



Do enriched digital catalogues offer compelling experiences, beyond websites? A comparative analysis through the IKEA case[☆]

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ARTICLE INFO

Keywords:

Website
Digital catalogue
Enrichments
Compelling experience
Utilitarian value
Hedonic value

ABSTRACT

Technology supports digital versions of catalogues, enriched with rich media tools, in an effort to create compelling consumer experiences. Yet these digital catalogues also share several similarities with websites, so why display both? Digital enriched catalogues could be promising to generate a compelling experience for consumers. However, is it really the case? To determine why retailers might use digital catalogues, what experiences consumers encounter, and the effect of the related enrichments, this study compares an enriched digital catalogue to a website, using a dual approach that spans both utilitarian and experiential perspectives. Two experiments, conducted with French and Belgian consumers, focus on the case of IKEA's enriched digital catalogue and website. The results indicate that though the digital enriched catalogue does not quite live up to its experiential promises, it features differences relative to the website, with implications for consumer usage and behavioral intentions.

1. Introduction

Despite threats from online channels, catalogues remain relevant tools in omnichannel marketing mixes (George et al., 2013) because consumers still use them. One survey indicated that 31% of consumers keep catalogues next to them as they shop online (Kurt Salmon Review, 2013), and Bhatnagar and Papatla (2016) suggest that catalogues can generate sales through that same channel or exert spillover effects on other channels too. This persistence does not imply static approaches though; in the face of technological advances and ecological concerns, catalogues are at a crossroad, as they can now benefit from advances in technologies. They increasingly take digital forms, displayed online, even if they retain some key traits of conventional printed catalogues (e.g., formatting, information, pages to turn and browse). These digital catalogues benefit from advantages of interactivity and rich media, which support the provision of enrichments with complementary information such as videos, pictures, or textual information, as well as augmented reality or 3D product simulations (Garnier et al., 2015).

Such benefits seemingly should enable compelling consumer experiences (Rose et al., 2012). Since Holbrook and Hirschman (1982), experience arouses research interest and is at the heart of managerial preoccupations. Online channels, visiting a site or digital “place” often constitutes an experience in itself that provides symbolic and hedonic

value beyond utility (Childers et al., 2001; Hoffman and Novak, 1996; Mathwick et al., 2001; Rose et al., 2012). Yet a lack of academic research into digital catalogues makes it difficult to confirm this potential experiential effect, despite its importance for the Direct Marketing area. Rather, as things stand in literature, we note that studies on catalogues are scarce since the 2010's and digital catalogues have not been studied from a marketing perspective. We then identify several pertinent questions for this retail channel. First, digital catalogues and websites are rather similar in their processes and content (George et al., 2013; Ward, 2001), yet retailers often use both channels in parallel. Why do they do so, and is the coexistence of these channels an example of competition or complementarity? Second, why might consumers prefer to use one channel over the other? We anticipate that utility and hedonic experiences might be informative, in which case we also seek to understand how enrichment with rich media affects consumer attitudes toward digital catalogues.

To understand the main influences of digital catalogues and determine if, how, and why this channel might offer compelling consumer experiences, in parallel with a seemingly more utilitarian website, we conduct two studies. In our effort to examine determinants of consumers' intentions toward an enriched digital catalogue, we take a dual perspective that combines utilitarian and hedonic experiential elements and outcomes. As a research context, we investigate the case of IKEA,

[☆] This research did not receive any specific grants from agencies in the public, commercial, or non-for-profit sectors.

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which offers a precursory case of a retailer that is well-known for its multichannel approach and its popular printed catalogue, and which now offers a digital catalogue along with its website. Furthermore, IKEA takes advantage of technological advancements, in that its digital catalogue is one of the few to be enriched, notably with videos. Before specifying this case though, we establish our theoretical foundations and hypotheses in the next section.

2. Theoretical framework

2.1. Catalogues: from print to digital and enriched

A catalogue offers “direct advertising support, illustrated or not, presenting the products manufactured and/or sold by the firm, indicating their characteristics in a more or less exhaustive way (references, sizes, options, prices, payment, delivery, use and aftersales service modalities)” (Lehu, 2012, p. 121). Although 44% of consumers indicate they would prefer to receive fewer catalogues, 58% also use catalogues to spark ideas, 45% state that catalogues increase their interest in the retailer, and 86% have bought a product after seeing it in a catalogue (Kurt Salmon Review, 2013). Catalogues are internationally popular, such that 65% of U.K. consumers like to browse this “quality medium” (Royal Mail Market Reach, 2013), and 47% of French consumers wish to be informed by them (Credoc, 2011; Ifop-Bonial, 2013). According to the Data & Marketing Association,¹ in 2016, some 9.8 billion catalogues were mailed to consumers. The catalogue as a communication tool then remains popular: as an example, IKEA consistently increases the number of catalogues it prints every year.

