibly fit in any of the four magazines and (2) the ads should vary on the six experiences we selected. The rationale for the first criterion should be self-evident – for this study to be realistic, it must be plausible that the ad would appear in the magazines studied. The rationale for the second is that we will have to have variation in experiences to detect congruence effects. If all ads had the same experiences, then they would be equally congruent to every vehicle on those experiences.

See the appendix for copies of the actual ads. We judged the Neosporin ad – featuring a mother and daughter and discussing the daughter's infection – to be more emotional than the others. The Behr paint ad – giving step-by-step instructions on how take a picture of your room and bring it in to try out color combinations – seems to be Utilitarian, Inspirational and Visual, but not

Emotional. The Neutrogena ad is text- and information-rich, but not very visual or relaxing. Both the Woolrich and Connecticut Walk ads are highly visual and provide the reader with an escape (Timeout). In looking at the ads, one feels transported to either the countryside or this living room with a particular style. The Woolrich ad is also Inspirational and Utilitarian, giving the reader ideas for decorating the home. The Woolrich product is more endemic to shelter magazines while the Connecticut Walk is not (walking is more endemic to health magazines than shelter).

Main Study

The main goal of the main survey is to assess the impact of context, as measured by experiences, on advertising effectiveness. This study, in combination with the ad study, will also allow us to study how congruency between the ad and magazine affect advertising.

Sampling. Respondents were selected from Meredith Corporation’s reader panels. We attempted to have a balanced design, with an equal number of respondents for each ad × magazine combination. The resulting sample sizes are provided in Table 1. The response rate for the main survey was 21.3%.

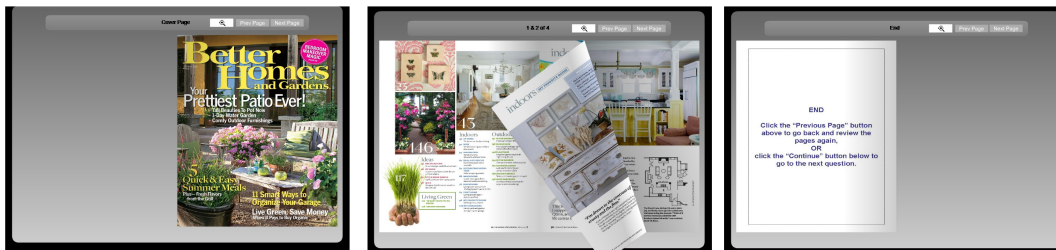
Table 1: Sample sizes by magazine and ad

	Woolrich	Neutrogena	Neosporin	Behr	Connecticut	Total
<i>BHG</i>	67	73	74	63	81	358
<i>Country Home</i>	71	90	63	79	76	379
<i>Parents</i>	85	75	72	84	85	401
<i>Fitness</i>	73	60	88	72	80	373
Total	296	298	297	298	322	1,511

Survey Structure. Respondents were first asked about the readership of the past four issues of a particular title using a visual cover prompt and date. Respondents were eliminated if they had not read or looked into one of the past four issues.

In an effort to recreate the reading environment and bring the reader closer to the reading experience, the respondent was asked to review a “mini-magazine” including a table of contents and 3 sample editorial pages (no advertisements) prior to the next set of questions. Using flash technology from Decipher, Inc., the respondent could flip pages and use a magnifying glass to get a closer look, coming as close to the reading experience as the on-line methodology would allow. See Figure 1 for an example mini-magazine.

Figure 1:
Example of “Mini-Magazine”



Mini-Magazine provided by Decipher, Inc., and Research Solutions, Inc.

Once the “mini-magazine” was reviewed, the respondent moved to the next section and was asked a series of standard reader usage metrics, including time and days spent reading, reading frequency and overall rating. Next, the respondent was presented with the 25 statements in Table 3 and asked (on a 5-point agreement scale) to describe their own feelings about their experience reading this magazine.

