Do consumers dig it all? The interplay of digital and print formats in media

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Abstract
Purpose – This study aims to explore consumers’ motivations in the adoption of either print or digital forms of media, given the fluctuation of trends and attitudes in magazine consumption in the USA. This paper utilizes cognitive lock-in and the power law of practice to further the understanding of digital adoption through an interdisciplinary lens.

Design/methodology/approach – In this study, initially, five focus group sessions, including 53 qualifying non-student participants randomly placed into groups of 10 or 11, were held. Next, a 2 × 2 between-subjects quasi-experiment, using 163 undergraduate students at a large public university, was conducted.

Findings – The findings show that although the digital medium is considered less expensive, more convenient and more environmentally friendly, the print medium is regarded as more familiar, personal and visual. Further, whether the media type is a book or a magazine, consumers report higher perceived value, hedonic value and attitude toward print versus digital media.

Practical implications – The potential to digitally attract and lock-in consumers in the media industry has immense implications. Individuals consume media because of fashion marketing, personal space and advertisements, among other reasons.

Originality/value – This paper contributes to existing research by uncovering qualitative and quantitative insights into media consumption through a multilayered analysis of focus group participants and a quantitative experiment. The findings indicate that both the power law of practice theory and cognitive lock-in are plausible explanations for the choice of print over digital media format.

Keywords Focus groups, Mixed methods, Hedonic consumption, Cognitive lock-in, Power law of practice, Semantic analysis

Paper type Research paper

Introduction

Be it literature or news, individuals choose to access their media in either print or digital forms; this informs not only the way they ingest information but also the way they feel about doing so. The generational or age-based “digital divide” is not as big as one might suspect, although it influences differences in media consumption. For example, a recent survey found that print publications are still used by nearly half of young adults aged 18-29 years and just over half of adults aged 30-39 years at 47 and 55 per cent, respectively (Rosenstiel et al., 2014).

Approximately 6 per cent of tablet users read magazines on their tablets daily, and 23 per cent of them read magazines monthly (Mequoda, 2013). Tablets and e-readers have widely expanded the digital marketplace, incentivizing tech companies to use innovation and persuade consumers to utilize and enjoy digital media. The durability of tablets is an important factor in deciding whether to read digital versus print media; while paper is frail and brittle, digital gadgets and devices can withstand wear and tear. However, regardless of the trends in devices, single magazine copies still have a higher selling rate in print than digital form (Patel, 2014), an indication of the stubborn grasp consumers keep on print media.

Given the fluctuation of media consumption in the USA, our study aims to explore consumer motivations in choosing to ingest either print or digital media. Our question then is whether consumers can adopt and employ e-reading in a manner similar to their previous shift to websites and e-commerce. Our inquiry indicates that the hedonic nature of magazine or book consumption will make this “lock-in” (lock-in is defined as consumers’ decreased propensity to search and switch after an initial investment – see Zauberman,
2003) more difficult than is the case with other forms of digital consumption such as newspapers. We conduct a series of focus groups followed by a quasi-experimental quantitative study and provide a theoretical framework based on extant research. We first present a literature review and conceptual framework surrounding cognitive lock-in theory and hedonic goals. Next, we detail the qualitative focus group study followed by a quantitative experiment. Finally, we provide results, conclusions and implications.

