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Influence of iconic, indexical cues, and brand schematicity on perceived authenticity dimensions of private-label brands

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ABSTRACT

Consumers respond positively to brands they perceive to be authentic. They use various cues to evaluate brand authenticity. The authenticity scale is made of four dimensions: integrity, credibility, symbolism and continuity. This research investigates the role of PLB's perceived authenticity dimensions and provides empirical evidence that, indexical cue as label and brand schematicity influence perceived authenticity dimensions of private-label brands. Compared with brand-aschematic consumers, brand-schematic consumers are more likely to perceive private-label brands as favorable on all dimensions of authenticity. The results also show that brand schematicity, by influencing integrity and credibility dimensions of PLB's perceived authenticity, increases willingness to buy and makes attitudes toward private-label brands more positive. The same result is obtained with indexical cue (label). Indexical cues influence integrity and therefore increase positive PLB attitude.

1. Introduction

In 2004, Grayson and Martinec pointed out that few consumer research articles focused explicitly on authenticity. Since then, interest in brand authenticity has increased in both consumer behavior research and managerial practice (Morhart et al., 2015). In 2015, an Opinionway survey highlighted that 72% of French people think that brands do not show enough authenticity, while this latter is reassuring and effective for customers (Chardenon, 2015). This survey indicated also that the agri-food sector is, for 20% of French people, the most promising sector of an "authenticity label" and tradition. Consumers strive to differentiate between “real” and “fake” authenticity (Arnould and Price, 2000; Firat and Venkatesh, 1995); they search for authenticity in brands (Arnould and Price, 2000; Beverland, 2005; Brown et al., 2003). Research suggests that authenticity is central to brand status, equity, and corporate reputation (Beverland, 2005; Gilmore and Pine, 2009).

The Authentic 100, a global index proposed by Cohn and Wolf Agency,[2] compiles a list of the highest ranking brands in the world based on consumer perception of authenticity. Luxury and automobile brands are well represented in this index. At the opposite, private label brands are quite absent (Ikea is ranked 31 in the worldwide index and 17 for the French index). However, by focusing on the success of their sales, retailers seek to value and manage their private label brands (PLBs) (Davis, 2013; PLMA, 2013). For consumers, private label brands (PLB) offer high-quality products at very attractive prices (Davis, 2013; Pauwels and Srinivasan, 2009). Because perceived quality increases the perceived value of PLBs, retailers often add premium tiers to their PLB portfolios (Ter Braak et al., 2013). They use brand positioning to distinguish premium PLBs from classic PLBs, such as the *terroir* brands of *Reflets de France* (Carrefour) or “Mmm!” taste/pleasure (Auchan). Retailers may associate their PLBs with various ingredients (Desai and Keller 2002) to communicate quality of the product (for example, *Label Rouge*) or convey authenticity of the product's origin; for example, *Appellation d'Origine Protégée* (AOP) designates products for which all manufacturing stages are carried out according to methods that are recognized in certain geographical areas and determine the product's characteristics (http://agriculture.gouv.fr).

Brand equity and brand personality concepts have been first examined in manufactured brands context and then, transferred in PLB area (Lombart and Louis, 2016 or Girard et al., 2017). The same phenomenon occurred for perceived brand authenticity of manufactured brands which has been investigated (Choi et al., 2015; Morhart et al., 2015; Napoli et al., 2014). However, brand authenticity has not been studied yet in the area of Private Label Brands.

To evaluate brand authenticity, consumers use various cues, such as indexical and/or iconic cues (Beverland and Farrelly, 2010; Grayson

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and Martinec, 2004; Leigh et al., 2006). But Morhart et al. (2015) highlight that "the list of antecedents considered is not exhaustive and it opens avenues for future research on drivers of brand authenticity." This research therefore investigates first, the influence of iconic cues and indexical cues, but also the effects of individual consumers' brand schematicity (Puligadda et al., 2012) on PLB perceived authenticity. Second, we investigate the mediating effect of authenticity between its antecedents (iconic, indexical cues and brand schematicity) and brand attitude and willingness to buy.

2. Theoretical background

2.1. Perceived brand authenticity

Current authenticity conceptualizations follow three perspectives (Morhart et al., 2015). First, the objectivist perspective defines authenticity as an objectively measureable quality of an entity that can be evaluated by experts (Trilling, 1972). Second, the constructivist perspective refers to authenticity as the projection of one's own beliefs, expectations, and perspectives onto an entity (Wang, 1999). Third, the existentialist perspective of authenticity is related to the self; it infers that authenticity means being true to oneself (Golomb, 1995). These three perspectives of authenticity are intertwined, and each contributes to confer authenticity to objects (Leigh et al., 2006).