In order to answer the next series of questions, the respondent is shown a spread consisting of editorial content on the left and an advertisement on the right. First, questions about editorial are posed with the goal of establishing the perceived “type” of content (i.e., utilitarian, emotional, visual, etc.). Following the editorial description, the survey moves into questions relating to the advertisement positioned adjacent to the specific editorial content. Questions include product appeal, ad appeal as well as a series of words describing the effectiveness of the ad, such as “interesting, believable, absorbing, and useful”.

Ad Study

The goal of the ad survey is to measure the experiences of four ads, absent of editorial context. Total sample 649 respondents were recruited from the same reader panel as the Main Study. The response rate was 22.9%.

Readership of the past four issues of each magazine was assessed using a visual cover prompt and date. Respondents were eliminated if they had not read or looked into one of the past four issues (same criteria as the main and non-endemic surveys). Following the screen in, respondents are shown a visual of one of the five ads and asked if they have seen the ad before (yes, no, not sure). All responses continue. Following the visual of the advertisement (but not adjacent to any editorial as in the other two surveys) the respondent moves into questions relating to one of the five advertisements. Questions include all of the same ad effectiveness questions from the main study (including product appeal, ad appeal as well as a series of words describing the effectiveness of the ad, such as “interesting, believable, absorbing, useful”), but also includes more in-depth seven-point agreement scale questions describing feelings when looking at the ad. These descriptors cover standard ad effectiveness measures, including appeal, attention, believability, but also focus on the emotional reaction (“I felt I was right there in the ad experiencing the same thing”). The important difference is that no editorial preview (“mini-magazine”) or adjacency is provided. This survey is simply testing ad effectiveness among a sample of readers.

Results

We first present an analysis of the experience metrics and overall engagement. Then we turn to the relationship between the experiences and advertising effectiveness.

Measuring Experiences and Engagement

We develop measures of magazine experiences and engagement using a two-step process. We first estimate a confirmatory factor analysis measurement model to study the psychometric measurement properties of our experience measures such as reliability, convergent validity and discriminant validity. We then fit a second-order confirmatory factor analysis model.

The first step in developing the magazine engagement measure is to estimate a measurement model for the experiences, allowing each possible pair of experiences to be correlated. Fit statistics are provided in Table 2. Question wording, factor loadings, and the values of coefficient alpha are provided in Table 3. The six experiences were measured with 25 items. All six scales are highly reliable, with coefficient alpha ranging from 0.79 to 0.90. In the measurement model, each item had a parameter for the loading and error variance ($25+25 = 50$), and there were $\binom{6}{2} = 15$ parameters for the covariances between the experiences, giving a total of 65 parameters. GFI, CFI, and NNFI all exceed 0.90, indicating an acceptable fit.

Table 2: Summary of Confirmatory Factor Analysis Models

	MEASUREMENT MODEL	SECOND-ORDER CFA MODEL
Parameters	65	56
GFI	.9246	.9170
CFI	.9412	.9364
NNFI	.9321	.9290
RMSEA	.0542	.0554

Note. $n=1,511$ with 25 items.

Table 3: Question Wording and Parameter Estimates from Confirmatory Factor Analysis Measurement Model

EXPERIENCE	ITEM	STAND. LOADING
Utilitarian ($\alpha=0.82$)	I really like the tips in the magazine	.8327
	I use the magazine to learn how to do and make things	.6761
	I get ideas from the magazine	.7680
	I look at the magazine as educational. I am gaining knowledge.	.7286
Visual ($\alpha=0.79$)	Most often I look at pictures before reading the articles	.6680
	I like to look at the pictures even if I don't read the story	.7169
	I look at the pictures in it and think "wow"	.7620
	I sometimes show a picture in it to someone else	.6820
Timeout ($\alpha=0.90$)	It is a quiet time	.7833
	I like to kick back and wind down with it	.7850
	Reading this magazine is my time alone	.7947
	It's an escape	.8113
	When I read this magazine, I lose myself in the pleasure of reading it	.7850
	The magazine takes my mind of other things that are going on	.7734
Positive Emotional ($\alpha=0.86$)	It helps me see that there are good people in the world	.7817
	Some articles touch me deep down	.7684
	It features people who make me proud	.8040
	The magazine definitely affects me emotionally	.7717
Ad Receptivity ($\alpha=0.82$)	I like the ads as much as the articles	.7584
	I look at most of the ads	.7996
	I like how colorful the ads are	.7846
Inspirational ($\alpha=0.84$)	It makes me feel like I can do important things in my life	.8217
	Reading it makes me want to match what others have done	.6578
	It inspires me in my own life	.7642
	Reading this magazine makes me feel good about myself	.8060

