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Remembering shopping experiences: The Shopping Experience Memory Scale

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ABSTRACT

Companies strive to enhance customer experiences and to foster positive consumer behaviors. While there is extensive literature on how to create enjoyable and conducive customer experiences, limited research focuses on memories associated with shopping experiences. However, the decision to repeat an experience is based more on the memory of that experience than on the actual experience itself. The current research draws on a series of qualitative and quantitative studies to develop and to validate the four-dimensional Shopping Experience Memory Scale (SEMS). Findings suggest that the scale's four dimensions – attraction, structure, affect, and social – are reliable and consistent across different consumption environments (in-store, mall, and online) and across different time intervals. SEMS reflects nuances of memory and of experience constructs forming the basis of theoretical and practical contributions in the ability to assess the progression of memory associated with shopping experiences over time.

“In my memory, I have the feeling that I was more positive than I am right now two months later. If you want, after my visit, I wasn't that disappointed.”

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1. Introduction

Since Holbrook and Hirschman's (1982) seminal paper, the notion of creating consumption experiences continues to gain relevance among scientific and professional communities. Retailers often enhance customer experiences to differentiate themselves from competitors and to achieve a competitive advantage (Pine & Gilmore, 1999; Schmitt, 1999). To achieve this experience-based differentiation, retailers provide their customers with events that are pleasant, meaningful, and memorable (Kwortnik & Ross, 2007). In turn, these customer-optimized interactional experiences foster customer loyalty and attachment to the retailer (Brakus, Schmitt, & Zarantonello, 2009).

Kahneman's (2011) research highlights the importance of differentiating and studying the memory of an experience rather than the actual experience, since a customer decides to repeat a past experience solely on the basis of the associated memory. Nevertheless, the memory connected with an experience is not commonly incorporated in

marketing research studies even though the underlying construct or premise is often included in the conceptualization of such studies (Antéblan, Filser, & Roederer, 2013; Kranzbühler, Kleijnen, Morgan, & Teerling, 2017; Puccinelli et al., 2009). This lack of empirical investigation of consumer memory is attributed to methodological and measurement challenges related to assessing an experience over time. According to the memory literature, the memory of an experience and the actual experience cannot be assessed with the same measurement tools – which is a current practice in marketing research studies. Instead, memory has several additional properties that need to be taken into consideration by scales in the marketing literature to accurately capture the intended element of the consumer experience, i.e. memory vs. actual experience. Given the identified lack of a suitable measurement tool, it is necessary to develop a scale of the memory of an experience that merges key concepts from both marketing and psychology literatures. Therefore, the current research proposes to approach consumer experience from the perspective of its memory and introduces a measurement tool that is an improvement over existing scales. Specifically, it develops a theory- and data-driven scale to capture consumers' memories linked to consumption experiences in retail contexts.

Another focus is the examination of how memory of a shopping experience evolves over time and how it influences the customer-retailer relationship. Qualitative interviews and quantitative surveys from

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both France and the U.S. across different retail settings (in-store, mall, and online) and different points in time provide the data to conceptualize and develop the Shopping Experience Memory Scale (SEMS). In an omni-channel shopping environment, the key theoretical contribution of this research is the identification of the four dimensions (attraction, structure, affect, and social) of SEMS. Furthermore, the current research contributes to the body of knowledge about shopping experience by bridging the gap between the customer experience literature in marketing and the memory literature in psychology. Managerial implications include a tool to assess how customers' memory progresses along one or more dimensions of SEMS, information which could ultimately be used to modify how customers form and retain memories.

2. Literature review

2.1. Customer experience in marketing

Numerous definitions of an experience prevail in the literature, which is fragmented across the discipline (Homburg, Jozić, & Kuehn, 2017). Researchers apply the construct either to a general context or investigate specific service, brand, retail, or product contexts. Although there is no overall consensus, customer experience is often defined as a set of interactions between a customer and a product, a company, or part of an organization in a specific situation, which induces reactions (Gentile, Spiller, & Noci, 2007). Considering that customers can express different types of reaction (e.g., affective and social) during experiences, researchers consider customer experience as a multidimensional construct (Verhoef et al., 2009). Several firm-controlled and macro factors (e.g., promotion, price, and location) in retail environments can shape these customer experiences and responses (Grewal, Levy, & Kumar, 2009). Previous research has mainly involved exploratory attempts to conceptualize this holistic construct to better comprehend the various facets of an experience (Table 1).

As Table 1 indicates, conceptualizations and thus dimensions of what constitutes an experience vary across studies. This phenomenon can easily be explained: customers do not recognize or distinguish between different facets of the overall experience. Gentile et al. (2007) confirm that consumers are aware of the entire experience yet fail to knowingly differentiate between its individual components. There are, therefore, various conceptualizations that attempt to capture the whole experience – often with interrelated dimensions.

A thorough qualitative review of previous customer experience research focused on synergies across experience constructs and identifies seven experience dimensions that are shared between these studies: 1) affective, 2) physical, 3) cognitive, 4) sensorial, 5) social, 6) symbolic, and 7) temporal (Table 1). These seven dimensions consistently emerge despite the different contexts of the various research studies. The first dimension, affective, appears in all conceptualizations and is also referred to as affect, feeling, emotional, hedonic-sensorial, or pleasure. This dimension includes affective consumer responses such as emotions and moods (Gentile et al., 2007) and relates to the pleasure or displeasure associated with an experience. The physical dimension (i.e. praxeological, behavioral) describes actions and activities taking place during a consumption experience (e.g. consumers walking around a store or sampling product offerings). Thinking and conscious mental processing reflect the cognitive dimension of an experience. Here, consumers may think of related or unrelated matters during a shopping experience, such as the store atmosphere or items to purchase. The sensorial dimension is aligned with the sensory stimulation or sensory cues contained within a customer experience, which can lead to pleasure or excitement. Social interactions during the experience are captured by the social dimension, also known as social-identity (Schmitt, 1999), relational (Gentile et al., 2007; Pentina, Amialchuk, & Taylor, 2011), or praxeological (Roederer, 2012). The symbolic dimension (i.e. lifestyle, ideological, and rhetorical) relates to notions of value and

belief. Lastly, the temporal dimension only appears in two studies (Michaud-Trevinal & Stenger, 2014; Roederer, 2012). Here, time is not only the moment when the experience takes place, but also an inherent feature of the experience itself. Roederer (2012) considers time and duration as a space or a resource that must be managed.

As mentioned before, an experience is a P.O.S. interaction (Person × Object × Situation) (Punj & Stewart, 1983), which is divided into four major stages (Arnould, Price, & Zinkhan, 2002): 1) pre-consumption experience including planning and anticipation of the experience; 2) purchase experience including choice, payment, and exchange act; 3) core consumption experience including sensation, satiety, satisfaction/dissatisfaction, irritation/flow, and transformation; and 4) remembered consumption experience and nostalgia experience including consumption memories, stories, and re-living of the experience. While researchers have widely studied the first three stages of an experience – pre-consumption, purchase, and core consumption (i.e. before and during the experience) – limited research focuses on the remembered or “post-experience” (i.e. consequences of the experience).

2.2. Memory

In cognitive psychology, memory is the process which encodes, stores, and retrieves information. The encoding process translates information from the outside world through the senses into usable information that is saved as memory. This storage allows maintaining of information over time, while retrieval enables recall of previously stored information. With regard to an experience, remembering involves an effort of reminiscence and reflexivity to recall and retrieve specific details of the encounter. When a customer remembers a particular shopping experience upon exiting a store, he or she uses long-term rather than short-term memory. Short-term memory involves recalling a limited number of readily available pieces of information that are accessible for a short period. However, this short-term memory does not correspond to the memory of a particular shopping experience assessed several minutes after exiting the store. Furthermore, it is important to distinguish between early and late long-term memory. Even though both are categorized as long-term memory, early long-term memory refers to memory recalled immediately after encoding (a few moments upon completion of the experience), while late long-term memory encompasses retrieval after a more substantial temporal delay (e.g. Talmi, 2013).