Research on printed catalogues was dense until the mid-2010's. It has tackled both theoretical and practical issues, such as attractiveness and intrinsic/extrinsic characteristics, consultation experiences, their influence on purchase or brand; their role and consequences for information search processes, and motivations to shop or purchase by catalogue (Chaabane et al., 2010; Eastlick et al., 1993; Fodness and Murray, 1999; Gehrt and Carter, 1992; Gehrt et al., 1996; George et al., 2013; Gijbrecchts et al., 2003; Goossens, 1994; Kumar and Venkatesan, 2005; Kumar et al., 2008; Mathwick et al., 2001; Parguel et al., 2010; Reinartz and Kumar, 2000; Schulz et al., 2007; Venkatesan and Kumar, 2004; Volle, 1997). As shown more recently, catalogues also can be used for high quality content marketing (Yohn, 2015). Yet most of this research focuses on paper catalogues, which may have suffered some competition from the growing presence of websites in business and academics' attention, that decreased for catalogues since the mid-2010's. These channels are similar in terms of the information they provide and the proximity of their purchase and delivery processes (Ward, 2001). Furthermore, the pace of evolutions and innovative digital technologies create new options for catalogues, such that even relatively recent studies on printed catalogues appear somewhat outdated.

It is more difficult than ever to separate or oppose print and digital in omnichannel strategies and operations. Technological advancements, smartphones, tablets, all allow catalogues to be enriched with complementary digital information that can be accessed through technological devices. Although catalogues have survived the digital age thus far, tech-savvy retailers blend their catalogues with their digital offerings,² creating both hybrid physical-digital versions as well as fully digital options.

Such developments reflect a broader retail trend toward leveraging advanced technologies (Poushneh, 2018), such as augmented reality in apps, websites, or digital catalogues. However, if professionals have grabbed this digital turn, research into digital catalogues remains

underdeveloped. To the exclusion of a very dynamic literature in educational studies about digital catalogues in library, studies about digital catalogues in a commercial context are rare. Whereas Gonzalez (2001) and Craven et al. (2010) address some usability issues, we know of no studies that explore the consumer experience of using digital catalogues.

The “virtual” can be seen as a representation or simulation of the “real” (Doel and Clarke, 1999; Latzko-Toth and Proulx, 2006); as a virtualization, going from real to virtual (Lévy, 1995, 1997); and as a hybridization between real and virtual, through interactions and interspersions (Latzko-Toth and Proulx, 2006). On the one hand, the digital catalogue could be considered as an immaterial representation of the real, reproducing the printed catalogue as it is, being subordinated to the real by merely copying or mimicking it. On another hand, it could also be considered as virtualization, reversing the balance of power: the virtual is considered as an amplification of the real that actualizes potentials (Levy, 1997). In that case, the virtual version is not a degradation of the real anymore but it has the potential to create some new richness (Latzko-Toth and Proulx, 2006) and possibly enhance experience.

We start by defining the enriched³ digital catalogue as the enriched online version, with content and richness that have been augmented, or its domain that has been enlarged, through virtualization and rich media. The quality and/or value of the enriched item (here, the catalogue) are improved, because it adds value (something desirable) in the form of detailed information (e.g., product and commercial information, informative or promotional videos about the product or the brand, redirection toward a webpage or product sheet), that cannot be displayed in printed catalogues (because of limited space in the traditional paper layout), but that becomes available in digital forms. The resulting experience then might surpass the experience with a paper catalogue or website. Investigating the novel consumer experiences created by digital catalogue channels is important, as retailers use the digital catalogues more and more. This is furthermore important, considering that only 17% of consumers seek enrichment through *flashcodes* leading to complementary information, while the other 83% feel indifferent, annoyed, or even invaded by them (Credoc, 2011).

Accordingly, we seek to understand the relevance and usefulness of a digital catalogue relative to both printed catalogues and websites. In the former comparison, costs are clearly relevant; digital versions eliminate printing and mailing costs, but adding enrichments likely requires substantial investments. In the latter comparison, we note that websites offer a means to buy the product, whereas digital catalogues require consumers to make an additional visit to another channel (website or physical store) to purchase. Such comparisons seem to suggest fewer benefits of using digital catalogues, so we further question whether enriched digital catalogues, with their virtualization and amplified reality, provide compelling consumer experiences.

2.2. Are enriched digital catalogues compelling experiences? The utilitarian website vs the experiential catalogue

Websites are seen as useful for information search and convenient purchases, be they properly designed (Ben Mimoun et al., 2014). Are digital catalogues similarly useful for shopping tasks, to improve shopping, find the right product easily, make the shopping easier and the e-consumer more productive (Ben Mimoun et al., 2014), or are they instead more experiential in terms of the value they provide? A consumer browses the digital catalogue to review products, discover offers, find promotions and gather ideas, though without any means to make a direct purchase. Thus, we differentiate the utilitarian or hedonic experiential nature of an enriched digital catalogue, relative to a website,

¹ <https://www.retaildive.com/news/why-paper-catalogues-still-matter/506298/>.

² <https://www.retaildive.com/news/why-paper-catalogues-still-matter/506298/> – 6 october 2017.