Convergent validity was assessed with the *t*-values of the factor loadings, computed as the ratio of the loading to the standard error of the item. Convergent validity is supported when *t*-values reach an absolute value greater than 2. The minimum *t*-value was 26.5, providing evidence in support of the convergent validity of the indicators (Anderson & Gerbing, 1988). We assess discriminant validity with the chi-square difference test. For each of the 15 pairs of experiences we estimated a separate measurement model identical items and first-order factors as the one in Table 3, except that the covariance between the pair is fixed at 1. The chi-square statistics between the models were computed, and range from 862 to 1,989. The differences all have chi-square distributions with 1df, and all are very highly significant, supporting discriminant validity.

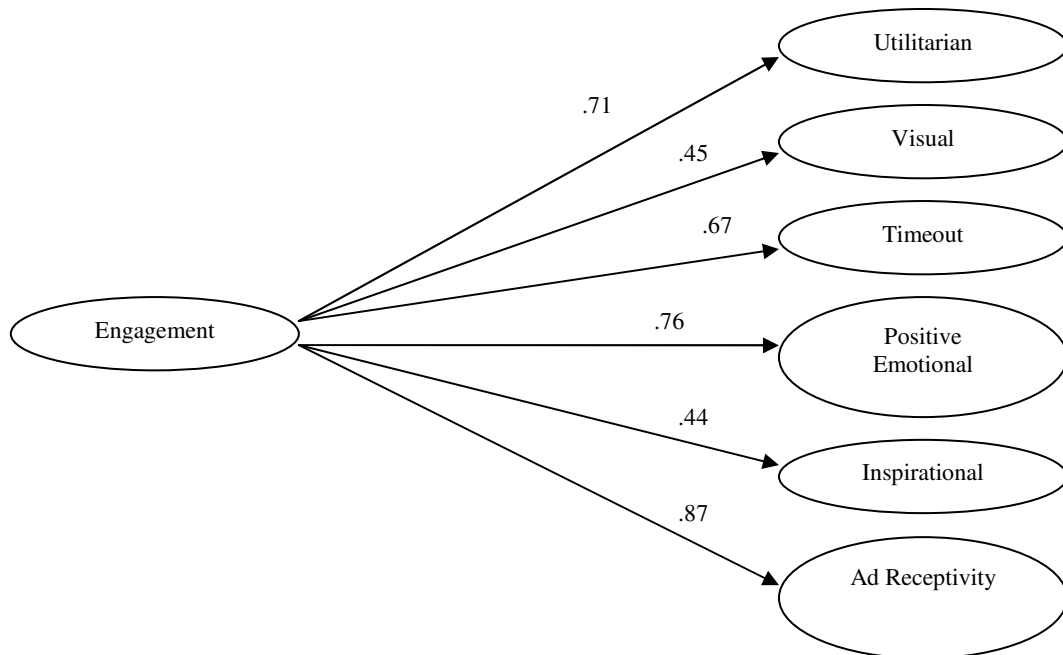
Having checked the psychometric properties of our scales, we estimate the experience levels for each respondent with the simple average of the items. Pearson Correlations between the experiences are provided in Table 4.