“Every act of remembering involves a reconstruction of information, and this process at times leads to inaccuracies” (Braun-Latour & Zaltman, 2006, p. 59). Discrepancies can occur between actual and remembered encounters because memory processes rely on heuristics or ‘shortcuts’ (Kahneman, 2011; Morewedge, Gilbert, & Wilson, 2005). As a result, memory differs from the original experience (Braun, 1999) with each memory being a dynamic, context-sensitive progression (Edelman, 2004; Schacter, 2001) even if it is often accompanied by a belief that it is a truthful record of the experience (Brewer, 1986). Nencyz-Thiel, Beal, Ludwichowska, and Romaniuk (2013) add that all these memory-creation processes are often associated with over- or under-estimations of responses. Moreover, memories evolve over time (Averell & Heathcote, 2011; Bartlett, 1932; Ebbinghaus, 1885; Schacter, 2001) and are subject to natural biases (Bartlett, 1932) as well as to forgetfulness (Ebbinghaus, 1885). In other words, memories associated with the same experience may not remain consistent at each recall.

Since consumers savor their memories of enjoyable and meaningful experiences (Alba & Williams, 2013), it is essential to study the memory of a customer experience and not the actual experience. It is important to note that it is the memory of an experience that determines whether the consumer repeats, recommends, or talks positively about it (Kahneman, 2011; Pedersen, Friman, & Kristensson, 2011; Robinson, Blissett, & Higgs, 2011; Wirtz, Kruger, Scollon, & Diener, 2003). Furthermore, future intentions are based on memory of past experiences and only indirectly on actual experiences (Stragà, Del Missier,

Table 1
Prior research conceptualizing experience.

Authors	Context	Dimensions	Scale			Item reduction based on:		Factor extraction and validation
			Experts	Consumer interviews	Consumer ratings	Experts	Consumer interviews	
Schmitt (1999)	Conceptual article	Sensory (sense), affective (feel), cognitive (think), physical (act), social-identity (relate)	✓					Study 1: N = 2368 consumers, (EFA), Italy
Gentile et al. (2007)	Study on several widely-known brands	Sensorial, pragmatic, relational, emotional, cognitive, lifestyle	✓		✓			Study 1: N = 267 students (EFA), U.S. Study 2: N = 193 students (EFA/CFA), U.S.
Verhoef et al. (2009)	Conceptual article	Cognitive, affective, emotional, social, physical	✓		✓			Study 3: N = 150 consumers (EFA/CFA), U.S.
Brakus et al. (2009)	Empirical study on a variety of brands	Sensations, feelings, cognitions, behavioral	✓		✓			Study 4: N = 144 consumers (EFA), U.S.
Pentina et al. (2011)	Online shopping experience	Sensorial, cognitive, emotional, pragmatic, relational						
Roederer (2012)	Qualitative study on a variety of consumption experiences	Hedonico-sensorial, praxeological, rhetorical, temporal						
Michaud-Trevinal and Stenger (2014)	Qualitative study on online shopping experience	Physical, ideological, pragmatic, social						
De Keyser, Lemon, Keiningham, and Klaus (2015)	Conceptual article	Cognitive, emotional, sensorial, physical, behavioral						
Brun et al. (2017)	Empirical study on physical/online banking experience and travel agency experience	Cognitive, affective, sensory, behavioral, social	✓					Study 1: N = 773 (484 + 289) consumers (EFA/CFA/SEM), Canada
Bustamante and Rubio (2017)	Empirical study on customer experience in physical retail environments	Social, cognitive, affective, physical	✓		✓			Study 1: N = 800 consumers (EFA, CFA/SEM), Spain
Current study	Empirical study on shopping experience memory in different environments (in-store, mail, and online)	Attraction, structure, affect, social	✓		✓			Study 1: N = 132 consumers, France Study 2: N = 989 consumers (EFA), France Study 3: N = 1100 consumers (EFA), France Study 4: N = 655 consumers (CFA/SEM), France Study 5: N = 338 consumers (CFA/SEM), U.S.

Marcatto, & Ferrante, 2017). In addition, when customers justify repeating an activity, the experience is often reconstructed as more positive (Cowley, 2008). Thus, the memory reflects an altered image of the actual experience.

In the psychology literature, Sutin and Robins (2007) identify ten dimensions of the memory of an experience: vividness, coherence, accessibility, time perspective, sensory details, visual perspective, emotional intensity, sharing, distancing, and valence. Similarities exist between these memory dimensions and the experience dimensions identified in marketing studies (affective, physical, cognitive, sensorial, social, symbolic, and temporal). For example, valence, which “refers to the degree to which the experience described in the memory is perceived to be positive or negative” (Sutin & Robins, 2007, p. 394), is similar to affect, traditionally conceptualized in experience research in marketing. In contrast, memory also appears to differ from experience on a range of dimensions, such as recency or vividness (Baumgartner, Sujuan, & Bettman, 1992). As a result, memory has unique properties that differ from experience.

One major challenge is measuring an experience and, more importantly, the memory of it. Since it is difficult to assess an experience while the consumer is going through it, it is primarily assessed upon completion. One potential exception is the use of neuroscientific tools including eye tracking and electroencephalograms to capture customers' experiences more precisely (Plassmann, Venkatraman, Huettel, & Yoon, 2015). While these in-the-moment measures of customer experiences are very accurate and useful, they are also expensive and difficult to implement, making them sparsely utilized research tools. Traditional, self-administered measurement scales are, therefore, more convenient and practical for academic and practitioner research. However, as mentioned above, these tools are administered after the completion of the experience and thus assess the memory rather than the actual customer experience itself – which can be quite different. As a result, any scale trying to capture a consumer experience is inherently memory-based and the memory associated with an experience collected by questionnaire is viewed as a “proxy” for the actual experience (Kahneman, 1994). Nevertheless, experience and memory are both distinct multi-dimensional constructs with several unique properties. Most importantly, memory evolves (e.g. Ebbinghaus, 1885) and fades over time (e.g. Lau-Gesk & Mukherjee, 2017), which existing consumer experience scales in marketing do not account for. In addition, most research studies do not provide details about the timing or time progression associated with the experience (e.g. Brakus et al., 2009; Roederer, 2012), which are essential temporal components of memory given the proxy role of experience scales. As a result, a bias prevails related to the timing of an experience itself and its assessment, which is addressed by the new scale development below.

3. Development of the Shopping Experience Memory Scale

Verhoef et al. (2009) invite researchers to develop a scale that measures the full complexity of customer experience. In addition, Antéblan et al. (2013) stress the importance of the memory of an experience and propose longitudinal research to assess the interaction between customer experience and retail environments – physical store vs. virtual store. The current research meets these requirements and follows commonly accepted, psychometric scale development and validation procedures (Babin, Darden, & Griffin, 1994; Churchill, 1979; Gerbing & Anderson, 1988; Rauschnabel, Krey, Babin, & Ivens, 2016). The first step involves defining the construct and the domain. The working definition of shopping experience memory involves information stored in memory after a shopping experience, consciously or subconsciously, that the customer can retrieve during a remembered experience with some degree of accuracy and certainty (Flacandji, 2015). Therefore, the memory of an experience can be viewed as an “output” of the experience. Table 2 presents an overview of the complete scale development process used in the current research study.

Table 2
Current scale development process overview.

Study	Steps	Sample/Method	Findings
1	Initial item generation	Qualitative analysis and literature review - semi-structured interviews with consumers (N = 132) in France - expert reviews - context: in-store	64 items
2	Initial purification	EFA among consumers (N = 989) in France - survey: online and paper-pencil - context: in-store, mall, online	14 items 4 dimensions
3	Final purification	EFA among consumers (N = 1100) in France - survey: online and paper-pencil - context: in-store, mall, online	14 items 4 dimensions
4	Validation	CFA/SEM among consumers (N = 655) in France - survey: online - context: in-store, mall, online	14 items 4 dimensions
5	Further validation/extension	CFA/SEM among consumers and students (N = 338) in U.S. - survey: online - context: in-store, mall, online	14 items 4 dimensions

The process begins with a literature review of existing, related constructs and qualitative studies. Specifically, semi-structured interviews with French consumers produce the first item pool that is rated by experts for refinement (study 1). Studies 2 and 3 focus on item purification, using online and paper-pencil surveys. Both studies use consumer samples based on in-store, mall, and online experiences. Study 4 incorporates a new data set to validate the dimensionality of the scale and to assess nomological validity by examining the scale's influence on two outcome variables (satisfaction and brand attachment). The final step entails further scale validation and extension to a new cultural context by using a U.S. data set.