Perceived brand authenticity can be defined by the interplay of objective facts (indexical authenticity), subjective mental associations (iconic authenticity), and existential motives about a brand (existential authenticity). Brand authenticity depends on how consumers perceive a brand to be faithful and true to itself and its consumers; it supports consumers being true to themselves (Morhart et al., 2015). Napoli et al. (2014) define three dimensions of brand authenticity content: quality commitment, heritage, and sincerity. Morhart et al. (2015) add a symbolism dimension that represents the importance of symbolic brand qualities in the context of authenticity. Perceived brand authenticity has been measured for various products, such as soft drinks, jeans, coffee (Morhart et al., 2015), fashion brands, and sporting goods (Choi et al., 2015). However, the perceived brand authenticity of private labels has not been evaluated.

2.2. Evaluation of brand authenticity: iconic and indexical cues

To evaluate brand authenticity, consumers use various cues, such as indexical and/or iconic cues (Beverland and Farrelly, 2010; Grayson and Martinec, 2004; Leigh et al., 2006). Iconic cues refer to marketing and promotional cues, such as a brand's advertising or design features that create impressions about the brand's essence (Brown et al., 2003; Leigh et al., 2006). One way for a company to project an authentic image is to feature the historicity, heritage, locality, tradition, and pedigree of the brand in its communication activities (Beverland et al., 2008). When they form brand-authenticity impressions, consumers tend to rely on a communication style based on a brand's virtues and roots (Morhart et al., 2015). This brand communication style influences positively in particular, continuity and integrity authenticity brand's dimensions (Morhart et al., 2015).

Retailers offer PLBs that range from single, standard-tier offerings to multi-tier offerings (Ter Braak et al., 2013). When retailers introduce multi-tier offers, they can choose between two PLB-naming strategies (Keller et al., 2016): They can opt for the same name for all tiers (economy tier, standard tier, and premium tier), such that the PLB name is the store-banner name and/or retailers' logo displayed on the packaging (Kotler, 2000), or they can decide to use different brand names for the different tiers, thereby avoiding any explicit links between PLB names and store banners (Ailawadi and Keller, 2004). In these cases, the banner name is not reflected in the PLB name, nor is the retailer's logo prominently displayed on the packaging. In France, both Carrefour and Leclerc have chosen this strategy for their premium tiers (*Reflets de France* and *Nos régions ont du talent*, respectively). These brand names focus on brand's roots and feature locality and tradition; they are iconic cues and reflect brand's origin and symbolic quality. They can increase continuity and symbolism dimensions of PLB's authenticity. They lead to our first hypothesis:

H1a. Iconic cue such as PLB's name (premium versus standard PLB brand name) has a positive influence on continuity PLB perceived brand authenticity dimension.

H1b. Iconic cue such as PLB's name (premium versus standard PLB brand name) has a positive influence on symbolism PLB perceived brand authenticity dimension.

Indexical cues refer to attributes that provide consumers with evidence of what a brand claims to be (Morhart et al., 2015). Objective information such as age, country of origin, or actual brand behavior can be used to evaluate brand authenticity. The absence of brand scandals and brand-congruent employee behavior are indexical cues that help consumers form brand-authenticity impressions (Morhart et al., 2015). To confer authenticity, brands may also choose to enhance indexical cues with an ingredient-branding strategy that uses an official signature such as specific labels. For example, an AOP label refers to the conditions in which a food is grown or produced that give the food its unique sensory characteristics (Barham, 2003). A brand and a label are distinct entities. These two "parent" brands develop a co-branded product, known as an ingredient-branded offering (Radighieri et al., 2014). A weaker brand gains more than a stronger brand when its ingredient offering is positively evaluated (Radighieri et al., 2014). In a branding context, indexical cues refer to attributes that provide consumers with evidence for what a brand claims to be (Morhart et al., 2015). Because a label is an official certification from a third party, it gives consumers objective information and thus reinforces credibility and integrity's dimensions of perceived brand authenticity. We hypothesize:

H2a. Indexical cue such as labeling strategy (no label versus label) has a positive influence on credibility PLB perceived brand authenticity dimension.

H2b. Indexical cue such as labeling strategy (no label versus label) has a positive influence on integrity PLB perceived brand authenticity dimension.

Iconic and indexical cues are often mentioned as antecedents of perceived brand authenticity, but Morhart et al. (2015) highlight that "the list of antecedents considered is not exhaustive and it opens avenues for future research on drivers of brand authenticity." Perceptions of iconic or indexical signs are highly influenced by personal predilections and perceptual imperfections (Grayson and Martinec, 2004). Because consumers differ in their perceptual abilities, their individual characteristics—that is, their brand schematicity—may also influence perceived brand authenticity.