**Literature review and conceptual framework**

**Cognitive lock-in and the power law of practice**

We base our conceptualization of e-magazine and e-book adoption on the cognitive lock-in and power law of practice theory (Newell and Rosenbloom, 1981). The power law of practice, at a qualitative level, states that when individuals practice a certain task, repetition creates higher efficiency. Higher efficiency creates higher familiarity, from which individuals tend to become locked-in to an environment (Johnson et al., 2003; Breugelmans et al., 2012). In the internet medium, multiple empirical studies show that cognitive lock-in, whereby there is a decreased propensity to search and switch after an initial cognitive investment, occurs when consumers learn how to traverse a website to complete a transaction. This lock-in increases their likelihood of returning to the same website again for their next transaction, even if doing so produces a sub-optimal decision (Steckel et al., 2005). Electroencephalogram measurements demonstrate this phenomenon at the neurophysiological level. (Sénécal et al., 2015). In this study, the authors studied the brain activity of people navigating actual websites, to measure the cognitive load, or total amount of mental effort used in a person’s working memory. Results showed that participants visiting the same website multiple times exhibited a different cognitive load pattern than participants visiting different websites. Those paying multiple visits to the same site rapidly moved from controlled processing to automatic processing, requiring less mental effort, and facilitating cognitive lock-in. Likewise, Zauberman (2003) provides three experiments, showing that consumers cognitively lock-in to websites, making them more reluctant to search or switch to potentially beneficial alternatives. This loyalty, in particular on the internet, is especially ironic, given the nature of internet shopping, such as bargain hunting, comparative shopping and consumer online goals. For example, through clickstream research, Moe (2003) suggests that consumers tend to have four key goals during online transactions: browsing, searching, learning and buying. These goals are relevant when discussing the consumption of digital media because consumers tend to have one of these goals (especially in the case of e-commerce) during any given set of activities. Because three of those four goals do not involve completing a transaction (i.e. browsing, searching and learning), consumers have the freedom to carry them out with virtually no salesperson pressure or stigma associated with returning to the same shopping environment repeatedly without purchasing (Krishen et al., 2013). Although digital media continues to increase in popularity even in learning environments, recent research finds that note-taking is better accomplished with paper (Mueller and Oppenheimer, 2014), and that laptops reduce learning in classrooms (Sana et al., 2013). In essence, our research posits cognitive lock-in as a potential explanation for the preference for print over digital consumption of hedonic material including magazines and books.

**Hedonic versus utilitarian media consumption**

Although much of the existing literature focuses on utilitarian online goals (such as searching, buying and learning), research also shows that consumers play online, often losing track of time, floating from one website to another or playing games and interacting in multiple environments (Hoffman and Novak, 2009). Although the internet was originally conceptualized as a shopping environment, more suited for utilitarian goals such as convenience and bargain hunting, research on retailing shows that hedonic pursuits can also be experienced during internet shopping (Childers et al., 2001). For example, consumers may have feelings of flow and play, which can create positive subjective experiences and in turn may evoke favorable brand attitudes (Mathwick and Rigdon, 2004). Research exploring online searches for experiential products (Grant et al., 2007) argues that the key determinant for understanding complex consumer behavior is information value. Applying their reasoning to the e-magazine adoption context would lead us to believe that the design of such offerings will have a large impact on their potential for cognitive lock-in.

E-tail experience offers participants more hedonic shopping value during their experience (Babin et al., 2007). Hedonic shopping value relates more to shopping as an enjoyable experience, whereas utilitarian shopping value relates to the outcome of accomplishing a necessary shopping task. Previous research reveals shopping frequency, or experience in the ecommerce environment, as a moderator to preference for an e-tailer (Overby and Lee, 2006). More specifically, Overby and Lee (2006) show that hedonic value has a stronger relationship with e-tailer preference for infrequent shoppers, while utilitarian value has a stronger relationship with e-tailer preference for frequent shoppers.

As such, the literature has broadly classified products as either hedonic or utilitarian, arguing that consumer real-time interactions can create more need- or want-based goals. Even though the product itself remains constant, the purpose driving the search behavior might differ and thus trigger either hedonic or utilitarian goals. The context of the decision, then, is important in determining which types of motivation will take place. Fiore et al. (2005) studied image interactivity on an e-commerce website and showed that hedonic shopping value and emotional pleasure during the shopping experience increase when subjects are able to mix and match product combinations visually while making product choices.

Much like hedonic experiences on the internet, research shows that magazines provide imaginary shopping spaces where individuals, mainly women, can experientially consume. Further qualitative research discusses how magazines provide women with time and space for themselves, a rare commodity in their otherwise hectic lifestyles (Stevens et al., 2003, 2007). We now set forth a focus group-based qualitative inquiry followed by a quantitative study to delve further into motivations to adopt the e-magazine format.
Digital and print formats in media

Angala S. Krishen, Sheen Kachen, Michael Kraussman and Zeenah Haniff

Study 1: qualitative inquiry

Method

With the advent of newer technological avenues for digital consumption of media and the relatively low understanding of the motivations driving consumers to read magazines in digital form, this study collects data in multiple focus group sessions using a qualitative design. Such designs are more appropriate when topics of research have been explored less in the existing literature (Drumwright and Murphy, 2009). A focus group is a critical/cultural research method with a qualitative aspect used to study social issues. By gathering information from a wide-ranging sample of people to measure attitudes or perceptions, this method researches how and why people think, feel or behave toward something (Quible, 1998).