3.1. Study 1: initial item generation

Study 1 utilizes literature reviews and semi-structured interviews to identify initial scale items. Existing scales provide a foundation for item generation after adapting them to a retail context (Brakus et al., 2009; Mehrabian & Russell, 1974; Roederer, 2012). In addition to measurement tools used in marketing studies, common psychology scales offer further items. The three most widely used measures are the Memory Characteristics Questionnaire (MCQ, Johnson, Foley, Suengas, & Raye, 1988), the Autobiographical Memories Questionnaire (AMQ; Rubin, Schrauf, & Greenberg, 2003), and the Memory Experiences Questionnaire (MEQ; Sutin & Robins, 2007).

3.1.1. Methodology

Upon reviewing existing scales, semi-structured interviews with French consumers provide additional insights into the operationalization of shopping experience memory and provide further sources for potential scale items. Interviews include questions about a consumer's recent shopping trip, specific stores visited during the trip, and overall perception of the experience (Roederer, 2012). All interviews began with the following instructions: “Please take a few moments to remember your shopping experience, then, when you are ready, describe this experience, discuss everything you did, everything that came to mind during the shopping trip, including specific details....”

Data were collected using a longitudinal approach on three different occasions: face-to-face immediately after the shopping experience in a store (t), by phone two weeks later (t + 1), and by phone two months later (t + 2) to capture the progression of memory. These three time periods were selected to ensure enough passing of time between t and t + 1 as well as t + 2 to identify a progression of memory based on

tapping into early and late long-term memory. In addition, the selection was influenced by the shopping habits of regular customers of the companies that were used for data collection.¹ Furthermore, to minimize pro-active interference resulting from new shopping experiences (Underwood, 1957), two weeks and two months after the initial shopping experience were deemed appropriate time intervals. Respondents were recruited at the different stores for face-to-face interviews and gave consent to be contacted again via phone for two additional interviews. All participants completed the same interviews at the three time periods. The sample consists of 132 consumers (70.5% female; 32.6% between 35 and 44 years of age). Table 3 details the current and all additional samples from the different studies. In line with other qualitative research approaches, interviews were recorded and fully transcribed. Data analysis involved systematic analytical procedures common in qualitative research (Spiggle, 1994).

3.1.2. Results

Even though respondents had the option to report positive and negative retail experiences, only positive experiences were reported. After carefully reviewing the interviews, communalities and patterns between questions as well as interviews were identified. This two-way coding approach allows for comparison and cross-referencing of common themes based on frequency of occurrence across interviews followed by sorting into theoretically-grounded themes: memory or experience dimensions. The findings of the content analysis include 11 themes associated with the memory of a shopping experience: 1) cognitive, 2) symbolic, 3) social, 4) physical, 5) affective, 6) sensorial, 7) temporal, 8) vividness, 9) coherence, 10) accessibility, and 11) distancing. As previously shown in Table 1, the first seven themes are consistent with the dimensions of an experience. Vividness, coherence, accessibility, and distancing represent the specific features of the memory of an experience discussed in the psychology literature. These themes specifically focus on the structure of the memory more than on its content.

Overall results of the interviews and the literature review provide the first item pool. For example, the response of one of the participants “I felt a bit uncomfortable when I entered this store that I did not know” translates to the scale item “During my shopping experience, I felt very comfortable.” A panel of nine expert judges with marketing or psychology backgrounds evaluated the comprehensiveness and appropriateness of the first 76 items by ranking each item according to the shopping experience memory concept. Mean scores are a screening mechanism, allowing only highly ranked items to remain in the item pool. Consequently, the expert reviews eliminate 12 items and refine 4 items leading to a final pool of 64 items.

3.2. Study 2: initial purification

The second study involves initial purification of scale items by identifying the potential factor structure of memory of a shopping experience using calibration procedures. A total of 989 French consumers (74.5% female; 43.0% between 18 and 24 years of age) took part in a survey enquiring about a recent shopping experience. Participants were recruited at a mall, a train station, and online via social media messages as well as emails. Online and paper-pencil surveys include questions assessing reasons for shopping, products purchased, memory of a shopping experience items, and demographic questions. Participants categorize their experience as either in-store (N = 367), mall (N = 420), or online (N = 202) with time frames ranging from less than two days (N = 226), less than one week (N = 265), less than two weeks (N = 195), less than one month (N = 166) to less than two months (N = 137). Respondents then indicate the name of the retailer and rate

their memory of the experience using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Although instructions allowed respondents to report positive or negative experiences, participants provided only positive retail experiences.

3.2.1. Results

Principal component analysis (PCA) with Oblimin rotation enables an assessment of dimensionality and suggests items for elimination. Items with a factor loading below 0.50, high cross-loadings above 0.30, and low communalities below 0.50 are candidates for deletion (Hair, Black, Babin, & Anderson, 2010). The final factor structure contains four dimensions with eigenvalues > 1 and explaining 68.9% of the total variance. For the total sample, factor loadings exceed 0.70, which is above the established cutoff of 0.50. Cronbach's alpha values for the four factors range between 0.74 and 0.87.

3.2.2. Scale inspection

In line with memory and experience scales, the four factors are named attraction, structure, affect, and social. The attraction dimension expresses the consumer's overall attraction to the retail environment and products he/she wants to try or purchase. The second factor, structure, contains items capturing the nature of the memory including vividness, accessibility, and coherence. The third factor reflects affect perceived during the memory of an experience, including valence of the memory and well-being. The last factor, social, is other-oriented and captures the development of a sense of belonging to a social group. Replication of the four-factor structure across several sub-samples (in-store, mall, and online) leads to a similar solution, therefore results are stable regardless of the type of experience. However, the online sub-sample has one cross-loading (0.62 and 0.35) and the online plus in-store sub-samples have a Cronbach's alpha value below 0.70 for one dimension.

3.3. Study 3: final purification

The four-factor solution from study 2 is further refined in study 3. A second exploratory factor analysis (EFA) with a new sample (N = 1100) provides final purification of scale items. This step is necessary since results of the initial purification could be improved for the online sub-sample. The data collection and recruitment methods are consistent with study 2, except for adding an option of engaging in a shopping experience on the same day as survey completion. As in the previous study, respondents were asked to remember a recent retail experience in-store (N = 433), mall (N = 335), or online (N = 332), followed by questions about their memory of that experience.

3.3.1. Results

PCA with Oblimin rotation reports no factor loading below 0.50, no high cross-loadings above 0.30, and no low communalities below 0.50 (Hair et al., 2010). The new factor structure includes four dimensions with eigenvalues > 1 explaining 76.8% of the total variance. Cronbach's alpha values for the four factors are above the 0.70 threshold ranging between 0.86 and 0.90 (Nunnally, 1978). See Table 4 for EFA results.

3.3.2. Scale inspection

Final EFA results include 14 items spanning the four dimensions of SEMs. These dimensions are 1) attraction, 2) structure, 3) affect, and 4) social. To assess the robustness of the scale, the four-factor solution is replicated again across several sub-samples. Results confirm a stable dimensionality of the scale across types of experience (in-store, mall, and online), timing (today, < 2 days, < 1 week, and < 2 weeks), gender (female and male), and occupation (students and workers).

¹ The companies involved in this research project were Nespresso, Desigual, Printemps, Ralph Lauren, Adidas Originals and Fnac.

Table 3
Samples descriptive.