2.3. Influence of individual characteristics on perceived brand authenticity

According to Keller (1993, p. 3), "Brand image is defined as perceptions about a brand as reflected by the brand associations held in consumer memory." Brand image is based on attribute associations with various sources, such as advertising and personal product experiences. In consumers' memories, brand authenticity is associated with brand names and stores. Researchers use two key approaches to study the structure of knowledge in memory. One is based on a theory that postulates the existence of a hierarchy of words/concepts (Collins and Quillian, 1969), and the other—the connectionist approach (Collins and Loftus, 1975)—is based on a network of relationships between words/concepts without such a hierarchy. A schema is an organized collection of beliefs and feelings (Solomon, 2004) that allows consumers to assimilate or look for information. It guides consumers' expectations of what information to collect (Komatsu, 1992). A schema is composed of a network of relationships

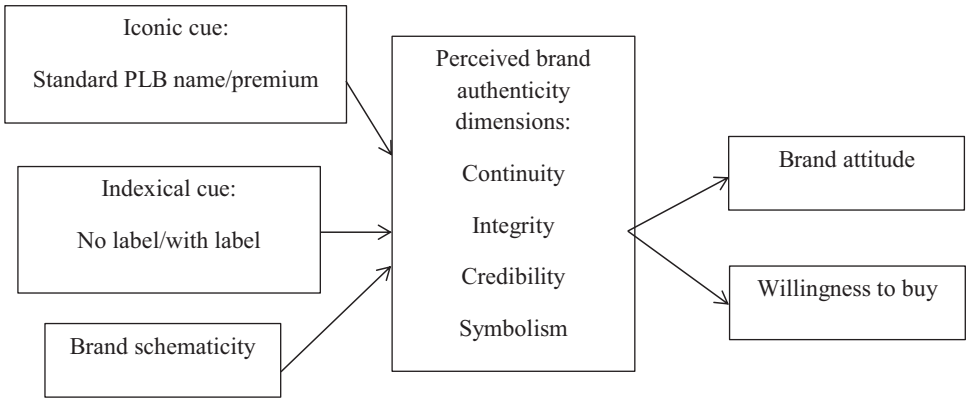

Fig. 1. Mediating effect of perceived brand authenticity dimensions between iconic, indexical cues, brand schematicity and outcomes.

between attributes and concepts (e.g., brands and product categories) or between concepts. It is a structure that is learned and stored in a consumer's preexisting semantic memory.

Brand schematicity is not specific to a brand; it is a tendency to process information according to its relationship to brands, in "chunks" (Bettman, 1979). For example, previous research on wine has shown that, compared with brand-aschematic consumers, brand-schematic consumers have memory networks that are more likely to be organized on brand nodes (Carsana and Jolibert, 2017). Brand schematicity has a positive influence on willingness to buy (Carsana and Jolibert, 2015). Commercial brand is more important to brand-schematic consumers than brand-aschematic consumers (Carsana and Jolibert, 2017). Even if these results have been obtained in a particular product category, brand schematicity applies across product categories (Puligadda et al., 2012). Brand-schematic consumers are receptive to brand information in general, and perceived brands are important to them. Consumers who do not have this propensity use other information first. Therefore, brand-schematic consumers may be more receptive to brand authenticity. We hypothesize:

H3. Brand schematicity has a positive influence on all brand perceived authenticity dimensions

2.4. Mediating effect of perceived brand authenticity dimensions between iconic, indexical cues, brand schematicity and brand attitude and willingness to buy

Consumers seek authenticity in consumption acts (Arnould and Price, 2000; Beverland and Farrelly, 2010; Boyle, 2003; Holt, 2002) and respond positively to brands that they perceive as authentic (Rose and Wood, 2005). Perceived brand authenticity positively influences brand attachment, brand commitment, brand loyalty, and word of mouth (Choi et al., 2015; Morhart et al., 2015). Perceived brand authenticity is part of consumer brand knowledge, which can influence brand attitude or willingness to buy (Sheinin and Biehal, 1999). Because the perception of brand authenticity is personal and can be influenced by brand schematicity but also by indexical or iconic cues, perceived brand authenticity may be a mediator between different cues (iconic, indexical cues and brand schematicity) and outcomes such as brand attitude and willingness to buy (Fig. 1). Therefore, we hypothesize:

H4a. Perceived brand authenticity dimensions are mediators between brand schematicity and brand attitude and willingness to buy.

H4b. Perceived brand authenticity dimensions are mediators between iconic cues and brand attitude and willingness to buy.

H4c. Perceived brand authenticity dimensions are mediators between indexical cues and brand attitude and willingness to buy.