Similar to a group interview, a researcher asks questions both systematically and simultaneously to all individuals present (Morgan, 1996). The guided discussion is likely to occur in a private, comfortable setting to allow participants freedom of expression. Typically, focus group research consists of four to six groups, each containing at least 6 and up to 12 diverse individuals (Morgan, 1996). The technique has an exploratory aim, as results from the focus group may or may not statistically represent the general population. Advantages to conducting a focus group are that it captures real-life data, is flexible, has high face validity, produces quick results and is inexpensive (Quible, 1998).

Focus groups can be a supplement to quantitative methods of questionnaires and experimental studies (Lunt and Livingstone, 1996). Their ability to “quantify subjectivity” renders them effective. (Gustafson et al., 1994). The qualitative approach of focus groups is instrumental in collecting consumer data through self-disclosure and social interaction in analyzing and determining collected data regarding media influence on the receptive audience (Sharts-Hopko, 2001). The method of posing candid open-ended questions to voluntary participants promotes such self-disclosure (Sharts-Hopko, 2001).

We derive the following benefits as a starting point from previous research regarding consumption in retail versus e-tail versus virtual world experiential promotion or v-tail (VWEP) environments (Krishen et al., 2013): convenience, affordability, multi-functional, portability, ease of readability and timeliness.

Study 1 Focus group script: guided discussion following open discussion:

1. If you could only have one type of magazine, would you prefer print or digital?
2. Do you own any digital devices? If so, which ones?
   - What magazine titles/genres do you read?
   - Why do you read magazines? Convenience, price, multi-functional, portability, ease, timeliness or sociability?
   - Examples: When and where do you usually read magazines? With whom do you discuss and/or share magazines?
   - What are the similarities/differences between print and digital magazines?
   - What are the similarities/differences between print and digital media?

Sample and procedure

We requested the focus group subjects to participate via electronic mail then asked them to contact other potential participants, creating a snowball sample. We required eligible participants to be between the ages of 18 and 65, and to be readers of either print or digital media. We also required that they could not be full-time students. We then asked qualifying participants for voluntary participation and informed them of anonymity before their placement into focus groups. We offered a prize drawing as an incentive for participation by providing an e-mail address for the chance to receive a one-year subscription to a magazine of choice. We randomly placed 53 qualifying participants into five focus groups of 10 or 11 per group. Participants in this study were aged between 18 and 45 years with average age of 23.8 years. Division of gender appeared skewed with 40 females and 13 males; however, given the target consumer of magazines, this gender distribution is appropriate (Stevens et al., 2007). The majority were single; only two participants were married. About 39 (74 per cent) participants indicated current employment. A few individuals indicated mixed ethnicities: 13 per cent Asian, 15 per cent African-American, 60 per cent Caucasian and 17 per cent Hispanic. We held focus groups at a university in the western region of the USA for approximately 45 min each. Graduate students at the university served as trained moderators during the sessions. Moderators used a script containing general questions and a timeline to lead the focus group discussion. Additionally, moderators utilized a researcher worksheet to record the tally of participant responses. Two moderators were present at each focus group, alternating tasks of distributing the survey, conducting the focus group and reporting responses.

At the beginning of the focus group, participants were provided with print and digital magazines to browse before starting the study. Following the viewing, moderators asked open-ended questions loosely based on their script about why participants regularly consume magazines, why they are attracted to the medium and what retains their interest in the medium. The focus group discussions were audiotaped by a moderator and later transcribed.

Analysis and results

Upon completion of the focus group data collection, we interpret the textual data to conceptualize the key ideas derived from it, following a two-step grounded theory approach (Spiggle, 1994). In essence, the process involves iterating through the transcribed textual data along with existing theory, and forming emergent interpretation (Goulding and Lee, 2005). Following this method, we therefore focus on the two frameworks of cognitive lock-in and the power law of practice, and hedonic e-magazine
motivations, as our theory base during our exploration. Three trained researchers independently coded each comment, serving as content analysis coders and identified key themes (Reynolds and Arnold, 2000). Table I gives the key themes and sample comments.