		Study 1 (N = 132)	Study 2 (N = 989)	Study 3 (N = 1100)	Study 4 (N = 655)	Study 5 (N = 338)
Age	18–24	3.79%	43.0%	36.3%	46.3%	10.9%
	25–34	18.94%	29.7%	26.3%	24.9%	16.6%
	35–44	32.58%	12.5%	19.1%	11.9%	13.3%
	45–54	23.48%	7.8%	11.7%	10.1%	18.9%
	55–64	9.09%	4.4%	5.4%	5.6%	27.5%
	> 64	12.12%	0.8%	1.3%	1.2%	12.7%
Gender	Unavailable		1.8%			
	Female	70.5%	74.5%	67.5%	75.4%	53.6%
	Male	29.5%	25.5%	32.5%	24.6%	46.4%
Type of experience	Store	100%	37.1%	39.4%	53.4%	24.9%
	Mall		42.5%	30.5%	17.9%	34.6%
	Online		20.4%	30.2%	28.7%	40.5%
Social classification	Higher occupations		30.3%	32.0%	24.9%	
	Intermediate/lower occupations		14.7%	25.6%	19.7%	
	Students		47.0%	35.1%	47.7%	
	Unemployed		4.1%	6.2%	6.9%	
	Unavailable		3.9%	1.1%	0.8%	
Timing of experience	Today	100% ^a		15.0%	13.5%	5.9%
	1–2 days ago		22.9%	26.8%	24.1%	29.6%
	3–7 days ago		26.8%	33.4%	35.7%	45.6%
	8–14 days ago		19.7%	24.8%	26.7%	18.9%
	15–31 days ago		16.8%			
	32–61 days ago		13.9%			

Note:

^a All respondents were interviewed on exiting the store, as well as two weeks and two months later.**Table 4**
Exploratory factor analysis of final item purification in t (study 3).

Item	Attraction	Structure	Social	Affect	Communalities
ATTRAC1	0.84	0.02	−0.03	0.03	0.77
ATTRAC2	0.83	−0.00	−0.10	0.01	0.77
ATTRAC3	0.77	0.01	−0.08	0.11	0.75
ATTRAC4	0.95	−0.01	0.10	−0.06	0.78
STRUCT1	0.07	0.78	−0.02	0.02	0.65
STRUCT2	−0.05	0.89	0.05	0.00	0.75
STRUCT3	0.01	0.85	−0.06	−0.07	0.75
STRUCT4	−0.03	0.86	0.02	0.05	0.74
AFFECT1	−0.05	−0.03	−0.88	−0.01	0.72
AFFECT2	0.05	0.06	−0.89	−0.00	0.86
AFFECT3	0.05	0.01	−0.88	0.02	0.83
SOCIAL1	0.02	−0.01	−0.02	0.89	0.83
SOCIAL2	0.10	−0.01	0.07	0.85	0.78
SOCIAL3	−0.08	0.02	−0.05	0.88	0.75
Eigenvalue	6.13	2.65	1.50	1.16	Total
% of trace	39.6%	18.5%	10.7%	7.9%	76.8%
Cronbach's alpha	0.90	0.87	0.86	0.87	

Method: principal component analysis, Oblimin-rotation ($\delta = 0$).

Loadings above 0.50 shown in bold.

Attrac: attraction; struct: structure.

3.4. Study 4: validation

The purpose of study 4 is the validation of the underlying structure of memory of a shopping experience established in study 3 and the assessment of convergent as well as discriminant validity. Confirmatory factor analysis (CFA) with appropriate constraints applied to the items covariance matrix offers a tool for scale validation (Rauschnabel et al., 2016). Using Amos 21 and maximum likelihood estimation, the CFA uses a new sample of 655 French consumers (in-store: N = 350; mall: N = 227; online: N = 188). The same online survey used for study 3 is administered. Furthermore, the study has a longitudinal focus by collecting data at three time points: t, t + 1 (two weeks after the first questionnaire), and t + 2 (two months after the first questionnaire). Respondents were contacted by e-mail to complete the online survey and consented at the end of the survey to be contacted twice again for research purposes. To ensure respondents answered surveys based on

the same shopping experience at t + 1 and t + 2, the name of the retailer was used as an attention check. Again, participants reported only positive retail experiences.

3.4.1. Fit validity

CFA results in t give a χ^2 -value of 250.43 (df = 71) that is significant at $p < 0.001$. The corresponding CFI of 0.97 (above 0.90), RMSEA of 0.06 (< 0.08), and SRMR of 0.04 (< 0.05) provide an acceptable fit validity to move forward. Fit indices for model t + 1 and t + 2 are also adequate. All fit measures are shown in Table 5.

3.4.2. Convergent and discriminant validity

Factor loadings, composite reliability (C.R.), and average variance extracted (AVE) assess convergent and discriminant validity. Factor loadings exceed the cutoff value of 0.50 for all items (Fornell & Larcker, 1981; Hair et al., 2010); specifically, all items exceed 0.69 in t, t + 1, and t + 2. C.R. values range between 0.83 and 0.91 (t), between 0.90 and 0.92 (t + 1), and between 0.88 and 0.93 (t + 2), thus exceeding the 0.70 cutoff. In addition, AVE are above 0.50 for all models (t = 0.63–0.77; t + 1 = 0.71–0.80; t + 2 = 0.71–0.82) (Bagozzi & Yi, 1988). These findings therefore further validate the four-dimensional SEMs.

3.4.3. Nomological validity

Nomological validity results if the relationship between SEMs dimensions and other key variables behaves as expected according to the academic literature. Previous research links customer experiences to satisfaction and brand attachment (e.g. Brakus et al., 2009; Brun, Rajaobelina, Ricard, & Berthiaume, 2017; Dolbec & Chebat, 2013) using a memory-based approach. Specifically, experience positively influences satisfaction and brand attachment. Therefore, the SEMs dimensions are expected to directly affect customer satisfaction and brand attachment. While satisfaction is adapted from Oliver (1980), brand attachment is measured using the parsimonious Park, MacInnis, Priester, Eisingerich, and Iacobucci (2010) scale. Table 6 shows scale items, reliability assessments, and other details for these two outcome variables.

Concerning nomological validity, the results reveal associations

Table 5
Overview of confirmatory factor analysis results.

Dataset	Study 4 - t	Study 4 - t + 1	Study 4 - t + 2	Study 5 - t
Sample	655	655	655	338
Country	France	France	France	U.S.
Overall model fit				
χ^2 (p)	250.43	250.95	238.67	118.86
$\chi^2/71$ df	3.53	3.53	3.36	1.71
CFI	0.97	0.98	0.98	0.98
TLI	0.96	0.97	0.97	0.98
NFI	0.96	0.97	0.97	0.96
RMSEA	0.06	0.06	0.06	0.05
SRMR	0.04	0.04	0.04	0.04
Factor 1: Attraction				
C.R.	0.90	0.92	0.93	0.85
AVE	0.70	0.75	0.78	0.59
ATTRAC1	0.83	0.89	0.89	0.66
ATTRAC2	0.87	0.89	0.90	0.85
ATTRAC3	0.85	0.83	0.88	0.79
ATTRAC4	0.81	0.86	0.87	0.74
Factor 2: Structure				
C.R.	0.87	0.91	0.91	0.89
AVE	0.63	0.71	0.72	0.68
STRUCT1	0.78	0.87	0.89	0.77
STRUCT2	0.83	0.89	0.91	0.81
STRUCT3	0.70	0.76	0.71	0.88
STRUCT4	0.86	0.85	0.88	0.84
Factor 3: Affect				
C.R.	0.91	0.92	0.93	0.89
AVE	0.77	0.80	0.82	0.72
AFFECT1	0.69	0.73	0.76	0.68
AFFECT2	0.97	0.98	0.98	0.92
AFFECT3	0.95	0.95	0.95	0.93
Factor 4: Social				
C.R.	0.83	0.90	0.88	0.83
AVE	0.63	0.74	0.71	0.63
SOCIAL1	0.87	0.90	0.89	0.81
SOCIAL2	0.79	0.88	0.85	0.77
SOCIAL3	0.70	0.79	0.78	0.79

Notes: Attrac: attraction; struct: structure.

among the constructs. Satisfaction and brand attachment correlate significantly with different dimensions of SEMS at different time intervals. At t, the affect dimension correlates with satisfaction ($r = 0.62$; $p < 0.05$), while attraction ($r = 0.56$; $p < 0.05$) and social ($r = 0.22$; $p < 0.05$) dimensions correlate with brand attachment. Results are the same at t + 1. At t + 2, affect correlates with satisfaction ($r = 0.78$; $p < 0.05$), while attraction ($r = 0.57$; $p < 0.05$) and social ($r = 0.32$; $p < 0.05$) correlate with brand attachment. More interestingly,

Table 6
Scale assessment for satisfaction and brand attachment.