3. Methodology

3.1. Protocol and sample

We conduct an experiment using a two-factor design: PLB (standard/premium) and alliance (no brand alliance/ label alliance). We choose to study Carrefour, because it is a well-known international group in France, with more than 5000 retail shops (http://www.carrefour.fr/magasin/liste-carrefour). Carrefour has a multi-tier product offering, in which the standard PLB is Carrefour and the premium PLB is *Reflets de France*.

We randomly assign each respondent to one of four situations (standard PLB/no brand alliance; standard/with brand alliance; premium PLB/no brand alliance; premium PLB/with brand alliance). We collect data online using a Qualtrics panel of respondents composed of 169 French consumers, who have made purchases from a hypermarket. We obtained 41 responses for a standard PLB (Carrefour), 42 for a standard PLB associated with an AOP label, 42 for a premium PLB (*Reflets de France*), and 44 for a premium PLB associated with an AOP label. We ask respondents to read a short presentation about the PLB and the label as a baseline, and then ask them questions related to brand and label awareness, brand/label fit, perceived brand authenticity, brand attitude, brand schematicity, and demographics.

3.2. Measurement scales

We include demographic variables (e.g., age, gender), brand and label awareness, and brand/label fit for descriptive purposes. We measure brand and label awareness using a 5-item scale adapted from Girard et al. (2017). The scales provide good reliability (Cronbach's alpha = 0.91 and 0.93). We measure brand/label fit using a 3-item scale adapted from Aaker and Keller (1990) (Cronbach's alpha = 0.89), then compute overall scores for brand awareness, label awareness, and brand/label fit, for each respondent.

We measure the individual characteristics of brand schematicity using a 7-item unidimensional scale adapted from Puligadda et al. (2012).[3] The brand-schematicity scale provides good reliability (Cronbach's alpha = 0.92). We then compute an overall brand-schematicity score for each respondent and transformed it into a dichotomous variable using a median split. We thereby created two groups: brand-schematic consumers (80 respondents) and brand-aschematic consumers (89 respondents). We measure brand attitude and willingness to buy using 3-item scales adapted from MacKenzie and Lutz (1989), and Poushneh and Vasquez-Parraga (2017), respectively. These scales provided good reliability (Cronbach's alpha = 0.90 and 0.89). We then compute overall scores for each respondent.

[3] Three items have been removed from the original scale because their loadings were < 0.6.

For all items (except gender, age, and retailer), we use a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree." All measured items are listed in Appendix A.

3.3. Perceived brand authenticity scale structure

We measure perceived brand authenticity using a 5-point, 14-item Likert scale adapted from Morhart et al. (2015). It is conceived as a second-order reflective construct with four dimensions: (1) continuity, (2) credibility, (3) integrity, and (4) symbolism. We measure the dimensions of credibility and symbolism using a 3-item scale and continuity and integrity using a 4-item scale.[4] For perceived brand authenticity, as recommended by Steenkamp et al. (1996) we perform confirmatory factor analysis (CFA) to study convergent and discriminant validity. To estimate the model goodness of fit, we used the Chi square and Chi square normed and we follow the recommendations of Hu and Bentler (1998), in support of using standardized root mean residuals (SRMR), supplemented by the root mean square error of approximation (RMSEA), confirmatory fit index (CFI), or Tucker-Lewis index (TLI). We perform the CFA (with AMOS statistical software) to test the measurement model and confirm the suitability of the scale. The results are satisfactory (Chi-square = 148.92; Chi-square normed = 2.04; SRMR = 0.038; RMSEA = 0.07; CFI = 0.954; TLI = 0.943), according to conventional standards.

To test reliability, convergent validity, and discriminant validity, we use XLSTAT statistical software. We rely on Cronbach's alpha coefficient to assess reliability. To evaluate convergent validity, we compute the Rho coefficient (Fornell and Larcker, 1981). Authenticity is reflected in four dimensions: (1) continuity (Rho coefficient = 0.90; Cronbach's alpha = 0.86), (2) credibility (Rho coefficient = 0.88; Cronbach's alpha = 0.81), (3) integrity (Rho coefficient = 0.91; Cronbach's alpha = 0.87) and (4) symbolism (Rho coefficient = 0.93; Cronbach's alpha = 0.88). Reliability is satisfactory, because the coefficient values of each construct exceeded Nunnally's (1978) recommendation of 0.70, and each construct provided satisfactory results (Rho coefficient > 0.50). The loading of each item is greater than 0.70 (factor loadings appears in Appendix B). Discriminant validity is established when the squared correlation between constructs is less than the average variance extracted (AVE) of each construct (Fornell and Larcker, 1981); using this criterion, we establish discriminant validity for these constructs (Table 1). We use these constructs to test our hypotheses.