Upon completion of the initial step, we then divided the focus group comments into two categories, either print or digital comments. To analyze key contextual differences between these two sets of comments, we utilized a lexicographic content analysis software, called Leximancer (www.leximancer.com). Previous research utilizes this machine learning technique to discover the concepts and themes within verbal data (Smith, 2007). This semantic analytic software applies to several disciplines of research, such as marketing, advertising and accounting (Campbell et al., 2011; Krishen et al., 2014; Rooney, 2005). Using Bayesian theory, this software analytic tool algorithmically derives concepts and themes that in general conform to those derived by qualitative researchers (Rooney, 2005). Given the exploratory nature of our inquiry, we selected automated semantic analysis because it does not rely purely on human coding of data and instead provides a process to retrieve key differences between these types of comments. Augmenting our hand coding with semantic content mapping provides further insights (Atkinson, 1992). In summary, we take the focus group data and analyze it in two separate ways: 1 hand coding to derive themes (Table I); and 2 semantic content analysis with theme and coding diagrams (Figure 1).

### Table I Study 1 sample qualitative responses of advantages

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Print</th>
<th>Digital</th>
<th>Sample comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience</td>
<td>5</td>
<td>8</td>
<td>It’s convenient. And if you could do something at the click of a button rather than having to drive to the store to go get it.</td>
</tr>
<tr>
<td>Environmentally friendly</td>
<td>0</td>
<td>3</td>
<td>Some people might opt for that because of the green option too. That’s a real thing that people won’t have to contribute to waste and stuff.</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>2</td>
<td>6</td>
<td>That goes to my Kindle and stuff. Then you don’t have those newspapers piling up in the center of your room and saying “Now what do I do with these?”</td>
</tr>
<tr>
<td>Cost</td>
<td>1</td>
<td>4</td>
<td>It’s more convenient. I think it’s a lot more cost effective. Like I read a lot, and if I have a book on my phone or my laptop, then I can read it on my phone. I can get like […] like it costs a lot less than if I go out, get the book</td>
</tr>
<tr>
<td>Durability</td>
<td>0</td>
<td>3</td>
<td>I would say digital because the paper over time will get ruined and you won’t have a magazine anymore</td>
</tr>
<tr>
<td>Amount of information</td>
<td>0</td>
<td>1</td>
<td>I can see more online. Like more options and more articles online. I don’t want to have a billion page magazine</td>
</tr>
<tr>
<td>Multi-functional</td>
<td>0</td>
<td>2</td>
<td>There’s the multimedia application. It can help you. If there’s certain data and things you could calculate. And also like, sometimes videos help you. Sometimes I use videos because they’re trying to show you something, how to do something</td>
</tr>
<tr>
<td>Time savings</td>
<td>0</td>
<td>3</td>
<td>Yea, yea. I’ll be sitting in bed, finish a book, hit a button, I already have the next book right there, ready to read. I don’t have to stop, go to the bookstore and hope it’s there</td>
</tr>
<tr>
<td>Organized</td>
<td>2</td>
<td>3</td>
<td>The digital bookshelf, everything is in one place so you don’t have to keep track of all your magazines if you want to refer back to an issue at all. You know exactly where it is on your iPad whereas you don’t have to run around your house, looking for a magazine that you saw an article in a while ago or something</td>
</tr>
<tr>
<td>Accessibility</td>
<td>6</td>
<td>3</td>
<td>In line at the grocery store. After I check the mail. At the doctor’s office</td>
</tr>
<tr>
<td>Ability to visualize</td>
<td>6</td>
<td>1</td>
<td>My oldest daughter actually wants to have the copy and have it on the bookshelf. Yea, I like to decorate my bookshelf</td>
</tr>
<tr>
<td>Familiarity</td>
<td>3</td>
<td>0</td>
<td>Print is more personal. When you go out and buy something, you feel more connected to it rather than just like, Oh, I just downloaded that on my iPad</td>
</tr>
<tr>
<td>Professionalism</td>
<td>1</td>
<td>0</td>
<td>Print has always been more professional and always will be as far as I’m concerned. There are too many errors online and articles you don’t necessarily know where they got their information from</td>
</tr>
<tr>
<td>Ability to share</td>
<td>2</td>
<td>1</td>
<td>With print, I feel like you could share more and borrow. Like, I’m not just going to lend my Kindle to my friend and like “Hey, give it back when you’re done”</td>
</tr>
</tbody>
</table>

**Notes:** *Italic numbers indicates that digital has a higher value; Non-italic numbers indicates that print has a higher value*
spending money with the print medium and receiving free services with the digital medium. This difference could be considered very significant, as subscribe is also connected to the print medium in the concept map and the first level of coding mapped cheaper with the digital medium as well. An important difference indicated both levels of analysis shows that the digital medium is more cost-effective.