Table 4: Correlation Matrix

EXPERIENCE	1	2	3	4	5	6	7
1 Utilitarian							
2 Visual	.27						
3 Timeout	.42	.33					
4 Positive Emotional	.43	.21	.42				
5 Inspirational	.22	.22	.27	.31			
6 Ad Receptivity	.53	.26	.51	.58	.31		
7 Personal Engagement	.67	.58	.78	.71	.54	.77	
ADVERTISING							
8 Woolrich	.12	.31	.24	.15	.30	.26	.33
9 Neutrogena	.14	.04	.11	.25	.33	.14	.24
10 Neosporin	.23	.26	.17	.30	.48	.23	.38
11 Behr	.31	.18	.28	.28	.44	.29	.44
12 Connecticut	.17	.14	.20	.26	.41	.25	.32

Note. All correlations are significantly different from 0 at the .0001 level.

The second step in developing our engagement measures is to estimate the second-order factor model, which is a more parsimonious model for the 25× 25 covariance matrix than the CFA measurement model. The objective is to test whether it is plausible that the Engagement latent variable generates the observed correlation structure between the experiences and items. Engagement will be used in the subsequent analyses of advertising effectiveness. Instead of having 15 covariances between the experiences, we assume that correlations between the experiences are due to a second-order factor. This model can represent the correlations between the experiences with only 6 factor loadings between Engagement and the experiences. Fit statistics are also shown in Table 2 above, with CFI, GFI, and NNFI all greater than .9 suggesting a good fit. Figure 1 shows the parameter estimates of the second-order factor structure. The loadings for the 25 items were very similar to those from the measurement model above and have been omitted. In the analyses that follow, we estimate the engagement factor using a simple average of the experiences.

Figure 2: Second-Order Factor Structure

In summary, the measurement model and value of coefficient alpha have shown that the six experiences have been measured reliably and that convergent and discriminant validity are supported. The second-order analysis shows that a single factor, Engagement, plausibly generates the correlation structure between the first-order experiences. We conclude that Engagement is manifested in specific experiences such as Utilitarian, Timeout, and Inspirational. These are specific ways in which a reader can engage with a magazine.

Comparing Media Experiences and Engagement Across Magazines

This section measures whether there are differences in the average experience levels of the four magazines. We selected the magazines for this study because we suspected that the readers would engage with them in different ways. Having differences in experiences is necessary to test the congruency hypothesis later in this section because if all four magazines are equal on some experience then they are all equally congruent with any ad on this experience.

Means of the four magazines are provided in the first four rows of Table 5. The “grand means” across the four magazines are in the fifth row and the *F* statistic from a one-way ANOVA model is in the sixth row (having 3, 1500+ degrees of freedom). The *F* statistics provide a way of quantifying how large the differences are across the magazine and allow us to test whether the average experience levels of the four magazines are equal.

Table 5: Experience and Engagement means by magazine

Magazine	Utilitarian	Visual	Timeout	Positive Emotional	Inspire	Ad Receptivity	Engagement
BHG	4.21	4.06	3.79	3.35	3.06	3.51	3.70
CH	4.21	4.19	4.07	3.35	3.06	3.51	3.70
Parents	4.23	3.38	3.70	3.71	3.11	3.55	3.64
Fitness	4.29	3.42	3.81	3.52	3.03	3.92	3.70
Grand Mean	4.24	3.76	3.84	3.49	3.03	3.65	3.71
F Statistic	1.68	152.3	20.65	26.03	3.12	33.35	6.05

The largest differences are on the Visual experience. *Country Home* is the most Visual magazine, followed by *BHG* (the two are significantly different). *Fitness* and *Parents* are significantly less Visual than *BHG* or *Country Home*, but not different from each other.

There are also important differences on the Timeout and Positive Emotional experiences. *Country Home* provides the highest level of the Timeout experience, with only small differences between the other three. *Parents* provides the highest level of the Positive Emotional experience, *Fitness* is significantly lower than *Parents* but significantly higher than both *BHG* and *Country Home*, which are not significantly different from each other. *Fitness* has significantly higher means on the Ad Receptivity experience, although the other three are also strong (in the 3.5-3.6 range).

Although the Utilitarian means (4.21, 4.21, 4.23, and 4.29) for all four magazines are larger than almost all the other experience means, we cannot reject the null hypothesis that the Utilitarian means are all equal at the .05 level. There are significant differences in the Inspirational experience and overall Engagement, but the differences are very small and are only significant because of the large sample size.