Table 1
Discriminant validity.

	Symbolism	*Integrity*	*Credibility*	*Continuity*	***AVE***
Symbolism	1	0.622	0.497	0.528	0.815
Integrity	0.622	1	0.698	0.567	0.724
Credibility	0.497	0.698	1	0.439	0.727
Continuity	0.528	0.567	0.439	1	0.707

4. Results

Our sample is made of 60.4% men and 39.6% women; 62.1% are younger than 45 years old, and 32.8% are Carrefour clients (see Appendix C). Previous knowledge about PLBs between Carrefour customers and others is checked thanks to brand awareness score and there is no statistical difference between PLB awareness of Carrefour customers and others (standard PLB: t = 1.05; p = 0.297 and premium PLB: t = 1.398; p = 0.16). Likewise, there is no statistical difference between premium PLB attitude of Carrefour customers and others (t = 0.77; p = 0.44), we obtain the same results for willingness to buy (t = 0.72; p = 0.47). On the contrary, there is a statistical difference between standard PLB attitude and PLB willingness to buy of Carrefour customers and others (brand attitude: t = 2.14; p = 0.035; ω^2 = 5%; and willingness to buy: t = 2.33; p = 0.02; ω^2 = 6%). In that case, to be a Carrefour customer or not, explains only 5% of the variance of brand attitude and 6% of variance of willingness to buy. This indicates that other elements may influence mainly these outcomes.

There is no statistical difference among the four experimental groups in these characteristics: age (χ^2 = 10.18, p = 0.60), gender (χ^2 = 1.39, p = 0.70), or being a Carrefour customer (χ^2 = 18.06, p = 0.64). The brand-awareness score (standard PLB and premium PLB) is good (mean scores, respectively, 4.00/5 (SD = 0.72) and 3.99/5 (SD = 0.83), and there is no statistical difference between PLB awareness of standard PLB and premium PLB (t = 0.09; p = 0.921). Label awareness is also good, with a mean score equal to 3.90 (SD = 0.85). Premium PLB/label fit results (mean score = 4.18; SD = 0.69) are statistically better than standard PLB/label fit (mean score = 3.75; SD = 0.78), (t = − 2.67; p = 0.00).

To test the hypotheses, we conduct a mediation model with bootstrapping (Preacher and Hayes, 2008). Koopman et al. (2015) prefer Bayesian method to bootstrapping when sample sizes are moderate or small (20–80 cases) but with 169 cases, bootstrapping can be applied. To examine the mediation hypothesis, we run a conditional process analysis (Hayes, 2013) using the SPSS macro PROCESS (Model 4, 5000 bootstrap samples), with design group conditions (iconic cue: 1 = standard PLB, 2 = premium PLB or indexical cue: 1 = no label, 2 = with label or individual characteristic: 1 = brand-aschematic, 2 = brand-schematic) are used as predictors, Perceived brand-authenticity components (continuity, integrity, credibility and symbolism) are mediators, and brand attitude and willingness to buy are dependent variables. We analyze first, the direct effect of the independent variable (iconic, indexical cue or brand schematicity) on brand authenticity dimensions, and then we study the direct effect of independent variable on the dependent variables (brand attitude and willingness to buy) and the mediation effect of perceived brand authenticity dimensions.

The iconic cue (PLB naming strategy) has no statistical influence on perceived brand authenticity dimensions of continuity and symbolism (p > 0.05) (Table 2). The consumers do not use this iconic cue (PLB name) to evaluate continuity or symbolism of brand authenticity. Therefore, H1a and H1b are rejected. If an iconic cue is represented only by a brand-name strategy, it is not sufficient to create perception of continuity or symbolism.

Indexical cue (labeling strategy) has a positive influence on the brand-authenticity dimension of integrity (p = 0.04) but no influence on credibility (p = 0.17) (Table 3). Consumers perceive more integrity for PLBs when they are associated with an indexical cue such as a label, thereby confirming H2b but not H2a.

In H3 we predict that brand-schematic consumers would perceive more brand authenticity than brand-aschematic consumers.

Brand schematicity has a statistical influence (p = 0.00) (Table 4) on all perceived brand-authenticity dimensions. Therefore, H3 is accepted: brand-schematic consumers perceive more integrity, continuity, credibility, and symbolism for PLBs than brand-aschematic consumers.

In H4a, we predict that perceived brand authenticity dimensions would be mediators between brand schematicity and outcomes (brand attitude and willingness to buy). The results show no statistically direct effect of brand schematicity on brand attitude (p = 0.95), but integrity and credibility have positive, significant mediating roles between brand schematicity and brand attitude (β = 0.22 and 0.28, respectively) (Table 5). For brand-schematic consumers, the PLB has more integrity and credibility, which enhances overall brand attitude, thereby partially confirming H4a.