Given the findings of the qualitative study and the various reasons for consumption of digital versus print magazines, we now move to quantitative, broadening the media types and increasing our overall understanding of cognitive lock-in. The key question for Study 2 is, “Do consumers value print more than digital formatting, when consuming hedonic media?”

**Study 2: quantitative experiment**

**Overview of study and independent measures**

A 2 (media format: print versus digital) × 2 (media type: book versus magazine) between-subjects design was used to test the main hypothesis. Both independent variables were manipulated using scenarios and asking participants to imagine themselves reading a hypothetical magazine or book in either digital or print form (Appendix).

**Sample, procedure and dependent measures**

We offered 163 undergraduate students at a large public university in southwestern USA course credit for taking part in the study. The sample consisted of 81 males (49.7 per cent) and 82 females (50.3 per cent). Most participants were under 35 years of age (94 per cent, with 52 per cent of these between 18 and 22 years, and 42 per cent between 23 and 34 years); of the other 6 per cent of participants, 5.5 per cent were between 35 and 49 years, and 0.6 per cent (one subject) were between 50 and 59 years.

We gave subjects a series of questions to answer that dealt with their perceptions of the reading material, including the multi-item constructs of perceived value, hedonic and utilitarian value and attitudes toward the reading material. All measures used were adapted from existing seven-point Likert-type scales with well-established reliabilities. Table II shows the items for each construct, along with a Cronbach’s alpha for each measure, showing that all constructs are reliable with α values exceeding 0.90.

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**Table II Study 2 construct items and reliabilities**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived value (seven-point scale: strongly disagree to strongly agree)</td>
<td>Adapted from Sweeney and Soutar (2001)</td>
<td>0.92</td>
</tr>
<tr>
<td>Given that &lt;hyperlink&gt;, what are your beliefs regarding this reading medium?</td>
<td><img src="https://example.com/screenshot.png" alt="" /></td>
<td></td>
</tr>
<tr>
<td>It has consistent quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is well made</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is one that I would enjoy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It would make me feel good</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It offers value for money</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is a good product for the price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It would improve the way I am perceived</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It would make a good impression on other people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hedonic value (seven-point scale: not at all to very much)</td>
<td>Adapted from Voss et al. (2003) and Jones et al. (2006)</td>
<td>0.94</td>
</tr>
<tr>
<td>Given that &lt;hyperlink&gt;, what are your feelings regarding this reading medium?</td>
<td><img src="https://example.com/screenshot.png" alt="Image" /></td>
<td></td>
</tr>
<tr>
<td>Fun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excited</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delighted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thrilled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enjoyable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilitarian value (seven-point scale: not at all to very much)</td>
<td>Adapted from Voss et al. (2003) and Jones et al. (2006)</td>
<td>0.90</td>
</tr>
<tr>
<td>Given that &lt;hyperlink&gt;, what are your feelings regarding this reading medium?</td>
<td><img src="https://example.com/screenshot.png" alt="Image" /></td>
<td></td>
</tr>
<tr>
<td>Effective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Necessary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude (seven-point scale)</td>
<td>Adapted from Homer (1995)</td>
<td>0.96</td>
</tr>
<tr>
<td>What are you overall impressions of (attitudes towards) reading &lt;hyperlink&gt;?</td>
<td><img src="https://example.com/screenshot.png" alt="Image" /></td>
<td></td>
</tr>
<tr>
<td>Bad – Good</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dislike – Like</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfavorable – Favorable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of media type (seven-point scale)</td>
<td>Adapted from previously validated product experience measures</td>
<td>0.97</td>
</tr>
<tr>
<td>In a week, how many times do you engage in reading &lt;hyperlink&gt;?</td>
<td><img src="https://example.com/screenshot.png" alt="Image" /></td>
<td></td>
</tr>
<tr>
<td>Infrequently – Frequently</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seldom – Often</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never – Always</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analysis
We conducted multiple analysis of covariance (MANCOVA) with perceived value, hedonic value, utilitarian value and attitude included as dependent variables. We used this test as protection against escalating Type I error that might occur if we analyze each variable separately. Additionally, we used three variables as covariates in our analysis: age, gender and frequency of media type, (a measure of how frequently the participants engage in reading the particular type of media mentioned in their given scenario), based on the results of the first study and the existing literature.