In summary, the four magazines are approximately equally engaging, but in different ways. All four magazines provide roughly the same exceptionally high levels of the Utilitarian experience. The mean levels of all six experiences for all of the magazines are greater than the scale midpoint (3), indicating that all are at least somewhat engaging on these dimensions. In addition to being Utilitarian, *Country Home* is very high on the Visual and Timeout experiences. *BHG* is also Visual. *Parents* is more Positive Emotional than the others. *Fitness* has higher Ad Receptivity means than the others.

Experiences and Advertising Effectiveness

The present study extends the previous work summarized in the literature review in three important ways. First, five different ads are used as stimuli instead of the single fictitious ads used by Malthouse et al. (2007) and Calder et al. (2007) or the general advertising experiences evaluated by Bronner and Neijens (2006). Second, in the present study respondents are actually reading content from the magazine when they are exposed to the ad stimuli. Third, we use two different measures of advertising effectiveness.

We test the experiences-ad effectiveness relationship with a series of three ANCOVA models for each experience. The two dependent variables of our analysis are attitude towards the ad (A Ad) and attitude towards the product (A Prod).² The three models are nested and implement a backward selection. The first model is the most general, allowing for an experience to have different effects (slopes) for magazine-ad combinations. It includes a three-way interaction between the experience, magazine and ad, as well as a term controlling for how much interest the respondent has in the product category of the advertised product.³

$$y = \text{intercept} + \text{Category Interest} + \text{experience} \times \text{mag} \times \text{ad}$$

The vertical bond symbol (l) indicates interactions as well as lower-order effects.⁴ This model has 41 total degrees of freedom, 20 intercepts and 20 slopes for each ad-magazine pair and one slope for category interest. We shall test whether the three-way interaction is significant. If the three-way interaction is not significant, the term will be dropped in favor of a more

² The exact question wording is “Overall, how much do you like this ad?” and “Overall, how much do you think you would like the advertised product?”

³ The exact wording is “How interested in general are you in products like the one in the above advertisement?”

⁴ For example, abc indicates the three-way interaction a*b*c, the two-way interactions a*b, a*c, and b*c, and the main effects a, b, and c.

parsimonious model and we will conclude that the relationship between experiences and ad effectiveness is not particular to specific magazine-ad combinations.

The second model allows for different magazines to have different slopes and different ads to have different slopes, without a three-way interaction:

$$y = \text{intercept} + \text{Category Interest} + \text{mag} + \text{ad} + \text{experience} \times \text{mag} + \text{experience} \times \text{ad}$$

This model has a total of 17 degrees of freedom. We test whether these two-way interactions are significant and drop them if they are now. If the experience-magazine interaction is significant, then the experience has different effects (slopes) in different magazines. For example, the timeout experience could have a stronger effect for *Country Home* than for *Fitness*.

The third model assumes a common slope across magazines and ads, after allowing main effects for the magazine and ad:

$$y = \text{intercept} + \text{Category Interest} + \text{mag} + \text{ad} + \text{experience}$$

It has only 10 degrees of freedom (the intercept, 3 dummies for magazine, 4 dummies for the ad, product liking, and the experience slope).

The ANCOVA models are estimated separately for engagement and each of the 6 experiences and two dependent variables (12 total models), with the results summarized in Table 6 below. Only one of the P-values in the "Model 1" column are significant (Inspiration for A prod, which is borderline significant at 0.0484 and is likely spurious, considering all of the hypothesis tests done here), indicating that we do not have evidence to conclude that there are three-way interactions. We therefore estimate Model 2 for all experiences. Only one P-value in the "Model 2" columns is significant (magazine \times Inspiration interaction), while the others are all greater than 0.05. With the exception of the magazine \times Inspiration interaction, which will be discussed in depth below, this indicates that we do not have evidence to conclude that there are two-way interactions either, and we shall consequently estimate Model 3 for each experience.