The results indicate no statistical direct effect of brand schematicity on willingness to buy (p = 0.65), but continuity and credibility have

[4] For the dimension of symbolism, the initial scale contained four items, but the CFA indicated that model quality improved without the item, "A brand that reflects important value people care about.".

Table 2
Influence of iconic cue on perceived brand-authenticity dimensions.

Source	Coefficient	SE	t	p	LLCI	ULCI
Continuity						
Iconic cue (standard PLB/premium PLB)	0.03	0.11	0.27	0.78	− 0.19	0.26
Symbolism						
Iconic cue (standard PLB/premium PLB)	0.07	0.13	0.51	0.60	− 0.20	0.34

Table 3
Influence of indexical cue on perceived brand-authenticity dimensions.

Source	Coefficient	SE	t	p	LLCI	ULCI
Credibility						
Indexical cue (no label/label)	0.15	0.11	1.36	0.17	− 0.06	0.37
Integrity						
Indexical cue (no label/label)	**0.23**	**0.11**	**2.04**	**0.04***	**0.008**	**0.45****

* $p < 0.05$.
** 0 excluding from the interval LLCI- ULCI.

Table 4
Influence of brand schematicity on perceived brand-authenticity dimensions.

Source	Coefficient	SE	t	p	LLCI	ULCI
Credibility						
Brand schematicity	**0.48**	**0.10**	**4.55**	**0.00***	**0.27**	**0.69****
Integrity						
Brand schematicity	**0.55**	**0.10**	**5.16**	**0.00***	**0.33**	**0.76****
Continuity						
Brand schematicity	**0.49**	**0.11**	**4.47**	**0.00***	**0.27**	**0.71****
Symbolism						
Brand schematicity	**0.77**	**0.12**	**6.14**	**0.00***	**0.52**	**1.01****

* $p < 0.05$.
** 0 excluding from the interval LLCI- ULCI.

Table 5
Direct and indirect effects of brand schematicity on brand attitude.

Brand schematicity (X)	**Direct effect**			
	β	SE	t	p
X → brand attitude(Y)	0.004	0.08	0.05	0.95
Brand schematicity(X)	**Indirect effect**			
	β	SE	LLCI	ULCI
X → integrity→brand attitude	**0.22**	**0.09**	**0.06**	**0.43**[a]
X →continuity → brand attitude	0.08	0.05	− 0.002	0.22
X → credibility→brand attitude	**0.28**	**0.07**	**0.15**	**0.46**[a]
X → symbolism→brand attitude	− 0.03	0.07	− 0.21	0.10

[a] 0 excluding from the interval LLCI- ULCI.

positively significant mediating roles between brand schematicity and willingness to buy (β = 0.21 and 0.23, respectively) (Table 6). For brand-schematic consumers, the PLB have more continuity and credibility, which enhanced their willingness to buy the PLB, thereby partially confirming H4a.

H4b expects that perceived brand authenticity dimensions mediate between iconic cue (PLB name) and outcomes (brand attitude and willingness to buy). The results show no statistically direct effect of iconic cue on brand attitude ($p = 0.20$) and no statistical indirect effects of iconic cue on brand attitude (Table 7).

The results show no statistically direct effect of iconic cue on willingness to buy ($p = 0.21$) and no statistical indirect effects of iconic cue on willingness to buy (Table 8). H4b is rejected. Brand authenticity

Table 6
Direct and indirect effects of brand schematicity on willingness to buy.

Brand schematicity (X)	**Direct effect**			
	β	SE	t	p
X → Willingness to buy (WTB)	− 0.04	0.10	− 0.44	0.65
Brand schematicity(X)	**Indirect effect**			
	β	SE	LLCI	ULCI
X → integrity→WTB	0.14	0.11	− 0.05	0.39
X →continuity → WTB	0.21	0.07	0.09	0.39[a]
X → credibility→WTB	0.23	0.08	0.10	0.41[a]
X → symbolism→WTB	− 0.03	0.09	− 0.25	0.13

[a] 0 excluding from the interval LLCI- ULCI.

Table 7
Direct and indirect effects of iconic cue on brand attitude.

Iconic cue (PLB name) (X)	**Direct effect**			
	β	SE	t	p
X → brand attitude(Y)	0.09	0.07	1.27	0.20
Iconic cue (X)	**Indirect effect**			
	β	SE	LLCI	ULCI
X → integrity→brand attitude	0.04	0.04	− 0.02	0.15
X →continuity → brand attitude	0.005	0.02	− 0.03	0.06
X → credibility→brand attitude	0.06	0.05	− 0.03	0.19
X → symbolism→brand attitude	− 0.004	0.01	− 0.07	0.15

Table 8
Direct and indirect effects of iconic cue on willingness to buy.