Results
A 2 (media format) × 2 (media type) MANCOVA analysis with perceived value, hedonic value, utilitarian value and attitude as dependent variables yields no interaction effect (Wilk’s $\lambda_{(4,153)} = 0.61$, ns). However, there are overall main effects for media format (Wilk’s $\lambda_{(4,153)} = 8.11$, $p < 0.001$) and media type (Wilk’s $\lambda_{(4,153)} = 2.85$, $p < 0.03$). Neither the media format × media type interaction nor the media type variable had any visible effect on any of the dependent variables. As Figure 2 shows, media format has a main effect on three of the four dependent variables, utilitarian value being the exception: perceived value ($F(1,162) = 4.63$, $p < 0.05$), hedonic value ($F(1,162) = 4.46$, $p < 0.05$) and attitude ($F(1,162) = 15.87$, $p < 0.001$) such that print is higher than digital. Therefore, whether the type of media is a book or a magazine, there is a significant difference for print versus digital, such that print is significantly higher.

Conclusions, implications and future research
Much like the expansion of blogs and social media, the prevalence of e-reading and digital media expands as technology does (Collander and Dahlé, 2011). The present study seeks to explore both consumer motivations qualitatively and quantitatively and advantages for digital versus print media consumption. Findings indicate that although most consumers do not currently read magazines in the digital form, despite ownership of digital devices, they do perceive several benefits from using digital resources. In fact, qualitative coding results show more advantages for digital consumption of magazines than for their print counterpart (Table I). At the same time, as we expand our inquiry to include books and e-books in the second study, our findings highlight the lock-in that consumers still have with hedonic print consumption. As shown in Figure 2, consumers perceive higher hedonic value and perceived value, and have higher attitudes toward print media. We contribute to existing research, uncovering qualitative insights into digital consumption through a multilayered analysis of focus group participants while also expanding to another methodology for our second study. Our findings show that although we consider the digital medium cheaper and more convenient, we regard the print medium as more familiar, personal and visual. Research indicates that by understanding global megatrends and forces shaping the future, firms can tailor innovative products and concepts more appropriately to consumers of all types and in all locations (Florin et al., 2007). As Singh et al. (2009) indicate, globalization, the rise of networks and open innovation are the current trends. E-magazine and e-book adoption represent a shift in the direction of such megatrends and thus should occur over time if properly facilitated by publishers. Future interdisciplinary research should investigate the cross-cultural implications of the power law of practice, cognitive lock-in and hedonic media consumption (Sangwan et al., 2009). Shifting from a well-known media form, i.e. print, to another newer type, i.e. digital, for the consumption of hedonic content would constitute a somewhat radical adoption, which would require compatibility with a consumer’s prior beliefs, experiences and values, as well as a shift in publishers’ advertising and innovative efforts to create shifts in the market (Karahanma et al., 2006).

In terms of hedonic versus utilitarian online experiences, the power law of practice would normally mean that regardless of the product or the goal, most consumers should increase cognitive lock-in with increased frequency of interaction and therefore become more efficient at reaching their goals. Furthermore, Murray and Bellman (2011) delineate between hedonic and utilitarian experiences and find that for utilitarian online experiences, lock-in increases efficiency and reduces time spent. Conversely, for hedonic online experiences, practice increases pleasure and enjoyment during the time spent, yielding emotional gains to the consumer.

Cognitive lock-in theory contributes to customer loyalty in the online environment and tends to counteract normal internet tendencies such as brand switching and price sensitivity, especially when coupled with newer technologies such as smart agents. However, an important distinction between lock-in loyalty and traditional concepts of customer loyalty is cognitive versus emotional motivations (Oliver, 1999). In particular, cognitive lock-in loyalty does not encompass motivational antecedents such as conformity, escapism or trust, and instead comes from a memory and learning perspective (Johnson et al., 2003; Labrecque et al., 2011). Nonetheless, the formation of cognitive lock-in and the theory surrounding the power law of practice underscores the importance of simplicity in internet design and usability. As such, the use of multiple methods of inquiry such as clickstream data coupled with behavioral measures can provide a dyadic perspective of potential digital consumption.