		Study 4			Study 5		
		α	C.R.	AVE	α	C.R.	AVE
Satisfaction (Oliver, 1980) (1 = strongly disagree, 7 = strongly agree)							
I am satisfied with this shopping experience.	t	0.89	0.90	0.81	0.88	0.88	0.79
<i>Je suis satisfait(e) de cette visite.</i>	t + 1	0.92	0.92	0.85			
Selecting this stand-alone/mall/online website was a good choice.	t + 2	0.93	0.93	0.86			
<i>J'ai eu une bonne idée quand j'ai décidé d'aller dans ce magasin/ce centre commercial/sur ce site internet.</i>							
Brand attachment (Park et al., 2010) (1 = strongly disagree, 7 = strongly agree)							
I feel personally connected to this brand.	t	0.86	0.90	0.81	0.83	0.88	0.79
<i>Je me sens personnellement connecté(e) à cette marque.</i>	t + 1	0.89	0.91	0.84			
This brand represents a part of who I am.	t + 2	0.90	0.90	0.82			
<i>Cette marque représente une partie de qui je suis.</i>							
This brand creates many feelings and thoughts inside me.							
<i>Cette marque éveille naturellement en moi de nombreux sentiments et pensées.</i>							
When I think about this brand, many things instantly come to mind.							
<i>Quand je pense à cette marque, beaucoup de choses me viennent automatiquement à l'esprit.</i>							

structure does not significantly correlate with any construct at t and t + 1, but significantly correlates with brand attachment at t + 2 ($r = -0.14$; $p < 0.05$). Even though not all dimensions relate to both outcome variables, there is overall support for nomological validity.

3.4.4. Robustness tests

To further enhance scale generalizability, invariance was tested between different sub-samples (survey administration techniques: on-line vs. paper-pencil; randomized order of scale constructs; gender and occupation). This test compares the goodness of fit criteria of a fully constrained model against the proposed baseline model (Byrne, 2004). The analyses reveal a non-significant chi-square difference test between the groups, thereby indicating equivalence of the measurement instrument across samples (Hair et al., 2010). In sum, supplementary analyses support the robustness of the scale.

3.4.5. Post-hoc analysis of temporal effects

Repeated measures ANOVA and post-hoc tests using Bonferroni correction is performed to check the progression of memory of a shopping experience, satisfaction, and brand attachment over time. Construct means are computed without considering the weighting of the items. Table 7 summarizes the main results.

Results indicate that respondents tend to evaluate their memory less positively over time. However, this progression is not consistent across all dimensions. The structure dimension of SEMS decreases more steeply than any other dimension. More specifically, it reduces from a mean of 5.41 (t; $p < 0.001$) to 4.2 (t + 1; $p < 0.001$) and 3.6 (t + 2; $p < 0.001$) across the different time intervals. This result upholds findings of the qualitative study and previous literature (Averell & Heathcote, 2011; Bartlett, 1932; Ebbinghaus, 1885; Schacter, 2001). The slower progression of the affect, attraction, and social dimensions confirms that the more emotionally charged elements of an experience are more stable over time, even if two of them decrease significantly. Satisfaction also decreases over time. Indeed, details of a shopping experience become inaccessible over time, which encourages people to use semantic knowledge and inferences to retrieve memories of past emotional experiences (Robinson & Clore, 2002). Finally, brand attachment does not change over time, confirming its constancy (Park et al., 2010).

3.5. Study 5: scale replication/extension in the U.S.

The final study aims to replicate and validate the four SEMS dimensions in a different cultural context. This step is important to enhance the generalizability and applicability of the scale. The questionnaire consists of the same questions as in the previous studies,

Table 7
Overview of repeated measures ANOVA (study 4).

Study 4	t	t + 1	t + 2	F-value, p-value	t + 1 / t	t + 2 / t + 1	t + 2 / t
Dimension/construct	M (SD)	M (SD)	M (SD)		p-Value		
ATTRAC	3.76 (1.60)	3.71 (1.58)	3.52 (1.59)	F(2,1308) = 20.74, p = 0.000	0.735 ⇨	0.000 ⇩	0.000 ⇩
STRUCT	5.41 (1.20)	4.21 (1.47)	3.60 (1.49)	F(2,1308) = 842.81, p = 0.000	0.000 ⇩	0.000 ⇩	0.000 ⇩
AFFECT	5.61 (1.19)	5.28 (1.24)	5.08 (1.34)	F(2,1308) = 93.60, p = 0.000	0.000 ⇩	0.000 ⇩	0.000 ⇩
SOCIAL	2.76 (1.55)	2.89 (1.57)	2.79 (1.48)	F(2,1308) = 5.81, p = 0.003	0.005 ↗	0.016 ⇩	0.998 ⇨
MEMORY	4.38 (0.96)	4.02 (1.08)	3.75 (1.12)	F(2,1308) = 300.25, p = 0.000	0.000 ⇩	0.000 ⇩	0.000 ⇩
SATIS	5.88 (1.24)	5.65 (1.30)	5.53 (1.38)	F(2,1308) = 45.57, p = 0.000	0.000 ⇩	0.002 ⇩	0.000 ⇩
BA	3.31 (1.59)	3.28 (1.54)	3.24 (1.57)	F(2,1308) = 1.40, p = 0.247 ^a			

Notes: Attrac: attraction; struct: structure; memory: memory of a shopping experience; satis: satisfaction; ba: brand attachment; M = mean; SD = standard deviation; ⇩ = significant decrease of mean over time; ⇨ = no significant change of mean over time; ↗ = significant increase of mean over time.

^a Overall model F is not significant, so additional group assessment is not included.

including the SEMS items, satisfaction, and brand attachment. A professional translator was hired to translate and back-translate the original scale items, in addition to two independent translators with a marketing background. Furthermore, a marketing expert fluent in French and English assessed both sets of items prior to data collection for content validity. Appendix A includes these items.

The sample consists of American consumers recruited by a panel data company. In total, the number of usable, appropriately completed questionnaires is 338 (in-store = 24.9%; mall = 34.6%; online = 40.5%). Respondents (male = 46.4%; female = 53.6%) ranged in age from 18 to 24 years (10.9%), 25 to 34 years (16.6%), 35 to 44 years (13.3%), 45 to 54 years (18.9%), 55 to 64 years (27.5%), to 65 and older (12.7%). In line with the previous studies, none of the participants discussed negative experiences.

3.5.1. Construct validity results

As in the previous analyses, the 14 SEMS items are subject to CFA. Fit for the measurement model is once again strong. The completely standardized loadings are presented in Table 5. The χ^2 is 118.86 (df = 71). The CFI, TLI, and NFI are 0.98, 0.98, and 0.96, respectively. SEMS reflects good psychometric properties in the U.S., meeting construct validity, fit validity, and convergent validity concerns based on factor loading estimates exceeding 0.50, C.R. values between 0.83 and 0.89, and AVE values between 0.59 and 0.72 (Hair et al., 2010).

