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# The neglected unity-in-variety principle: A holistic rather than a single-factor approach in conceptualising a visual merchandise display

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## ABSTRACT

While retailers cannot stress enough the fact that, in reality, a variety of store design cues combine to make a merchandise's visual display (VMD), the product presentation research focuses mostly on investigating the effect of a single retail display cue, at a time, on consumer product evaluations. But, is "unity-in-variety" a neglected principle in the product presentation research? Scholars are increasingly suggesting more systematic study to identify combinations of key store cues that shape a product's display for more pertinent for the retailing practice exploratory research. In response, the present article reviews the relevant literature and organises the findings to propose a qualitative typology of VMD cues that can capture, holistically, the VMD construct. The proposed typology is then confirmed in two studies. The identified VMD cues are classified into five key VMD element categories (factors) comprising display fixtures, materials, organisation, staging technique and lighting, and all factors load on one higher-order VMD construct.

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## 1. Introduction

Consumers engage with and ultimately buy [mostly branded] products to receive their perceived functional and psychological benefits. In this search of satisfying physiological and psychological needs, store atmosphere – that is, the physical or digital environment where consumers encounter with the products and services being offered – plays a crucial role in shaping consumers' product and brand evaluations.

Early scholars in store atmospherics research (e.g. Ailawadi & Keller, 2004; Baker, 1986; Baker et al., 1994; Bitner, 1992) have categorised the *wider* store cues in three categories, comprised as (i) ambient, (ii) design (visual) and (iii) social factors of the whole store environment. The evidence has also suggested that each factor affects consumers' perceived benefits and evaluations in relation to the displayed products, delivered services and the seller or service provider, which, in turn, impacts their decision to purchase.

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This article attempts to bridge the early research in store atmospherics with the more contemporary retailing concept of visual merchandising (VM) and visual merchandise display (VMD). VM refers to the *holistic* organisation of the wider store's (macro-level) interior and exterior cues—which are primarily visual in nature—with the aim of communicating the store's image while offering a memorable shopping experience (Kerfoot et al., 2003). The concept of VMD, which is the focus of this study, explicitly refers to the micro-level product display cues and the way in which they are, again, holistically orchestrated, but specifically, for showcasing the product (Law et al., 2012).

At the macro-level, there are several rich ethnographic studies documenting how store atmospherics and architecture influence consumer behaviour (e.g. Dion & Arnould, 2011; Joy et al., 2014). At the micro-level, many more product-focused studies have explored the effect of specific product presentation cues on consumers' product evaluation and purchase intentions (e.g. Hagtvedt & Patrick, 2008; Kerfoot et al., 2003; Logkizidou et al., 2019). The effect of VMD on consumers' evaluations has either been approached descriptively and qualitatively (e.g. Dion & Arnould, 2011; Joy et al., 2014; Kerfoot et al., 2003) or empirically and quantitatively but, by focusing on one store cue at a time (e.g. Argo & Dahl, 2018; Bellizzi et al., 1983; Sevilla & Townsend, 2016). However, when consumers entering a retailing store, passing by a window display or visiting an online shop, it is never the effect of a single cue what helps them making product and brand inferences. So, while the extant exploratory research offers a list of display cues for retailers to choose from, the effect of unity [in-variety] and the interactivity between cues is either missing or confounding, undermining the external validity of the relevant research assumptions. In fact, an emerging trend of research, (Dion & Arnould, 2011; Joy et al., 2014; Logkizidou et al., 2019; Murray et al., 2019; Reynolds-mcilnay et al., 2017) is suggesting more systematic study to identify key dimensions and cues of the VMD construct for promoting further exploratory research of cues that are often or inevitably combined in practice.

In response, by focusing just on the design factor, which refers to the visual onsite store cues, and the retail micro/display environment, this paper raises two research questions: (i) is “unity-in-variety” a neglected principle in the product presentation research? And, (ii) what are the key cues and dimensions that capture holistically the VMD construct? The aim is to propose a qualitative typology of display cues that defines VMD.

The paper is organised as follows: first, the relevant literature is reviewed, and the findings are organised in a qualitative typology of salient, in terms of their effect on product evaluations, VMD cues (to include prestige and discount cues) that comprise the VMD construct (Table 1). Then, the proposed typology is confirmed via two empirical studies.