All of the main effects in "Model 3" are significant. The fact that we did not find interactions for almost all experiences indicates that their effects on ads are consistent *across these magazines and ads*, i.e., the relationship between a particular experience and effectiveness is not stronger or weaker for different ads or different magazines. For example, the effect of Positive Emotional on ad effectiveness is equally strong for these four magazines and five ads. We cannot conclude, however, that the slopes will remain constant for other magazines or ads. For example, the slope for Positive Emotional could be larger or smaller for news-weekly magazines or Nike ads, neither of which are tested here.

Table 6: Estimates from Separate Models using experiences to predict effectiveness.

	Model 1		Model 2				Model 3	
	P-Value Ad*Mag* Experience		P-Value Mag * Experience		P-Value Ad * Experience		Experience Slope	
Experience	Aad	Aprod	Aad	Aprod	Aad	Aprod	Aad	Aprod
Utilitarian	.7594	.6521	.1448	.5985	.0703	.0094	0.2007	0.2799
Visual	.3718	.0861	.2612	.6214	.2943	.6063	0.2145	0.1600
Timeout	.5780	.3400	.3503	.2839	.3221	.8000	0.1835	0.1962
Positive Emotional	.3042	.1005	.4597	.1475	.3335	.1772	0.2568	0.2139
Inspiration	.8776	.0484	.2166	.0041	.7802	.3525	0.3637	0.1424
Ad Receptivity	.8562	.7801	.3469	.5262	.1239	.6731	0.2335	0.2048
Engagement	.9162	.4134	.3340	.1653	.2113	.4694	0.5012	0.4073

The slopes for engagement and all the experiences are very highly significant. This supports hypothesis 1 and confirms the findings from Malthouse et al. (2007), Calder et al. (2007) and Bronner and Niejens (2006), using these four real ads and the more realistic experimental procedure. The more engaged a reader is with the content of a magazine, the higher the respondent rates specific ads.

The two-way interaction between Inspiration and magazine was found to be highly significant when predicting attitude towards the product. We investigate this relationship further by estimating contrasts to determine which pairs are different. The effect of Inspiration on ads is stronger (greater slope) for *BHG* and *Country Home* than for the other two. The slope for *Country Home* is slight larger than the one for *BHG*, although the difference is not significant. Moreover, the Inspiration slopes for *Fitness* and *Parents* are not significantly different from 0.

Congruency and Advertising Effectiveness

We now evaluate whether congruity between the ad and the magazine vehicle affects reactions to ads using two different approaches. The first approach uses the survey respondent’s rating of “How typical is the above ad of the types of advertisements you see in [magazine name]?” This is an individual respondent-level evaluation of congruence. We regress the two measures of ad effectiveness on this measure of congruence, allowing for different magazines to have different intercepts and controlling for category interest and respondent-level engagement. The results are in the second and third columns of Table 7. The effect for congruence is positive and highly significant. The more congruent an ad is the more favorable the respondent’s attitude is towards both the advertisement and product.

Table 7: Estimates from Separate Models Including Context-Free Control Group

Parameter	Respondent-Rated Congruence		Ad Transportation – Mag Timeout Congruence		Ad Visual – Mag Timeout Congruence	
	A Ad	A Prod	A Ad	A Prod	A Ad	A Prod
Intercept	0.1092	0.5292	0.3919	0.9830	0.4619	1.0219
Magazine						
<i>BHG</i>	0.0094	0.0626	0.08584	0.1665	0.0135	0.0857
<i>Country Home</i>	-0.2274	-0.0699	-0.2457	-0.0715	-0.2556	-0.0751
<i>Fitness</i>	-0.0164	0.0701	-0.0841	-0.0098	-0.0649	0.0202
<i>Parents</i>	0	0	0	0	0	0
Category Interest	0.7613	0.8612	0.8061	0.8605	0.7955	0.8521
Engagement	0.4630	0.3573	0.5352	0.4044	0.5390	0.4049
Congruence	0.1575	0.0938	0.3996	0.5404	0.4037	0.4657