3.5.2. Nomological validity

Nomological validity is once again assessed with the two theoretically based outcome variables: satisfaction ($\alpha = 0.88$) adapted from Oliver (1980) and brand attachment ($\alpha = 0.83$) by Park et al. (2010). Additional scale assessment information is summarized in Table 6. Results show that affect ($r = 0.73$, $p < 0.05$) and structure ($r = 0.13$, $p < 0.05$) correlate with satisfaction, while attraction correlates with brand attachment ($r = 0.74$, $p < 0.05$). Findings support nomological validity, similarly to the previous results in study 4. However, no longitudinal comparison is possible in study 5 since data were only collected at time t. In addition, differences in SEMS dimension effects on outcome variables can be attributed to cultural differences since French and American consumers seem to express different relationships between the social dimension and brand attachment. Therefore, even if not all dimensions are related to both constructs included in the assessment, the overall pattern suggests nomological validity (Rauschnabel et al., 2016).

4. General discussion and conclusion

4.1. Summary

Memorable experiences remain an essential tool for companies to attract and retain loyal customers. As previous research has shown, the memory associated with an experience differs from the actual

experience on numerous facets such as vividness, coherence, and accessibility of the memory (Kahneman, 2011; Sutin & Robins, 2007) – these facets not only translate to the structure of memory, but also to the newly developed Shopping Experience Memory Scale (SEMS). These distinct factors are essential to consider beyond previous experience dimensions, because memory is the best predictor of future behavior (Kahneman, 2011; Pedersen et al., 2011; Wirtz et al., 2003). Therefore, the current research takes an important first step in assessing retail experiences based on the consumer's memory by developing the four-dimensional SEMS including: 1) attraction, 2) structure, 3) affect, and 4) social.

4.2. Theoretical contributions

The major theoretical contribution of this research is introducing and validating a measurement theory related to the memory of a consumer shopping experience. The four dimensions – encompassing a total of 14 items that capture SEMS – show acceptable levels of internal consistency and discriminant validity. Overall, the new scale contributes to a better conceptualization of the customer shopping experience and thus advances theoretical contributions by 1) including nuances of both memory and experience to assess consumer responses, 2) integrating a comprehensive validation of the scale across multiple countries and shopping contexts, 3) considering temporal progression of memory in the development and validation of the scale, and 4) establishing relationships between the SEMS dimensions and two commonly applied outcome measures in experience research – satisfaction and brand attachment.

As evident by the four dimensions and the corresponding individual items of SEMS, the new scale reflects nuances of the previously identified memory as well as experience dimensions. Specifically, the structure dimension relates to the vividness, coherence, and accessibility themes of memory while the attraction, affect, and social dimensions tap into the cognitive, symbolic, social, physical, affective, and sensorial themes of an experience. It is important to note that, by following commonly accepted, data-driven, psychometric scale development procedures (Babin et al., 1994; Churchill, 1979; Gerbing & Anderson, 1988; Rauschnabel et al., 2016), findings produce a parsimonious measurement theory across two countries: France and the U.S. As a result, the new scale is bilingual in French and in English (see Appendix A), thus enhancing its applicability and generalizability to international and cross-cultural research. Another unique contribution of the scale is the inclusion of three distinct retail contexts: in-store, mall, and online. The fact that these different retail contexts were included during the scale development process will allow researchers to apply SEMS to these different contexts in future research studies since the scale has been validated across these settings – the only proper way of ensuring methodological rigor without having to implement scale development procedures when adapting a scale (Ortinau, 2011).

Furthermore, a longitudinal assessment (study 4) confirms the

stable factor structure and effects of the scale. When comparing effects immediately after the experience to effects two weeks and two months later, the four dimensions of SEMS remain consistent. This finding is especially important since memory is often assessed after some time has elapsed: thus the scale must be suitable for longitudinal research – which is the case with SEMS. Furthermore, while a successful experience is often equated with a memorable experience (e.g. [Kwortnik & Ross, 2007](#); [Pine & Gilmore, 1999](#)), ‘memorable’ does not mean that the customer will remember the experience in every detail. As study 4 confirms, the structure dimension of the memory tends to diminish over time. Specifically, it becomes more challenging for the consumer to readily and accurately remember the experience. These findings are consistent with empirical studies in the memory literature reporting decreased memory capacity ([Averell & Heathcote, 2011](#); [Bartlett, 1932](#); [Schacter, 2001](#)).

4.3. Managerial contributions

The findings have significant managerial implications. According to [Verhoef et al. \(2009\)](#), retailers not only face controllable (e.g. atmosphere, service interface), but also uncontrollable (e.g. shopping purpose, influence of others) elements that contribute to a consumer's overall consumption experience. However, managers can facilitate the memory process to their advantage by tapping into one or multiple of the SEMS dimensions most relevant to the offered experience (i.e. product or service). These dimensions can be used to create or strengthen the competitive advantage associated with an experience. For example, according to the attraction dimension, retailers can encourage customers to try numerous products to increase product interactions and in turn positively influence customer's long-term memory storage of the entire experience. Furthermore, retailers need to make sure that customers feel comfortable by enhancing atmospheric cues (e.g., lighting, music) and social interactions if they want to reinforce the affect dimension.

[Lee and Dubinsky \(2017\)](#) suggest that e-tailers should implement effective customer-based information and e-contact features to fulfil consumers' desire to interact with a salesperson. This finding confirms the importance of the social dimension of SEMS. The salesperson needs to answer customers' questions, but also needs to make them feel special and important. However, retailers should be careful. Discrepancies between the evoked and actual properties of in-store merchandise may lead to inferences of manipulative intent, which can lead to negative consequences in terms of trust and attitude towards the retailer ([Lunardo & Mbengue, 2013](#)).

Overall, Customer Experience Management (CEM) is often viewed as an important element in sustaining long-term customer loyalty ([Homburg et al., 2017](#)). Beyond CEM, we invite companies to rethink the experience from the perspective of its memory and to move towards what we call Customer Experience Memory Management (CEMM). Considering that an experience is transformed into a memory and that memory is more important than actual experience in future relationships with the customer ([Kahneman, 2011](#); [Pedersen et al., 2011](#); [Wirtz et al., 2003](#)), CEMM appears to be more relevant.

Finally, this research reminds practitioners and scholars why it is essential to integrate a temporal variable into their marketing studies. They must be aware that memory is evolving (e.g. [Averell & Heathcote, 2011](#); [Bartlett, 1932](#); [Ebbinghaus, 1885](#)) and that results of their studies will depend on the time of data collection.

4.4. Limitations and future research

As with any research, this study has its limitations. First, the empirical validation of the scale is limited to France and the U.S. Additional contexts and countries should be included in future research

to further increase the generalizability of the scale. In addition, the temporal assessment of memory focuses on immediately after the experience, two weeks later, and two months after experience completion, which should be expanded in the future to estimate a point of diminishing returns associated with memory progression. Practitioners could determine when to selectively target consumers with promotions or reminders based on past shopping experiences once additional time lags have been established.

Even though participants had the option to report positive and negative retail experiences, only positive experiences were reported. Therefore, negative experiences should be investigated in the future as it remains unclear what memory customers retain after a retailer-attributed service failure and if that memory has a negative influence on the customer-retailer relationship. For example, [Kalamasa, Laroche, and Makdessian \(2008\)](#) show that angry customers are less satisfied and give lower service evaluations. Does the memory of a bad shopping experience evolve in the same way as a positive experience?

Moreover, the four-dimensional structure of SEMS reflects core facets of the literature on cognitive psychology and experience and its impact on two common outcome variables used in these two areas: satisfaction and brand attachment. However, a thorough assessment with additional constructs, such as brand loyalty, brand attitude, brand perceptions and repurchase intention, is necessary to enhance the applicability and robustness of the new measurement tool. As such, an additional avenue for future research is examining how the new scale relates to commonly tested attitudinal, behavioral, and cognitive constructs in related research streams.

Furthermore, the current study is unable to isolate the effect of a single touchpoint between the customer and the firm, yet customers interact with companies through several touchpoints in multiple channels and media ([Lemon & Verhoef, 2016](#)). Each customer experience informs subsequent experiences as it is encoded and stored in memory ([Puccinelli et al., 2009](#)). It would be useful for retailers who offer products through multiple channels to know whether they should manage customer experiences in the same way for each channel. Here, store formats could impact the linkage between stored memory and customer-retailer relationship. For example, the shopper satisfaction-loyalty link is different for supermarkets and hypermarkets ([Kamran-Disfani, Mantrala, Izquierdo-Yusta, & Martinez-Ruiz, 2017](#)). Hence, future studies should investigate the customer's responses to a firm's offerings during the entire purchase journey by focusing on individual touchpoints.