An important issue that future research can address deals with complexity, clutter or information overload that can occur in digital formats. More specifically, research shows that information overload is an existing issue during the choice process on websites (Krishen et al., 2011) and likewise,
complexity and clutter in advertisements are also avoidable (Zanjani et al., 2011). Hence, simplicity will be key as media providers attempt to transition consumers to digital formats. Future research should study the financial implications of digital adoption, as previous research indicates that as print becomes less common and users shift to free online content, they are less willing to pay for hedonic content consumption (Sumner, 2001). Digital adoption requires the use of personal handheld devices and computers, which facilitate social media technology and sharing and mobile collaboration. Such cross-platform links should decrease cognitive lock-in and increase adoption likelihood (Sheng et al., 2010). Another future research question is whether digital media might be a better platform for “co-creation”, wherein customers can become actively engaged in creating their own online experiences, thereby increasing their engagement in the process (Rowley, 2008). Different types of consumers may be more or less likely to adopt e-magazines versus print ones; Iqani (2012) discusses drifters, speed-readers and free-readers as three types of magazine consumers. Thus, future studies can develop a taxonomy of consumer types and their likelihood of e-magazine consumption. By combining the rich theory of the power law of practice with hedonic goals as a framework, the study forms a basis within which to understand digital versus print consumption of media. Through a series of focus groups followed by a quantitative study, we identify several advantages of digital versus print consumption, yet also find that most people would rather not read hedonic media in an online format. Movement from print to online should occur when consumers feel cognitively locked-in to the technology; such habits of use (Murray and Haubl, 2007) will require ease of entry into this relatively new medium. One major implication of our findings is that digital providers should decrease barriers to entry for consumers and increase penetration into their target markets by providing trial licenses and direct marketing promotions. When consumers enter into the hedonic digital market and begin to feel comfortable with the format, they will gradually gain practice in the environment and ultimately increase the enjoyment they gain from their interaction (Murray and Bellman, 2011). Thus, cognitive lock-in, a well-demonstrated theory, appears to form a theoretical basis for ongoing consumption of hedonic print media. The complex interaction between print and digital media is indicative not only of their unique relationship to each other but also of humanity’s broader tension with technology and innovation. The progression of digital and print usage shows the unpredictability of the industry’s ebbs and flows, with print gaining support in instances of hedonic utilization, and digital preference expressed in other instances. As literature, magazines and newspapers continue to grow and change with the evolution of technology and society, consumers’ relationship with their medium of preference will continually transform.

References


Digital and print formats in media

Anjala S. Krishen, Sheen Kachen, Michael Kraussman and Zeenath Haniff


Further reading


Appendix

Table A1 Study 2 experimental scenarios

<table>
<thead>
<tr>
<th>Media format</th>
<th>Media type</th>
<th>Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print</td>
<td>Magazine</td>
<td>Suppose that you are packing for a trip and want to have some relaxing reading material for the journey. You are rushing out the door as you pack so you stop by a store on the way and pick up a few magazines. Once you board your plane, you take out the magazines and begin reading them to pass the time.</td>
</tr>
<tr>
<td>Print</td>
<td>Book</td>
<td>Suppose that you are packing for a trip and want to have some relaxing reading material for the journey. You are rushing out the door as you pack so you stop by a store on the way and pick up a few books. Once you board your plane, you take out the books and begin reading them to pass the time.</td>
</tr>
<tr>
<td>Digital</td>
<td>Magazine</td>
<td>Suppose that you are packing for a trip and want to have some relaxing reading material for the journey. You are rushing out the door as you pack so you grab your electronic tablet device from your desk in order to be able to read a few magazines. Once you board your plane, you take out the electronic tablet device and load up the magazines and begin reading them to pass the time.</td>
</tr>
<tr>
<td>Digital</td>
<td>Book</td>
<td>Suppose that you are packing for a trip and want to have some relaxing reading material for the journey. You are rushing out the door as you pack so you grab your electronic tablet device from your desk in order to be able to read a few books. Once you board your plane, you take out the electronic tablet device and load up the books and begin reading them to pass the time.</td>
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