The second approach is to use a magazine × ad level measure of congruence as discussed earlier. Recall that we did a separate ad study in which an independent sample of magazine readers were asked to rate their experiences with four of the specific ads in this study, without any editorial content around the ad or instructions that the ads appeared in a specific magazine. The intent was to measure a specific advertising experience called *Transportation*, which refers to lifting the reader out of his/her world. The items are provided in Table 8. The seven Transportation items were factor analyzed and found to be unidimensional with a single eigenvalue greater than one (the first two eigenvalues were 4.83 and 0.68). Coefficient alpha is 0.92, indicating a highly reliable scale, and alpha decreases when any single item is deleted. The two magazine experiences that are most similar to Transportation are Timeout and Visual. We will measure average Transportation for each ad and average Timeout and Visual for each magazine. Congruence is measured by the difference between the average Transportation level of an ad and the average for an experience for the magazine.⁵

Table 7 gives the results from an ANCOVA. The slope for congruence is very highly significant, indicating that the more congruent an ad is with the magazine, the higher the attitude, supporting hypothesis 2.

Table 8: Factor analysis of the Timeout questions from the ad study.

Question Wording	Factor Loading
I could picture myself in the scene of the events in the ad	0.8923
I can picture myself at the scene of the events and places in this ad	0.8819
I felt I was right there in the ad experiencing the same thing	0.8688
I could easily picture the events in it taking place	0.8423
The enthusiasm of the ad was catching – it picks you up	0.8080
This ad took my mind off other things	0.7587
An ad like this is a bit of an escape	0.7537

⁵ As a specific example of computing the congruence measure, consider the Woolrich ad in *Country Home*. The estimated average score for the Woolrich ad on the Timeout scale is 3.66 and the grand average was 3.05, indicating that the Woolrich ad is above average on the Timeout dimension. Table 4 shows that the mean for *Country Home* on Timeout is 4.07 while the grand average is 3.84. The congruence is thus $|(3.66 - 3.05) - (4.07 - 3.84)| = 0.38$. The congruence between *Country Home* and the Neurogena ad, which is very text heavy and informative, is $|(2.06 - 3.04) - (4.07 - 3.84)| = 1.22$, indicating that the Woolrich ad is closer than the Neurogena ad to *Country Home*. We flip the sign so that the orientation is the same as the individual-level congruence measures, i.e., larger values mean more congruent.

DISCUSSION AND CONCLUSION

Engagement with magazines is manifested through specific experiences that the reader has such as getting good advice and tips (Utilitarian), being transported by the pictures and illustrations (Visual), and enjoying relaxation and escape through the magazine (Timeout). We confirm the measurement psychometric properties of metrics (scales) that measure these experiences as well as the conceptualization of engagement as being the overall result of the experiences.

This work set the stage for examining the effect of magazine media engagement on advertising. We related experiences and engagement to the test score ratings of five ads. The results show that both engagement and individual experiences affect reactions to the ads. Moreover, these effects are general across both ads and magazines. This confirms findings from other media-context studies and is of particular importance given that readers saw the ads in the context of actually reading editorial content.

This study, moreover, provides an empirical test of the experiential congruency hypothesis that the more congruent an ad and vehicle are in terms of an experience, the more effective the ad. We proposed a specific formula for evaluating the *experiential congruence* between an ad and a media vehicle. We showed that experiential congruence is related to ratings of ads and the product advertised.

The Context Fit Index

These findings have important implications for both advertisers and media companies. Since the experiential congruence of an advertisement with the vehicle affects reactions to the ad and product, advertisers should attempt to maximize congruence. This can be done either in developing ad creative executions with consideration of the experiences in the intended vehicles or through the selection of vehicles. Experiences provide tangible dimensions for evaluating vehicles. And understanding the experiences offered by a vehicle can guide the creation of an ad.

Measures of experiential congruency could be incorporated into the media selection process. Media experience measures could be available from syndicated research (e.g., Simmons, MRI, Scarborough, JD Power). Or through proprietary studies (e.g., Starcom's ACE platform). And although few ads are tested prior to insertion, the experiences of particular ads should be ascertained through copy testing. In lieu of specific syndicated measurement of experiences, advertisers could rely on the judgment and experience of the magazine publishers who are the best source of their readership behavior. This should result in increase congruence of ad and content experiences. The magazine and ad experience measures could be used to identify which magazines are most congruent with a particular ad. The Euclidian distance approach used in this research in fact provides a formula for calculating a *Context Fit Index*.