Iconic cue (PLB name) (X)	**Direct effect**			
	β	SE	t	p
X → Willingness to buy (WTB)	0.11	0.09	1.23	0.21
Iconic cue (X)	**Indirect effect**			
	β	SE	LLCI	ULCI
X → integrity→WTB	0.03	0.03	− 0.01	0.15
X →continuity → WTB	0.01	0.04	− 0.08	0.11
X → credibility→WTB	0.05	0.04	− 0.02	0.17
X → symbolism→WTB	− 0.007	0.02	− 0.07	0.01

Table 9
Direct and indirect effects of indexical cue on brand attitude.

Indexical cue (label) (X)	**Direct effect**			
	β	SE	t	p
X → brand attitude(Y)	0.002	0.07	0.03	0.97
Indexical cue (X)	**Indirect effect**			
	β	SE	LLCI	ULCI
X → integrity→brand attitude	**0.08**	**0.04**	**0.01**	**0.21**[a]
X →continuity → brand attitude	0.02	0.02	− 0.01	0.10
X → credibility→brand attitude	0.07	0.05	− 0.02	0.21
X → symbolism→brand attitude	− 0.01	0.02	− 0.09	0.01

[a] 0 excluding from the interval LLCI- ULCI.

dimensions do not mediate between iconic cue and outcomes.

H4c expects that perceived brand authenticity dimensions mediate between indexical cue (label) and outcomes (brand attitude and willingness to buy). The results show no statistically direct effect of indexical cue on brand attitude ($p = 0.97$), but integrity has a positively significant mediating role between indexical cue and brand attitude (β = 0.08) (Table 9). When there is a labeling strategy, PLB had more integrity, which enhanced a better PLB attitude.

Table 10
Direct and indirect effects of indexical cue on willingness to buy.

Indexical cue (label) (X)	**Direct effect**			
	β	SE	t	p
X → Willingness to buy (WTB)	0.08	0.09	0.85	0.39
Indexical cue (X)	**Indirect effect**			
	β	SE	LLCI	ULCI
X → integrity→WTB	0.05	0.05	− 0.006	0.22
X →continuity → WTB	0.05	0.05	− 0.03	0.17
X → credibility→WTB	0.06	0.05	− 0.02	0.18
X → symbolism→WTB	− 0.02	0.02	− 0.12	0.01

The results show no statistically direct effect of indexical cue on willingness to buy ($p = 0.39$) and no statistical indirect effects of indexical cue on willingness to buy (Table 10). H4c is partially rejected. Brand authenticity dimensions do not mediate between indexical cue and outcomes except for the integrity dimension which mediates between indexical cue and brand attitude.

5. Discussion and conclusion

Several researchers have shown that perceived brand authenticity is influenced by iconic cues such as a brand's advertising or design features (Brown et al., 2003; Leigh et al., 2006; Morhart et al., 2015). To form brand-authenticity impressions, consumers also rely on indexical cues, that is, objective information about attributes that provide evidence of what a brand claims to be (Morhart et al., 2015). Perceived brand authenticity has been measured in many sectors but not yet in PLB retailing and others brand authenticity antecedents may be studied (Morhart et al., 2015).

Our results confirm that an indexical cue such as a label enhanced consumers' perceptions of integrity related to the PLB but not credibility. From a managerial point of view, our results suggest that retailers can enhance PLB perceived integrity by choosing a co-branding strategy with specific label.

On the contrary, iconic cue as brand name has no influence on brand authenticity dimensions. Iconic cue as brand name is not sufficient to create a highest level of perceived brand authenticity. When retailers present multi-tier offers, they can choose between two PLB naming strategies (Keller et al., 2016): either the same PLB name for all tiers or different brand names for different tiers (Ailawadi and Keller, 2004). In the latter situation, the banner name is not reflected in the PLB name, as illustrated by Carrefour's policy in France. The company's premium tier, *Reflets de France*, features locality and tradition. But, our results suggest that to reinforce perceptions of continuity or symbolism, brand name strategy is not sufficient and retailers should use other communication supports such as advertising or packaging, with appropriate messages and illustrations. Further research could investigate these elements as iconic cues.