## 2. Literature review

### 2.1. The dimensionality of the general store environment

The early research in store atmospherics has shown that the general store atmosphere is experienced by a variety of human senses, such as sight, hearing, smell and touch. Accordingly, Kotler (1973), by conducting a qualitative analysis based on examples of

**Table 1.** Visual merchandise display typology (Study1).

VMD		Low-Image VMD		High-Image VMD		Cues		Representative Quotations (N = 40)		Studies	
Fixture type	Dimensions	Pedestals/raised platforms (less items)	Shelves (less items)	Pedestals/raised platforms (less items)	Shelves (less items)	Tables (more items)	Realistic mannequins	Tables (more items)	Realistic mannequins	Tables (more items)	Realistic mannequins
Quality of Materials		Gilded/golden/polished brass/nickel	Non gilded/golden/polished brass/nickel	Gilded/golden/polished brass/nickel	Non gilded/golden/polished brass/nickel	Glass cases	Abstract/Semi-realistic mannequin formations	Glass cases	No glass cases	Reflective	Marble Glass
		Reflective	Marble Glass	Hardwood	Metalllic						

(Continued)



Table 1. (Continued).

VMD Dimensions	High-Image VMD Cues	Low-Image VMD Cues	Representative Quotations (N = 40)	Studies
Organisation/ Density	Neat/tidy (i.e. well-organised; folded, item-grouping, colour blocking, etc.) Low-merchandise display density (e.g. single-item display)	Messy/cluttered (i.e. unorganised)	<i>"Easy to scan and choose the right item; if things are over-cluttered, I can never be bothered to look for the items I want, I would rather go online."</i> , <i>"Tidiness discriminates the high-class retailers from the mainstream retailers."</i> (R43)	Baker et al., 1994; Dion & Arnould, 2011; Joy et al., 2014; Kerfoot et al., 2003; Logkizidou et al., 2019; Reynolds-mclainay et al., 2017; Sevilla & Townsend, 2016
	Decorative/Informational Minimalism	High-merchandise display density (e.g. multi-item display)	<i>"Quality on the top of quantity versus quantity in expense of quality."</i> , <i>"It is more difficult to find uniqueness if identical or even similar products are displayed one next to the other."</i> , <i>"It reminds me of boutique or posh shops ... oppositely, it makes me think of Primark, like a jumble sale or supermarket."</i> (R36)	
	Artistic/museological staging	Decorative/Informational Maximalism	<i>"Think about jewellery or cars, they require a minimalistic elaboration ... the product needs all the attention because it's very costly and the purchasing decision requires focused thinking."</i> , <i>"The item speaks for itself, don't need to get your eye by bombarding you with lots of interesting decorative things."</i> (R11)	
Staging Technique	Artistic/museological staging Conceptual display	Artistic/museological vacuum Exposed display	<i>"Only expensive brands can afford art."</i> , <i>"When brands are exhibiting their product next to authentic artworks or the product itself is the artwork in its display environment, then, we talk luxury."</i> (R32)	Baker et al., 1994; Borghini et al., 2009; Dion & Arnould, 2011; Grewal et al., 2016; Garaus & Wagner, 2019; Hollenbeck et al., 2008; Hagtvedt & Patrick, 2008; Huettl & Gierl, 2012; Joy et al., 2014; Lee et al., 2015; Logkizidou et al., 2019; Mazursky & Jacoby, 1986; Pino et al., 2017; Vukadin et al., 2016; Roggeveen et al., 2020
	Creative director's/ designer's credentials	No creative director's/ designer's credentials	<i>"... I still remember their Christmas theme window display during the Christmas festive period"</i> , <i>"Only original brands devote time in developing a concept-display, to make us remembering them for a really long time"</i> , <i>"... it requires having a distinctive vision, whereas, just placing products next to each other makes them not that unique."</i> (R21)	
	Story telling	No story telling	<i>"Should be a designer brand ... or, have collaborated with one, which is equally prestigious."</i> (R26)	
	Tech staging (e.g. customisation, personification, product experience)	Tech staging vacuum/tech gimmick	<i>"... that's a heritage brand ... because they have history and expertise in what they do, they've got a story to tell"</i> , <i>"... these elements indicate good quality and expensiveness."</i> (R27)	
Lighting	Story telling Satisfactory	No story telling	<i>"Technology can be used in-store to display and personalise products for special customers ... that's an up-to-date but up-market brand."</i> , <i>"... only if it isn't just a gimmick but it actually helps to experience the product ... then, that should be a very successful, not boring brand."</i> (R30)	
	Incandescent spotlights (warm white)	Fluorescent strip-lights (cool white/colour)	<i>"Satisfactory lighting increases the visibility ... again, makes it easy to scan and choose the right item"</i> , <i>"Lighting makes the product inviting."</i> (R19)	Areni & Kim, 1994; Baker et al., 1994; Dion & Arnould, 2011; Gardner & Siomkos, 1985; Joy et al., 2014; Kerfoot et al., 2003; Logkizidou et al., 2019; Murray et al., 2019; Reynolds-mclainay et al., 2017
	High brightness contrast	Low brightness contrast	<i>"... if there is lighting inside the glass cabinet, then it is even more precious ... unless, it is fluorescent strips like in supermarkets."</i> (R20)	
	Accent lighting (product focus)	Ambient lighting (general focus)	<i>"In this way, the product on focus truly stands out ... they are easier to assess, look more attractive too."</i> (R9)	
			<i>"Harsh background light is modern but reminds me of supermarkets or fast food chains"</i> , <i>"Soft background lighting is pleasant ... I can stay for longer, and when the lighting is rather focused on the products that's usually a middle market or, better, a high-end retailer."</i> (R31)	