³ Based on definitions of the verb “to enrich” in Oxford and Larousse dictionaries.

and turn to the technology acceptance model (TAM) (Davis, 1989) that offers a largely admitted basis to study the perceived utility and ease of use of any new technology. If different versions of the TAM exist, the two key variables and main determinants of adoption – perceived utility and perceived ease of use – are the basis for the model. Perceived utility refers to the extent to which using the technology enhances task performance; perceived ease of use relates to the effort required and perceived (or not) to use the technology (Davis, 1989). Consumers mostly rely on websites to look for information and purchase products in a convenient and effective way (Ben Mimoun et al., 2014); digital catalogues instead allow them to discover new ideas, similar to printed catalogues. Furthermore, digital catalogues support conventional methods to browse (e.g., turning pages), because they mimic printed catalogues: as such, they might be not so complex to use. As a parallel to ease of use, we therefore consider the global cost of navigating the digital catalogue (adapted from navigating a website; Baier and Stüber, 2010; Venkatesh and Davis, 2000), measured by effort, time spent, and benefits of use. That is, browsing the digital catalogue is not difficult but does require multiple actions that are tied to online connection and may consume substantial time or repeated effort. They rarely provide search engines, unlike websites, that facilitate product search, so consumers must turn pages to find products of interest. Living a compelling online catalogue experience may then require some efforts for the Internet user. On a purely utilitarian level, the perceived cost of this browsing method thus may be higher than for familiar websites that offer facilities such as search engines. In line with the TAM, we thus predict:

H1. Perceived utility is lower for enriched digital catalogues than for websites.

H2. The perceived cost of use is higher for enriched digital catalogues than for websites.

Beyond mere utility, online shopping also provides hedonic and experiential benefits (Bäckström and Johansson, 2006; Childers et al., 2001; Hoffman and Novak, 1996; Mathwick et al., 2001; Novak et al., 2003; Rose et al., 2012), and an enjoyable experience for consumers can establish a competitive advantage for retailers (Antéblian et al., 2013). Understanding consumers' experiences thus is critical for retailers (Puccinelli et al., 2009), which seek to determine which elements they can use to enhance those experiences (e.g., music, color, store layout, merchandise presentation, rich media, augmented reality). Enriched digital catalogues in particular may be appealing options, because they evoke two key components of virtual experiences: presence (Lombard and Ditton, 1997) and immersion (Charfi and Volle, 2011; Davis et al., 2009; Poncin and Garnier, 2010). We focus on immersion, defined as a state of intense activity that the consumer enters by accessing the experience (Fornerino et al., 2008), such that he or she disconnects from the real world, forgets that world outside, and loses a conscious sense of the surroundings. Immersion can be partial or total, potentially leading to the ultimate state of flow (Fornerino et al., 2008; Hoffman and Novak, 1996). Rich media technologies are immersive (Charfi and Volle, 2011; Poncin and Garnier, 2010), and immersion is considered at the heart of online experiences, such that it encourages favorable approach behaviors among consumers (Charfi and Volle, 2011; Rose et al., 2012). If the digital catalogue can reproduce an immersive browsing experience, similar to a printed catalogue, but also provide immersive experiences through enrichments such as videos (as the more frequently used enrichment in digital catalogues), it consequently should be more immersive than a website. Thus:

H3. Immersion is higher for enriched digital catalogues than for websites.

Novak et al. (2003) argue that consumers' perceptions of their own skills and the extent to which they feel challenged by a task can generate compelling online experiences, such that this intrinsically

enjoyable experience motivates them to interact further with the technology. Such effects are particularly likely when the experience is designed to be immersive. The efforts required to browse the catalogue may be somewhat challenging and thus immersive, which would make the experience more compelling for consumers than navigating a familiar website. As for a printed catalogue, the browsing experience is central to the compelling experience created by online catalogues. In turn, we predict:

H4. Perceptions of compelling experiences are higher for enriched digital catalogues than for websites.

Finally, compelling environments and experiences have positive consequences for retailers, because a pleasant shopping environment and experience encourage positive shopping behaviors (Kaltcheva and Weitz, 2006). Substantial research reveals the links among compelling experiences, positive patronage intentions, and loyalty (Arnold et al., 2005; Foster and McLelland, 2015; Pullman and Gross, 2004; Rose et al., 2012). In this sense, we expect that an enriched digital catalogue that produces a superior and compelling online experience for consumers will lead to a competitive advantage for the retailer (Hoffman and Novak, 2009), though this hypothesis still needs to be tested. Desirable outcomes for firms naturally relate to behavioral intentions toward the catalogue (intention to use, to recommend...), resulting from utility and a positive experience. Therefore, we investigate if consumers' intentions to use a digital catalogue are higher when they experience immersion and a compelling experience. On the one hand, the lower perceived utility and higher cost of use of digital catalogues might diminish consumers' intentions to use them. On the other hand, immersion and positive experiences with the digital catalogue could provoke favorable usage intentions, compared with consumers' intentions toward a more traditional website experience. Noting the importance of hedonic or experiential values when browsing online, we predict:

H5. Behavioral intentions toward enriched digital catalogues are higher than those toward websites.

2.3. Impacts of enrichments

Potential enrichments of digital catalogues are varied, in their nature (e.g., additional pages, video, 3D simulation), content (e.g., textual contents (additional text) or visual contents (video, images)), or content nature and use (e.g., more or less utilitarian, more or less experiential, informational or communicational, useful or fun). To assess the utilitarian versus experiential nature and value of enriched digital catalogues, relative to websites, we believe that studying these different types of enrichments could be valuable to deepen further our understanding of the phenomenon. Notably, the utilitarian or experiential value likely influences consumers' perceived utility, immersion, and behavioral intentions, as well as the perceived utilitarian or hedonic value of the digital catalogue overall.