According to the literature, it is the memory of an experience that influences customer's choice to repeat, to recommend, to engage in positive WOM, and other actions. However, additional factors apart from memory might contribute to customer attitudes and behaviors. An experience that the customer does not remember may have a stronger influence than a clearly-remembered experience, depending on the type of emotion or cognitive appraisal it elicits.

In conclusion, the current research examines different conceptualizations and the role of memory in shopping experiences to develop a new psychometric measure. Findings support the four dimensions of the new scale across different shopping environments and across time. Researchers can thus use this measurement tool to investigate consumer experience, while managers can create memorable experiences by focusing on key dimensions relevant to their business.

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Appendix A. Shopping Experience Memory Scale (SEMS) items

Attraction

I was attracted by everything around me.

J'étais attiré(e) par tout ce qui m'entourait.

What I remember about this shopping experience is the joy of being surrounded by many attractive products.

Le souvenir que je garde de cette visite, c'est le plaisir de m'être retrouvé(e) au milieu de nombreux produits attirants.

I was carried away by the atmosphere during the shopping experience.

Durant ma visite j'étais transporté(e) par l'ambiance du magasin.

I wanted to test and try out most of the products.

J'avais envie de tester et d'essayer la majorité des produits.

Structure

I remember details about the shopping experience.

Mon souvenir de cette visite est riche en détails.

I remember the order in which events occurred.

L'ordre des événements dans mon souvenir est clair.

This shopping experience is easy for me to recall

De manière générale, je me suis remémoré(e) facilement cette visite.

I remember everything I did during this shopping experience.

Je me souviens de tout ce que j'ai fait durant cette visite.

Affect

During this shopping experience, I felt very comfortable.

Lors de cette visite, je me suis senti(e) particulièrement à l'aise.

The shopping experience described in this memory is positive.

La visite décrite dans ce souvenir est positive.

During this shopping experience, my feelings were positive.

Lors de cette visite, mes émotions étaient positives.

Social

This shopping experience was socially rewarding.

Cette visite a été socialement valorisante.

This shopping experience made me feel important for a few moments.

Cette visite m'a permis de me sentir important(e) l'espace de quelques instants.

This shopping experience was a true moment of sharing and exchange.

Cette visite a été un véritable moment de partage et d'échange.

References

- Alba, J. W., & Williams, E. F. (2013). Pleasure principles: A review of research on hedonic consumption. *Journal of Consumer Psychology*, 23(1), 2–18. <https://doi.org/10.1016/j.jcps.2012.07.003>.
- Antéblian, B., Filser, M., & Roederer, C. (2013). Consumption experience in retail environments: A literature review. *Recherche et Applications en Marketing*, 28(3), 84–113. <https://doi.org/10.1177/2051570713505471>.
- Arnould, E. J., Price, L. L., & Zinkhan, G. M. (2002). *Consumers*. New York: McGraw-Hill.
- Averell, L., & Heathcote, A. (2011). The form of the forgetting curve and the fate of memories. *Journal of Mathematical Psychology*, 55, 25–35. <https://doi.org/10.1016/j.jmp.2010.08.009>.
- Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun: Measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*, 20(4), 644–656. <https://doi.org/10.1086/209376>.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. <https://doi.org/10.1007/BF02723327>.
- Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology*. Cambridge: Cambridge University Press.
- Baumgartner, H., Sujan, M., & Bettman, J. R. (1992). Autobiographical memories, affect, and consumer information processing. *Journal of Consumer Psychology*, 1(1), 53–82. [https://doi.org/10.1016/S1057-7408\(08\)80045-9](https://doi.org/10.1016/S1057-7408(08)80045-9).
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty? *Journal of Marketing*, 73(3), 52–68. <https://doi.org/10.1509/jmkg.73.3.52>.
- Braun, K. A. (1999). Post-experience advertising effects on consumer memory. *Journal of Consumer Research*, 24(4), 319–334. <https://doi.org/10.1086/209542>.
- Braun-Latour, K. A., & Zaltman, G. (2006). Memory change: An intimate measure of persuasion. *Journal of Advertising Research*, 46(1), 57–72. <https://doi.org/10.2501/S0021849906060077>.
- Brewer, W. F. (1986). What is autobiographical memory? In D. Rubin (Ed.), *Autobiographical memory* (pp. 25–49). Cambridge: Cambridge University Press.
- Brun, I., Rajaobelina, L., Ricard, L., & Berthiaume, B. (2017). Impact of customer experience on loyalty: A multichannel examination. *The Service Industries Journal*, 37(5–6), 317–340. <https://doi.org/10.1080/02642069.2017.1322959>.
- Bustamante, J. C., & Rubio, N. (2017). Measuring customer experience in physical retail environments. *Journal of Service Management*, 28(5), 884–913. <https://doi.org/10.1108/JOSM-06-2016-0142>.
- Byrne, B. M. (2004). Testing for multigroup invariance using AMOS graphics: A road less traveled. *Structural Equation Modeling: A Multidisciplinary Journal*, 11(2), 272–300. https://doi.org/10.1207/s15328007sem1102_8.
- Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64–73. <https://doi.org/10.2307/3150876>.
- Cowley, E. (2008). Looking back at an experience through rose-colored glasses. *Journal of Business Research*, 61(10), 1046–1052. <https://doi.org/10.1016/j.jbusres.2007.09.018>.
- De Keyser, A., Lemon, K. N., Keiningham, T., & Klaus, P. (2015). *A framework for understanding and managing the customer experience*. MSI Working Paper. 15–121.
- Dolbec, P.-Y., & Chebat, J.-C. (2013). The impact of a flagship vs. a brand store on brand attitude, brand attachment and brand equity. *Journal of Retailing*, 89(4), 460–466. <https://doi.org/10.1016/j.jretai.2013.06.003>.
- Ebbinghaus, H. (1885). *Memory: A contribution to experimental psychology*. New York: Teachers College, Columbia University.
- Edelman, G. (2004). *Wider than the sky: The phenomenal gift of consciousness*. New Haven: Yale University Press.
- Flacandji, M. (2015). De l'expérience au souvenir de l'expérience : Etude des invariants et des décalages entre parcours de magasinage et souvenir immédiat. *Management & Avenir*, 86, 79–100. <https://doi.org/10.3917/mav.086.0079>.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>.
- Gentile, C., Spiller, N., & Noci, G. (2007). How to sustain the customer experience: An overview of experience components that co-create value with the customer. *European Management Journal*, 25(5), 395–410. <https://doi.org/10.1016/j.emj.2007.08.005>.
- Gerbing, D. W., & Anderson, J. C. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research*, 25(2), 186–192. <https://doi.org/10.2307/3172650>.