store atmospheric planning and expenditure from several industries and companies, suggested a first *general* typology of elements that comprise a store's atmosphere. In this, four distinct dimensions of store environment elements were identified: (i) the visual dimension (i.e. colours, brightness, sizes and shapes), (ii) the aural dimension (i.e. volume and pitch), (iii) the olfactory dimension (i.e. scent and freshness), and (iv) the tactile dimension (i.e. softness, smoothness and temperature).

Later on, Baker (1986) extended the work of Kotler (1973) and proposed a more *practical* typology suggesting that the store environment simply comprises (i) the ambient factor (i.e. non-visual atmospheric cues such as odours, sounds, music, etc.), (ii) the design factor (i.e. visual cues such as a store's colours, fixtures, materials, etc.) and (iii) the social factor (i.e. the people in the store, including customers and frontline employees). Research that followed up in store atmospherics (e.g. Ailawadi & Keller, 2004; Baker et al., 1994, 1992, 2002; Bitner, 1992; Grewal & Baker, 1994) suggested a similar categorisation. Finally, Baker et al. (1994), as part of their exploratory study, tested empirically this three-factor store environment typology. They used principal components factor analysis and found that the indicators (items) of the participants' perceptions of all the store environment cues on perceived merchandise/service quality were, as anticipated, loaded into three categories (factors) according to whether they were assessing ambient, design, or social store elements. In this three-factor solution that emerged, the factors *together* explained the 70% of the total variance, adequately catching the wider store-environment construct.

Different categorisations of store environment cues do exist in the literature of store atmospherics, but they rather discuss different *levels* of the store environment elements. For example, Turley and Milliman (2000) in a review article identify external (e.g. exterior signs, colour and architecture of building), general internal (e.g. flooring and carpeting, music, and ceiling composition) and display (micro) store cues (e.g. placement of merchandise, racks and cases, and price displays) and discuss how such cues effect consumers' in-store behaviour (e.g. time spend in-store, satisfaction, and purchase intention).

Finally, scholars in consumer behaviour research started to empirically investigate not just the dimensionality or the general impact of the store atmosphere but the impact of specific atmospheric cues, mostly one at a time though – e.g. by focusing on colour (e.g. Bellizzi et al., 1983; Crowley, 1993; Vieira, 2010), lighting (e.g. Park & Farr, 2007; Reynolds-mcilnay et al., 2017; Summers & Hebert, 2001), flooring (e.g. Van den Bergh et al., 2016), music and sound (e.g. Spendrup et al., 2016; Yalch & Spangenberg, 1990) or scents (e.g. Doucé & Janssens, 2013; Spangenberg et al., 1996), – on consumers' product evaluation and various aspects of their purchase behaviour (e.g. their willingness to buy, approach or avoidance behaviour and so on).

By identifying the general store environment factors and levels (macro and micro), the research in store atmospherics has informed this study's conceptualisation and helped locating VMDs as the design/visual cues of the micro, display retail environment. However, the review of the relevant literature, especially when focusing on the visual cues, has also revealed limitations suggesting a more holistic approach in conceptualising and operationalising store environment elements.