Utilitarian value, based on cognitive aspects of consumption and effectiveness (Babin et al., 1994), stems from the offering's ability to help the consumer solve a need in an effective way. Whereas a conventional digital catalogue, similar to a printed version, may provide limited visual and written information about products (due to a lack of space for each product, compared with a website that can display more information), enriching this digital catalogue could compensate for or complement that available information, which should facilitate consumers' purchase decisions. This effect also may depend on the type of enrichments; a video with product use instructions or a detailed product sheet might appear more useful than an atmosphere or promotional video for example. Hedonic value relates to the search for pleasure, fun, and experiential stimulation (Babin et al., 1994). Previous studies note its importance in virtual contexts (Hoffman and Novak, 1996; Poncin and Garnier, 2010) and in catalogues (Gonzalez, 2001; Mathwick et al.,

2001). Because an enriched digital catalogue aims to offer a new, compelling experience (Hoffman and Novak, 2009), unlike that provided by a printed catalogue or website, it constitutes an experience in itself, which may increase its hedonic value. Here again, the hedonic value likely varies with the type of enrichment, e.g. a video proposing an explanation on product use or a promotional and atmosphere video.

Depending on consumers' motivations for using different channels—including convenience, speed, and direct buying convenience with a website or discovering offers and living a specific experience with the digital catalogue—we anticipate that utilitarian or hedonic perceptions of these channels develop through experience and then influence intentions to use them. In particular, utilitarian value should be the main driver of intentions toward the website, used for browsing but also direct purchases. Both utilitarian and hedonic value may drive intentions toward the digital catalogue though, which provides both useful information and a unique hedonic experience. Still, the primary driver could be different, depending on the type of enrichment offered by the digital catalogue. Informational enrichments provide useful information that is not available in the regular digital catalogue because of limited space, so they should offer utilitarian value by adding valuable useful information to the catalogue. Experiential enrichments seek to trigger emotion or playfulness by providing pleasant – even if not useful for shopping purposes – additional cues to the limited layout of the digital catalogue, such that they likely enhance the browsing experiential value. Formally, we hypothesize:

H6. Utilitarian value is the main driver of intentions toward websites.

H7. Utilitarian and hedonic value both drive intentions toward enriched digital catalogues.

H8. When exposed to an informational (experiential) enrichment, utilitarian (experiential) value mainly drives consumers' intentions toward enriched digital catalogues.

Fig. 1 depicts the model for H6–H8.

3. Methodology

To investigate these hypotheses, we conducted two experimental lab studies, focused on the specific case of IKEA's enriched digital catalogue. This leading retailer offers a somewhat representative case, because it is known for its multichannel approach, has long provided paper catalogues, and more recently added an enriched digital version of its catalogue, along with its website. In that sense, IKEA seems precursory in its way of taking advantage from technological renewed possibilities for catalogues. By focusing on a single case, we ensure ecological and external validity, as compared to lab manipulations, and we can identify effective retail strategies and actions related to this innovative channel.

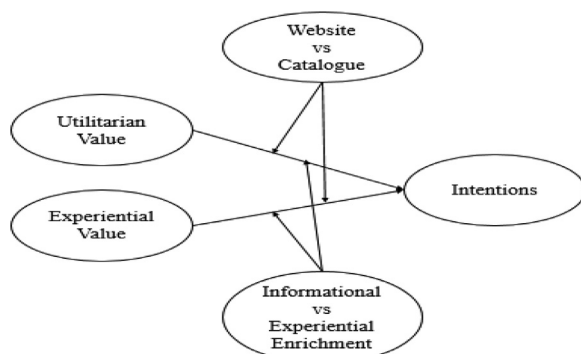


Fig. 1. Study 2 model.

3.1. Study 1: enriched digital catalogues versus websites

To test H1–H5, a first experimental study was conducted to compare the enriched digital catalogue to a website. For this between-subject experimental design (2×1), we created a scenario that invited respondents to browse and discover IKEA's offerings to find a new sofa. The 113 participants from France and Belgium were assigned randomly to use either IKEA's website (54 participants) or a digital version of its paper catalogue, enriched by videos (59 participants). The participants were unpaid students, aged 18–25 years (51% men, 49% women). Although they are young and not representative of the national population, these respondents match the consumer segment targeted by IKEA (i.e., young consumers with average revenues, looking for cool designs at affordable prices). Moreover, they all were familiar with using computers and interactive shopping on the web. In the enriched digital catalogue condition, only 45 participants indeed watched the enrichment video on the target product; we dropped the 14 participants who did not notice this video from the analysis. Thus the enriched digital catalogue group, all of whom watched the video during the experiment (Digital Enriched Catalogue, DEC) included 45 participants, and the classical IKEA website group (Website, WS) featured 54 participants.

We analyzed data from both groups using SPSS24 software. The measures are well-validated measurement tools from prior literature and all use five-point Likert scales: perceived utility (Davis, 1989), perceived cost of use (Baier and Stüber, 2010; Venkatesh and Davis, 2000), compelling experience (Kohler et al., 2010), immersion (Fornerino et al., 2008), and intentions (six-item ad hoc aggregated measure). In support of their reliability, all the variables explain more than 60% of variance and achieve Cronbach's alpha values greater than 0.7 (Table 1).