It is interesting to note that the authenticity dimensions of a brand are emphasized by brand schematicity. Brand-schematic consumers perceive more integrity, continuity, credibility, and symbolism for the PLBs than brand-aschematic consumers. These results confirm previous studies that demonstrate that brand schematicity influences brand and product evaluation (Carsana and Jolibert, 2017; Halkias, 2015; Puligadda et al., 2012). Moreover, individual characteristics such as brand schematicity influence evaluations of brand authenticity. This study contributes to a better understanding of the influence of brand schematicity and extends findings by Puligadda et al. (2012), who show that brand-schematic consumers perceive more PLB authenticity on all dimensions than brand-aschematic customers. Compared with brand-aschematic consumers, brand-schematic consumers attribute more integrity, continuity, credibility, and symbolism to PLBs. Brand schematicity influences perceived PLB authenticity, increases willingness to buy, and engenders more positive attitudes to PLBs.

Our results thus show that customers need information to evaluate brand authenticity. Retailers who focus on brand-schematic consumers should provide marketing support (e.g., leaflets, flash codes, applications) that explains the link with the label.

In terms of limitations, we used a convenience sample for this research, in which consumers evaluated brand authenticity for one retailer only. Thus, these results should be validated using a more representative sample and other retailers. We did not control previous knowledge about PLB, even if there is no statistical difference of brand awareness between Carrefour Customers and no Carrefour customers, our results need to be validated using a whole sample of Carrefour customers versus no Carrefour customers. Likewise, past brand usage may influence brand attitude and intention to buy (Bird and Ehrenberg, 1966, 1970) and must be controlled in future research.

We did not check also for involvement with the store format or its impact on loyalty, so our results are limited to Carrefour hypermarkets (Filipe et al., 2017). Trust could differ according to both store format and retailer benefit programs.

Another limitation stems from the store name. The French version of the name Carrefour is known in Asia, and more specifically in China, as *Jia Le Fu*, meaning "the family is happy," such that it has a good meaning. Would the meaning be the same in other countries where the store is present?

Appendix A. : Scale items

- Brand schematicity scale (adapted from Puligadda et al., 2012) –

(Cronbach's alpha = 0.92; mean score = 3.15; std deviation = 0.98)

1. When I go shopping, I am always scanning the environment for brand names.
2. Brand name considerably influences my buying decisions.
3. I like to surround myself with recognizable brand names at home.
4. When I am considering products, the brand name is more important to me than any other information.
5. Brands are important to me because they indicate social status.
6. The brand name is the most important information to me when I am considering a product
7. I keep abreast of the brands people around me are using.

- User's Willingness to Buy (adapted from Poushne and Vasquez-Parraga, 2017)

(Cronbach's alpha = 0.89; mean score = 3.90; std deviation = 0.90)

1. I intend to buy _
2. I would be willing to buy _

3. In future, I would buy _

- Brand or label Awareness (adapted from Girard et al., 2017)

(Brand awareness: Cronbach's alpha = 0.91; mean score = 4.00; std deviation = 0.78)
(Label awareness: Cronbach's alpha = 0.93; mean score = 3.9; std deviation = 0.85)

1. I can recognize _ among other competing products.
2. I know what look like _.
3. I am familiar with _
4. I can quickly recognize the symbol or logo of_
5. When I think of _, some of their characteristics come to my mind quickly.

- Brand attitude (adapted from MacKenzie and Lutz, 1989).

(Cronbach's alpha = 0.90; mean score = 3.88; std deviation = 0.83)

1. I am favorable to _
2. _ is a good brand
3. I like_

- Brand/label fit (adapted from Aaker and Keller, 1990)

(Cronbach's alpha = 0.89; mean score = 3.97; std deviation = 0.76)
Association between brand _and AOP label is

1. Consistent
2. Natural
3. Logical

Appendix B

See appendix Table B1.

Table B1
Factor loadings of perceived brand-authenticity dimensions.

Dimension	Items	Loadings
Continuity	A brand with an history	0.824
	A timeless brand	0.846
	A brand that survives times	0.843
	A brand that survives trends	0.850
Credibility	A brand that will not betray you	0.890
	A brand that accomplishes its value promise	0.873
	An honest brand	0.792
Integrity	A brand that gives back to its consumers	0.838
	A brand with moral principles	0.844
	A brand true to a set of moral values	0.848
	A brand that cares about its consumers	0.874
Symbolism	A brand that adds meaning to people's lives	0.901
	A brand that connects people with their real selves	0.900
	A brand that connects people with what is really important	0.907

Appendix C

See appendix Table C1.

Table C1
Characteristics of survey participants.

Characteristics	Number	Percentage
Gender		
Male	102	60.4
Female	67	39.6
Age		
Younger than 25 years old	23	13.6

(*continued on next page*)

Table C1 (*continued*)

Characteristics	Number	Percentage
25–34 years old	34	20.1
35–44 years old	48	28.4
45–54 years old	31	18.3
More than 54 years old	33	19.5
Retailer's customer		
Carrefour	55	32.5
Others	114	67.5

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