- Grewal, D., Levy, M., & Kumar, V. (2009). Customer experience management in retailing: An organizing framework. *Journal of Retailing*, 85(1), 1–14. <https://doi.org/10.1016/j.jretai.2009.01.001>.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). New Jersey: Pearson Prentice Hall.
- Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of Consumer Research*, 9(2), 132–140. <https://doi.org/10.1086/208906>.
- Homburg, C., Jozić, D., & Kuehn, C. (2017). Customer experience management: Toward implementing an evolving marketing concept. *Journal of the Academy of Marketing Science*, 43(5), 1–25. <https://doi.org/10.1007/s11747-015-0460-7>.
- Johnson, M. K., Foley, M. A., Suengas, A. G., & Raye, C. L. (1988). Phenomenal characteristics of memories for perceived and imagined autobiographical events. *Journal of Experimental Psychology. General*, 117(4), 371–376. <https://doi.org/10.1037/0096-3445.117.4.371>.
- Kahneman, D. (1994). New challenges to the rationality assumption. *Journal of Institutional and Theoretical Economics*, 150, 18–36. <https://www.jstor.org/stable/40753012>.
- Kahneman, D. (2011). *Thinking fast and slow*. New York: Farrar Straus Giroux.
- Kalamasa, M., Laroche, M., & Makdessian, L. (2008). Reaching the boiling point: Consumers' negative affective reactions to firm-attributed service failures. *Journal of Business Research*, 61(8), 813–824. <https://doi.org/10.1016/j.jbusres.2007.09.008>.
- Kamran-Disfani, O., Mantrala, M. K., Izquierdo-Yusta, A., & Martínez-Ruiz, M. P. (2017). The impact of retail store format on the satisfaction-loyalty link: An empirical investigation. *Journal of Business Research*, 77, 14–22. <https://doi.org/10.1016/j.jbusres.2017.04.004>.
- Kranzbühler, A.-M., Kleijnen, M. H. P., Morgan, R. E., & Teerling, M. (2017). The multilevel nature of customer experience research: An integrative review and research agenda. *International Journal of Management Reviews*, 20(2), 433–456. <https://onlinelibrary.wiley.com/doi/full/10.1111/ijmr.12140>.
- Kwortnik, R. J., & Ross, W. T. (2007). The role of positive emotions in experiential decisions. *International Journal of Research in Marketing*, 24, 324–335. <https://doi.org/10.1016/j.ijresmar.2007.09.002>.
- Lau-Gesk, L., & Mukherjee, S. (2017). Coping with sequential conflicting emotional experiences. *Journal of Business Research*, 73, 1–8. <https://doi.org/10.1016/j.jbusres.2016.12.004>.
- Lee, Y. J., & Dubinsky, A. J. (2017). Consumers' desire to interact with a salesperson during e-shopping: Development of a scale. *International Journal of Retail & Distribution Management*, 45(1), 20–39. <https://doi.org/10.1108/IJRDM-04-2016-0058>.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80, 69–96. <https://doi.org/10.1509/jm.15.0420>.
- Lunardo, R., & Mbengue, A. (2013). When atmospherics lead to inferences of manipulative intent: Its effects on trust and attitude. *Journal of Business Research*, 66(7), 823–830. <https://doi.org/10.1016/j.jbusres.2011.06.007>.
- Mehrabian, A., & Russell, J. (1974). *An approach to environmental psychology*. Cambridge: MIT Press.
- Michaud-Trevinal, A., & Stenger, T. (2014). Toward a conceptualization of the online shopping experience. *Journal of Retailing and Consumer Services*, 21, 314–326. <https://doi.org/10.1016/j.jretconser.2014.02.009>.
- Morewedge, C. K., Gilbert, D. T., & Wilson, T. D. (2005). The least likely of times: How remembering the past biases forecasts of the future. *Psychological Science*, 16(8), 626–630. <https://doi.org/10.1111/j.1467-9280.2005.01585.x>.
- Nenycz-Thiel, M., Beal, V., Ludwickska, G., & Romaniuk, J. (2013). Investigating the accuracy of self-reports of brand usage behavior. *Journal of Business Research*, 66(2), 224–232. <https://doi.org/10.1016/j.jbusres.2012.07.016>.
- Nunnally, J.-C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460–469. <https://doi.org/10.2307/3150499>.
- Ortinau, D. J. (2011). Writing and publishing important scientific articles: A reviewer's perspective. *Journal of Business Research*, 64(2), 150–156. <https://doi.org/10.1016/j.jbusres.2010.02.002>.
- Park, C. W., MacInnis, D. J., Priester, J., Eisingerich, A. B., & Iacobucci, D. (2010). Brand attachment and brand attitude strength: Conceptual and empirical differentiation of two critical brand equity drivers. *Journal of Marketing*, 74(6), 1–17. <https://doi.org/10.1509/jmkj.74.6.1>.
- Pedersen, T., Friman, M., & Kristensson, P. (2011). The role of predicted on-line experienced and remembered satisfaction in current choice to use public transport services. *Journal of Retailing and Consumer Services*, 18, 471–475. <https://doi.org/10.1016/j.jretconser.2011.06.013>.
- Pentina, I., Amialchuk, A., & Taylor, D. G. (2011). Exploring effects of online shopping experiences on browser satisfaction and e-tail performance. *International Journal of Retail & Distribution Management*, 39(10), 742–758. <https://doi.org/10.1108/09590551111162248>.
- Pine, J. B., & Gilmore, J. H. (1999). *The experience economy: Work is theatre and every business a stage*. Boston: Harvard Business School Press.
- Plassmann, H., Venkatraman, V., Huettel, S., & Yoon, C. (2015). Consumer neuroscience: Applications, challenges, and possible solutions. *Journal of Marketing Research*, 52(4), 427–435. <https://doi.org/10.1509/jmr.14.0048>.
- Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghubir, P., & Stewart, D. (2009). Customer experience management in retailing: Understanding the buying process. *Journal of Retailing*, 85(1), 15–30. <https://doi.org/10.1016/j.jretai.2008.11.003>.
- Punj, G. N., & Stewart, D. W. (1983). An interaction framework of consumer decision making. *Journal of Consumer Research*, 10, 181–196. <https://doi.org/10.1086/208958>.
- Rauschnabel, P. A., Krey, N., Babin, B. J., & Ivens, B. S. (2016). Brand management in higher education: The University Brand Personality Scale. *Journal of Business Research*, 69(8), 3077–3086. <https://doi.org/10.1016/j.jbusres.2016.01.023>.
- Robinson, E., Blissett, J., & Higgs, S. (2011). Recall of vegetable eating affects future predicted enjoyment and choice of vegetables. *Journal of the American Dietetic Association*, 111, 1543–1548. <https://doi.org/10.1016/j.jada.2011.07.012>.
- Robinson, M. D., & Clore, G. L. (2002). Episodic and semantic knowledge in emotional self-report: Evidence for two judgment processes. *Journal of Personality and Social Psychology*, 83(1), 198–215. <https://doi.org/10.1037/0022-3514.83.1.198>.
- Roederer, C. (2012). A contribution to conceptualizing the consumption experience: Emergence of the dimensions of an experience through life narratives. *Recherche et Applications en Marketing*, 27(3), 81–95. <https://doi.org/10.1177/205157071202700304>.
- Rubin, D. C., Schrauf, R. W., & Greenberg, D. L. (2003). Belief and recollection of autobiographical memories. *Memory & Cognition*, 31(6), 887–901. <https://doi.org/10.3758/BF03196443>.
- Schacter, D. L. (2001). *The seven sins of memory: How the mind forgets and remembers*. Boston: Houghton Mifflin.
- Schmitt, B. H. (1999). *Experiential marketing*. New York: Library of Congress Cataloguing-in-Publication Data.
- Spiggle, S. (1994). Analysis and interpretation of qualitative data in consumer research. *Journal of Consumer Research*, 21(3), 491–503. <https://www.jstor.org/stable/2489688>.
- Stragà, M., Del Missier, F., Marcato, F., & Ferrante, D. (2017). Memory underpinnings of future intentions: Would you like to see the sequel? *PLoS One*, 12(4), e0176624. <https://doi.org/10.1371/journal.pone.0176624>.
- Sutin, A. R., & Robins, R. W. (2007). Phenomenology of autobiographical memories: The memory experiences questionnaire. *Memory*, 15(4), 390–411. <https://doi.org/10.1080/09658210701256654>.
- Talmi, D. (2013). Enhanced emotional memory: Cognitive and neural mechanisms. *Current Directions in Psychological Science*, 22(6), 430–436. <https://doi.org/10.1177/0963721413498893>.
- Underwood, B. J. (1957). Interference and forgetting. *Psychological Review*, 64(1), 49–60. <https://doi.org/10.1037/h0044616>.
- Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31–41. <https://doi.org/10.1016/j.jretai.2008.11.001>.
- Wirtz, D., Kruger, J., Scollon, C. N., & Diener, E. (2003). What to do on spring break? The role of predicted, on-line, and remembered experience in future choice. *Psychological Science*, 14(5), 520–524. <https://doi.org/10.1111/1467-9280.03455>.