3.2. Study 2: impact of enrichments

A second study, that includes types of enrichments in the digital enriched catalogue, was conducted to test H6–H8. This study comprises two steps. First, with a qualitative approach, we identify the different enrichments available in IKEA's digital catalogues and consumers' perceptions of them, using interviews with a convenience sample of five men and five women, aged 22–53 years, who expressed varying familiarity with technologies and catalogues. This qualitative study led us to identify to what extent consumers perceive the various available enrichments as useful or experiential. Most respondents consistently expressed positive feelings toward enrichments, but they also insisted that enrichments must be useful, not just experiential, to be interesting.

Second, we leveraged these results to design a lab experiment that could reveal the impact of two types of enrichment, selected for their utilitarian or hedonic potential to the eyes of consumers. We used a between-subjects experimental design (4×1) and asked participants to review a scenario in which they had to discover the offer of Ikea to refurbish their kitchens. These participants were randomly assigned to four groups, only one of which used the classical IKEA website (30 participants, Group 4). The other three groups used the digital catalogue, enriched with either (1) a video presenting a kitchen setting, providing mostly informational cues about how to refurbish a kitchen (31 participants, Group 1); (2) an experiential video, similar to advertising, with music and depictions of people in a kitchen (30 participants, Group 2); or (3) no enrichment (30 participants, Group 3). To ensure participants in Groups 1 and 2 saw the video, a sentence in the scenario highlighted its presence, and a manipulation check question ensured that respondents had fully accomplished the task of their scenario. Although 134 respondents started the survey, 13 failed to answer the manipulation check question correctly and were removed, leaving 121 scenario responses for analysis. The participants, all unpaid Belgian consumers, were equivalent across groups on several key variables: age (mean = 36 years), gender (58% women, 42% men), and familiarity with technology and IKEA (mean = 4.5 on seven-point scale). We used

Table 1

Construct validity and reliability, with mean, standard deviation and correlations between constructs.

	Mean	St Dev	Cronbach Alpha	AVE	1	2	3	4
1. Perceived utility (Davis, 1989)	3.412	0.830	0.89	61%				
2. Perceived cost of use (Baier and Stüber, 2010; Venkatesh and Davis, 2000)	2.716	0.947	0.76	67%	– 0.327**			
3. Compelling experience (Kohler et al., 2010)	3.197	0.868	0.83	61%	0.63**	– 0.099		
4. Immersion (Fornerino et al., 2008)	2.466	1.089	0.78	62%	0.311**	0.011	0.503**	
5. Intentions (ad hoc aggregated measure)	2.927	0.862	0.89	63%	0.720**	– 0.238*	0.658**	0.372**

Notes: AVE = average variance extracted; Correlations significant at * $p < .05$; ** $p < .01$.

Smart PLS 3.0 for the data analysis. The variables, measured on five-point Likert scales, came from prior literature, including utilitarian and hedonic attitude dimensions (adapted version of Voss et al., 2003; 2 × 3 item measure with “practical/effective/functional” for utilitarian and “fun/exciting/thrilling” for hedonic), used as a proxy of perceptions of utilitarian/hedonic value (Gursoy et al., 2006), and behavioral intentions (six-item ad hoc aggregated measure). In addition to their strong existing validation, we confirmed the validity and reliability of all the measures (see forthcoming results).

4. Results and discussion

4.1. Study 1: a compelling experience?

To control for possible confounding effects in our experimental design, we conducted preliminary analyses with 29 participants: the 14 respondents who browsed the catalogue without looking at the video enrichment and 15 respondents randomly selected from the website group. We seek to isolate the effect of merely using the online catalogue, to ensure the results for H1–H5 reflect the influence of the enriched digital catalogue (not merely the digital catalogue). We find significant differences in perceived utility ($M_{PUWebsite} = 3.60$, $M_{PUCatalogue} = 2.71$; $F(1,27) = 10.88$, $p = .003$), compelling experience ($M_{CEWebsite} = 3.28$, $M_{CECatalogue} = 2.52$; $F(1,27) = 4.645$, $p = .04$), and behavioral intentions ($M_{INTWebsite} = 3.15$, $M_{INTCatalogue} = 2.30$; $F(1,27) = 6.25$, $p = .02$). However, we find no significant differences in immersion ($M_{IMMWebsite} = 2.18$, $M_{IMMCatalogue} = 2.05$; $F(1,27) = 1.12$, n.s.) or perceived cost of use ($M_{PCUWebsite} = 2.63$, $M_{PCUCatalogue} = 2.71$; $F(1,27) = 0.041$, n.s.). The perceived utility for the online catalogue, without enrichment, is lower than that for the website. However, contrary to our expectations, the experience appears significantly more compelling for the website, which relates to the positive behavioral intentions toward this channel. The digital catalogue, without enrichment, is no more immersive than the website, but neither is it perceived as costlier to use.

The tests of H1–H5 rely on analyses of variance (ANOVA) across the two experimental groups (see Table 2 for results summary). As expected, perceived utility is lower for the enriched digital catalogue than for the website ($M_{PU} = 3.22$, 3.74; $F(1,97) = 11.656$, $p < .001$).

Table 2

Study 1 results.