Engagement is not just something that distinguishes one media vehicle from another. It is not just that one magazine offers more engaged readers than another. This research indicates that consumers have experiences with ads in the same way that they have experiences with editorial content. Advertisers need to think about ads, as well as media vehicles, in terms of engagement. And both media companies and advertisers need to give more thought to the congruence of ads with vehicles by considering the fit of ad experiences to media experiences.

This advances thinking on media planning, which began by simply counting eyeballs, and then moved to incorporating demographic and buying behavior and more recently engagement (Bahary & Fielding, 2005). This focus on the congruence between advertising and content adds further refinement to the magazine planning and selection process. Moving towards experience context fit planning continues the goal of maximizing ad effectiveness.

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APPENDIX
Figure 1

Behr Paint

Your room. Your vision. Your masterpiece.

Paint Your Room™ to BEHR, a new house of color!™ to BEHR, enables you to deliver your own distinctive and unique color combinations before ever dipping a paintbrush.

How to use:

1. Take a large photo of the room you'd like to paint.
2. Click the photo and send your unique color requests to BEHR.
3. Choose from over a 100 color, precise color match to your walls, and the best color formulas for the color of choice.
4. Order color swatches or 4-oz. paint samples for home delivery.

Behr Paint Your Room™ is an innovative color consultation service available at your local paint store.

BEHR
Paint Your Room™

Neutrogena Sun Screen

There's more to sun protection than SPF. SPF measures UVB burning rays, but what about UVA aging rays? With the introduction of **helioplex**, you now have access to the best UVA/UVB protection there is.

Longest lasting protection.
The SPF in your tanning lotion or spray effectively blocks burning UVB rays, but what about the invisible UVA rays that age your skin? Neutrogena's helioplex begins to break down the moment your skin is exposed to the sun. Only a stabilizing complex like helioplex can keep UVA defense this strong and steady longer than the top ten sunscreens available.

Strongest protection.
While SPF measures UVB protection, helioplex is a cutting edge system for UVA protection called PPS. The higher a sunscreen's PPS value, the better and longer lasting its UVA protection. With an unbeatable PPS based on helioplex™, it's the highest SPF available. Neutrogena's helioplex SPF 100 offers the best UVA/UVB protection there is, lasting outdoors or indoors.

Dermatologists believe even your daily moisturizer should provide superior sun protection.
UVA rays penetrate deeper into the epidermis than UVB rays, and cause long-term damage to your skin. Neutrogena's helioplex SPF 100 moisturizer offers the best UVA/UVB protection available in a daily skin care product.

Neutrogena's helioplex is a trademark used by Neutrogena, Inc. For more on the complete line of products visit www.neutrogena.com

Woolrich Carpet

WOOLRICH
EST. 1830
Made to be lived in.
For more information on Woolrich Home Furnishings, visit www.woolrich.com.

Neosporin

"I will never leave another cut untreated."

A Mother's Story

"Last year, Michelle got this little scrape on her knee. It didn't look like much, so I just closed it up. Three days later, we were in the emergency room with an infection. Even the most caring mom can't tell which cuts or scrapes, no matter how small, might lead to a serious infection. So I stop guessing and treat them all with NEOSPORIN! NEOSPORIN kills more types of infectious bacteria than even the leading topical prescription. And NEOSPORIN is clinically proven to heal cuts four days faster than a bandage alone. Remember—nothing protects against serious infection better than NEOSPORIN!"

NEOSPORIN
Every cut. Every time.™

Connecticut Tourism

A Power Walk
Closer than you think.

Put a grasshopper under your feet. Disconnect from the daily routine with a healthy escape to Connecticut. Powerful computers, paired with scenic trails and local adventures, let you breathe in the sunshine.

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