	Mean DEC group N = 45	Mean WS group N = 54	F	p-value	Hypothesis status
Perceived utility	3.22	3.74	$F(1,97) = 11.656$	$p < 0.001$	H1 accepted
Perceived cost of use	2.97	2.51	$F(1,97) = 5.864$	$p < 0.05$	H2 accepted
Immersion	2.80	2.29	$F(1,97) = 5.309$	$p < 0.05$	H3 accepted
Compelling experience	3.31	3.27	$F(1,97) = 0.069$	n.s.	H4 rejected
Behavioral intentions	2.86	3.15	$F(1,97) = 3.201$	0.07	H5 rejected

Because the website appears more efficient in terms of perceived utility, we confirm H1. This effect may be due to product presentation, that is indeed is a fundamental issue for websites (Ben Mimoun et al., 2014) that are usually designed to be useful, effective and to facilitate product search and finding. A catalogue is rather designed to favor browsing and offer discovering, and the digital catalogue is here a strict mimicry of its printed version. The perceived cost of use for the enriched digital catalogue also is higher than the perceived cost of use for the website ($M_{PCU} = 2.97$, 2.51; $F(1,97) = 5.864$, $p < .05$). The perceived efforts required to manipulate the enriched digital catalogue to discover the retailer's offer and find the sofa are greater, in support of H2.

To study further the enriched digital catalogue experience, we also measured the compelling experience and immersion variables. As expected, the enriched digital catalogue, thanks to videos, appears more immersive than the website ($M_{IMM} = 2.80$, 2.29; $F(1,97) = 5.309$, $p < .05$), in support of H3. In this sense, the digital catalogue also here mimics its printed version. However, the results for compelling experience conflict with our expectations, such that the enriched digital catalogue does not seem to provide a more compelling experience than the website ($M_{CE} = 3.27$, 3.31; $F(1,97) = 0.069$, n.s.), and we must reject H4. Still, it is interesting to note that enrichments improve the score of compelling experience for the digital catalogue (as compared to $M_{CECatalogue} = 2.52$ in the preliminary analyses), even though not enough to surpass the website.

Finally, we tested usage and patronage intentions across the two channels and find that they are lower in the enhanced digital catalogue channel, compared with the website channel and the significance is borderline ($M_{INT} = 2.86$, 3.15; $F(1,97) = 3.201$, $p = .07$), so we must reject H5. The balance of utility and immersive experiences does not seem able to drive favorable intentions in a more favorable way toward one or the other. Results and hypotheses status for Study 1 are summarized in Table 2.

In terms of both perceived utility and cost of use, these results appear to discount the appeal of the enriched digital catalogue; intentions to use it might not be significantly neither higher nor lower than intentions toward the website, but this result still conflicts with our predictions. A lack of perceived utility and high costs of use may limit consumers' appreciation of the enriched digital catalogue, yet consumers are not solely utilitarian, so experiential aspects remain

important (Childers et al., 2001; Mathwick et al., 2001). In particular, the data for the enriched digital catalogue group indicate that the presence of the videos favors immersion, which should lead to positive outcomes such as satisfaction or approach behaviors (Charfi and Volle, 2011). Yet the enrichment does not create a compelling experience, as we expected, nor is it sufficient to increase intentions to use the digital catalogue. These findings challenge the very potential of digital catalogues to create positive consumer experiences, the need for coexisting websites and digital catalogues, the role and content of catalogue enrichments, and their influences on perceived utility or experiential aspects. Depending on the retail contexts, investing in such enrichments might not be optimal and must be carefully discussed; instead, they might be pertinent only when the experiential value of the shopping task already is high. In Study 2, we investigate which values get evoked, to provide further insights.

4.2. Study 2: utilitarian website versus enriched experiences

Using partial least squares structural equation modeling (PLS-SEM with SmartPLS 3.0), we simultaneously check the psychometric properties of the measurement model (reliability and validity) and estimate the parameters of the structural model (strength of relations among different model variables). We regard PLS-SEM as an appropriate method, considering the size of our sample (Hair et al., 2014), which is small but comfortably above the minimum for PLS-SEM: it is 10 times the largest number of structural paths directed at a particular construct in the structural model (Hair et al., 2014).

4.2.1. Measurement model

A PLS-based assessment of the measurement model relies on three elements: individual item reliability (outer loadings), internal consistency, and validity (Hair et al., 2014). To test individual item reliability, we examined the outer loadings (i.e., loading of the measures on the constructs they intend to measure). All the loadings are acceptable; though two items load at < 0.70, other items measuring the same construct achieve high reliability scores, so their loading of at least 0.5 is acceptable (Hair et al., 2014). To check for internal consistency, we used both Cronbach's alpha (> 0.7) and a composite reliability index (Fornell and Larcker, 1981) (> 0.8). All scales exceed the acceptable values. Finally, for construct validity, we tested for discriminant and convergent validity. The square roots of the average variances extracted (AVE) are greater than any other values, in support of discriminant validity. In support of convergent validity, the AVE values are greater than 0.5 for all variables. Thus, our measurement model meets all three conditions (Table 3).

4.2.2. Hypotheses tests

To test our hypotheses, we first ran the model on the whole sample, with all four groups, and determined that utilitarian and hedonic values positively influence behavioral intentions, as expected. In PLS-SEM, the structural model evaluations depend on the coefficient of determination R-square (= 0.417) for the dependent constructs and on the effect size (f^2 utilitarian value = 0.294, f^2 hedonic value = 0.178), significance level, and t-value for the structural path coefficients (Fornell and Cha, 1994). We calculated the significance of each path coefficient, the standard errors (SE), and the t-values through bootstrapping with 5000 samples, using the replacement method (Hair et al., 2014). Both

utilitarian (path coefficient = 0.441, SE = 0.074, t-statistics = 5.928***) and hedonic (path coefficient = 0.343, SE = 0.077, t-statistics = 4.487***) value influence behavioral intentions. Next, we compared the four experimental groups with a Multi Group Analysis (MGA). For Group 4, which used the website, utilitarian value (path coefficient = 0.798, SE = 0.120, t-statistics = 6.636***) indeed drives intentions; hedonic value is not significant (path coefficient = -0.146, SE = 0.193, t-statistics = 0.757). Thus we confirm H6: Utilitarian value drives intentions toward the website.

In Group 1, which saw a useful and experiential video in the digital catalogue, both utilitarian (path coefficient = 0.363, SE = 0.147, t-statistics = 2.465**) and hedonic (path coefficient = 0.579, SE = 0.117, t-statistics = 4.934***) value influence intentions. We find a similar result for Group 3, which browsed the digital catalogue without any enrichment (utilitarian path coefficient = 0.335, SE = 0.144, t-statistics = 2.32**; hedonic path coefficient = 0.602, SE = 0.117, t-statistics = 5.153***). Because both utilitarian and hedonic values influence intentions toward the digital catalogue, enriched or not, we find support for H7. Still this questions the interest of enrichments as both values influence intentions, even when the digital catalogue is not enriched.

When consumers see a promotional, experiential video (Group 2), only hedonic value exerts a positive influence on intentions (utilitarian path coefficient = 0.240, SE = 0.205, t-statistics = 1.417, n.s.; hedonic path coefficient = 0.441, SE = 0.135, t-statistics = 3.273**). This interesting result somewhat contradicts the consumers' input during the qualitative study. Thus it appears that even if experiential enrichments might seem uninteresting, they nevertheless positively influence intentions to use the digital catalogue, though their hedonic value and the experience they create.

However, the MGA results do not reveal significant differences between the two types of enrichments, that is, between Group 1 (useful and experiential video) and Group 2 (experiential video) (utilitarian path coefficient difference = 0.073, Welch-Satterthwait test t-statistic = 0.292, n.s.; hedonic path coefficient difference = 0.138, Welch-Satterthwait test t-statistic = 0.775, n.s.). If the type of enrichment has no specific effect on value or on which value drives behavioral intentions, we must reject H8. Perhaps the experiential scenario that participants considered, without any concrete task (e.g., finding or buying a specific product), encouraged them to prioritize experience seeking. Furthermore, we uncover a significant difference between the website (Group 4) and digital catalogue in general, enriched or not (Groups 1–3) (utilitarian path coefficient difference = 0.463, Welch-Satterthwait test t-statistic = 2.499**; hedonic path coefficient difference = 0.748, Welch-Satterthwait test t-statistic = 3.374**), in line with our Study 1 results that indicate notable differences between the website and digital catalogue. This finding also affirms the need to question the use of enrichments; mere digitization of the catalogue may be sufficient to establish differences with the website. Results and hypotheses status for Study 2 are summarized in Table 4.

4.3. Combined study findings

E-commerce development has further accentuated retailers' fascination with experiential retailing. In order to increase differentiation, more and more retailers promise an experience to consumers (Antéblan et al., 2013). Creating compelling experiences for consumers

Table 3
Internal consistency and validity, with correlations between constructs.

	Mean	St Dev	Cronbach Alpha	AVE	rho_A	Composite Reliability	1	2
1. Intentions	3.582	0.735	0.871	0.570	0.886	0.902		
2. Experiential value	2.862	0.849	0.799	0.715	0.839	0.882	0.481**	
3. Utilitarian Value	3.958	0.588	0.716	0.631	0.787	0.834	0.508**	0.324**

Table 4
Study 2 results.

	Utilit. Value Path Coeff.	S.e.	Hedo. Value Path Coeff.	S.e.	Utilit. Value Path Diff.	Hedo. Value Path Diff.	Hyp. status
Utilitarian value - > Intentions toward the website	0.798 t-Stat = 6.636***	0.120	n.s.				H6 accepted
Utilitarian Value and Hedonic Value - > Intentions toward the catalogue	0.335 t-Stat = 2.32**	0.144	0.602 t-Stat = 5.153***	0.117			H7 accepted
When exposed to an informational (experiential) enrichment, utilitarian (experiential) value mainly drives consumers' intentions toward enriched digital catalogues.					0.073 t-Stat = 0.292, n.s.	0.138 t-Stat = 0.775, n.s.	H8 rejected

Welch-Satterthwait test

can lead to positive consequences for the retailer, and an enriched digital catalogue appears to offer a promising means to do so, due to its novelty and consumers' curiosity about this new channel of communication. Accordingly, we find that the immersive nature of the enriched digital catalogue is strong, yet the absence of evidence of a compelling experience, together with the utility and cost results, suggest that novelty is not enough to make enriched digital catalogues appealing in the long term. The website surpasses the digital catalogue in efficiency measures, with potentially more favorable intentions toward the website (despite a borderline significant test). With the IKEA case, we clarify that this potentially compelling tool ultimately might not fulfill its promises. For a digital catalogue to evoke favorable responses among consumers, it must offer greater utility, as well as enhance the experience to sustain the potential experiential advantage that could have been expected.

Furthermore, enrichments to digital catalogues may not appear as promising as they could have been. Both utilitarian and hedonic values already are triggered simply through digitizing the catalogue, which creates some distinction from the website. Yet we find no significant differences across types of enrichments or no enrichment. This result partially contradicts consumers' own descriptions of their lack of interest in useless (experiential-only) enrichments; the experience provided by experiential enrichments still could have partial effects on intentions. In this sense, the digital catalogue might offer a virtualization tool that creates new possibilities for retailers to establish consumer experiences. That is, even if the enriched digital catalogue does not provide a fully compelling experience, as we expected, retailers still might benefit from providing some experiential value, beyond the website. Retailers should strive to enhance consumers' experiences with the digital catalogue if they want to leverage it as a complement to their useful websites.

5. Conclusion

5.1. Discussion

Studies on catalogues have rarefied for years. Studies on online catalogues are also rare and to the best of our knowledge, this study is the first to investigate enriched digital catalogues from a consumer behavior perspective. By studying the IKEA case and comparing consumer experiences across an enriched digital catalogue and a website, we establish that perceived utility is higher for the website, whereas perceived costs are higher for enriched digital catalogues. We find no significant effect that indicates that different types of enrichments differently influence value. However, the digital catalogue could be perceived favorably, as useful and/or experiential, especially in experiential settings, whereas website use is mainly driven by utilitarian purposes. A mere digital version of the catalogue, without any investments in rich media enrichments, may be sufficient to trigger some experiential value, beyond that offered by the website. Informational enrichments can still influence intentions through utilitarian and hedonic paths, which might prompt favorable behaviors; experiential enrichments, without informational or useful value, also might enhance intentions somewhat. Yet as these cautious findings imply, enriched digital catalogues might not reach the experiential promise predicted. Technological advances can sometimes be deceptive, as shown for example by Ben Mimoun et al. (2012) for Embodied Virtual Agents, and as indicated by the lack of interest in additional information from *flash-codes* that was mentioned previously. Therefore, retailers must take care before investing in cutting-edge technologies and avoid implementing the latest "fashionable" technological tools without gathering feedback from consumers about whether they want those tools. Similarly, researchers must devote more attention to critically consider and study the actual impact and outcomes of technological advances for retailers.

5.2. Implications and research perspectives

As central theoretical contributions, we combine TAM elements (perceived utility and cost of use) with experiential aspects (compelling experience and immersion) to study a new communication channel, enriched digital catalogues. We also advance extant research on digital marketing, experiential online marketing, and e-commerce by comparing digital catalogues with websites. Although digital catalogues may be at a disadvantage on utilitarian dimensions, they still can provide an interesting, immersive, experiential option for consumers, thereby contributing to literature on experiential online marketing. Finally, in taking a critical approach to technology advances, this study highlights their potential drawbacks and the need for further research to acknowledge and define those limits (Ben Mimoun et al., 2012; Poncin et al., 2017).

From a managerial perspective, the IKEA case raises important questions for retailers, especially with regard to whether they should be willing to follow IKEA's path and implement enriched digital catalogues. We recommend a careful consideration of the desired purpose of a digital catalogue and its complementarity with an existing website. Investing in and implementing this technology, especially if enriched, merely because the retailer can or to follow a trend is unlikely to produce favorable outcomes, as is true of various advanced technology tools (Ben Mimoun et al., 2012; Poncin et al., 2017). If a retailer determines that an enriched digital catalogue actually will be beneficial, it still needs to undertake careful design efforts, to ensure that the types of enrichments offered to consumers also maximize the expected benefits for the retailer. Despite consumers' claimed lack of interest in experiential enrichments, they might boost experiential value and trigger more value than mere digitization. As technological possibilities continue to develop rapidly, other enrichments, such as augmented reality or tutorials, should be tested to determine the best designs for digital catalogue enrichments as marketing tools. Deepening our understanding of the role and content of enrichments should then be a priority.

The gap between expectations and the experience actually provided by IKEA's digital catalogue also should encourage retailers to find ways to leverage this technology more effectively. Even newer, more revolutionary retail technologies keep emerging, allowing retailers to push the boundaries with regard to how they help consumers shop and gain compelling experiences. 2018 and 2019 should be exciting years for technological developments in retailing. Academics can aid retailers in these efforts, by investigating and clarifying how each of these technologies affects consumers and why they might use one technology over another to achieve different shopping goals. Individual or situational variables (e.g., shopping or task orientation) could provide insights along these lines.

5.3. Limitations

Several limitations of our studies require consideration and should generate further new research perspectives. In particular, our sample includes only French and Belgian students and refers specifically to the precursory case of IKEA, such that the findings may not be representative of retail strategies and outcomes generally. We used real materials for the experiments, which meant we could not impose any manipulations, though it also enhanced the external and ecological validity of our findings. Yet the study is limited to the effects of an existing digital catalogue, designed by a single retailer.

Further studies thus might seek to increase the external validity of our results, by including other retailers and product categories, other countries, and other consumer segments. The potential moderating effect of individual or situational variables, such as familiarity with new technology, shopping orientations, or task orientations, also could be investigated. Finally, research could benefit from experiments that manipulate and compare enrichments that are tailored to a retailer's

strategy or product category, to understand their impact more clearly.

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