## **2.2. Research suggesting a more holistic approach**

The wider store environment literature seems to be focusing either on: (i) the general construct of store atmosphere and its associated physical attractiveness (e.g. Donovan & Rossiter, 1982; Kotler, 1973; Mazursky & Jacoby, 1986), or (ii) the effect of a single store cue on consumer product responses (e.g. Argo & Dahl, 2018; Doucé & Janssens, 2013; Hagtvedt & Patrick, 2008; Spangenberg et al., 1996; Summers & Hebert, 2001; Spendrup et al., 2016; Sevilla & Townsend, 2018; Vieira, 2010; Van den Bergh et al., 2016). The earlier studies that have focused on (i) provide little guidance to retailers because they tend to do not indicate specific store cues that can improve consumers' responses. The more recent studies that focus on (ii) also offer limited implications for retailers mainly because they do not consider the effect of the interactivity between store cues although in reality store cues together affect consumers' evaluations.

More recent studies in the retailing and product presentation research (e.g. Dion & Arnould, 2011; Joy et al., 2014; Kerfoot et al., 2003; Logkizidou et al., 2019; Reynolds-mcilnay et al., 2017; Shin et al., 2015) start exploring the joint effect of a combination of visual store cues on consumers' evaluations. For example, Reynolds-mcilnay et al. (2017) have demonstrated that products which are neatly organised when displayed in high brightness levels that contrast more with the surrounding retail environment will be more preferred. However, messy products in high brightness contrast levels will be less preferred due to increased contamination and reduced pleasantness perceptions.

Also, Dion and Arnould (2011, p. 511) have argued that it takes a combination of VMD cues to cause an artistic contamination that enhances a product's perceived luxury: "*Sales items[. . .]are placed on pedestals; shiny display cases are ubiquitous, lighting is focused on the objects, clients are placed at some physical distance from the items, and so forth*". Logkizidou et al. (2019) have corroborated this view and provided a more organised typology of museological display cues comprising museological fixtures, materials, organisation, presentation technique, and lighting. Those combined, even in the absence of a formal artwork, found to cause an "extended art infusion" that improves the luxury product perceptions and purchase intentions.

This stream of research highlights a new, more "holistic" way of considering the practice and effect of visual merchandising and display in the marketing and retailing literature. It also raises a reasonable question: is "unity-in-variety" a neglected principle in the product presentation research?

## **2.3. The neglected unity-in-variety principle**

The first ever empirical evidence suggesting the store design elements affect consumer store and merchandise evaluations came from the research in environmental psychology and the application of inference theory (see Morrow & McElroy, 1981; Sadalla et al., 1987; Zweigenhaft, 1976). The use of inference theory in store atmospherics (e.g. Baker et al., 1994, 2002; Bitner, 1992; Grewal & Baker, 1994) established the notion that consumers are not passive recipients of the store environment information. Instead, they actively seek for cues in the product's surrounding to make inferences about the seller and



merchandise and ease their purchase decision process (Huber & McCann, 1982; Nisbett & Ross, 1980).

The occurrence of relevant “spillover” effects, however, in the more recent product presentation research (see Dion & Arnould, 2011; Logkizidou et al., 2019) requires also “unity” in compiling VMD cues that tell a consistent story or have a symbolic meaning. For example, Logkizidou et al. (2019) have demonstrated that a second-order spillover is initiated by a *combination* VMD cues that resemble what is prototypically associated with museum displays. In this, artistic essence is transferred to the display because of the cues’ symbolic resemblance and from the display to the merchandise itself. This unity-in-variety prerequisite (principle) is somewhat implied but is not yet formally theorised when exploring display-infused effects on consumers’ evaluations.

The unity-in-variety principle states that the aesthetic appreciation of variety in a sensory stimulus is conditional to the perceived unity in this variety (Berlyne, 1971; Hekkert, 2006). This principle is widely used in visual arts (e.g. Berlyne, 1971; Cupchik & Gebotys, 1988) to explain the success (quality evaluations) of artworks when their diverse and complex visual effects are also harmoniously related. For example, Cupchik and Gebotys (1988) developed pairs of paintings (study 1: a kitsch series of paintings) which were evaluated individually by artists on scales measuring complexity and harmony among other qualities (such as originality, dynamicity, and warmth). Consistent with the unity-in-variety principle, they found that the more highly appreciated paintings were judged to be more complex and better integrated (i.e. better balance between subject matter and visual effects) whereas the less successful paintings were judged to be simpler and less balanced.

More recently, the unity in variety principle has been empirically studied in the product design research (e.g. Hekkert, 2014). In this field, the aesthetic evaluation of a product (the interior design of a car) was often attributed more to unity rather than the variety of the visual cues (Post et al., 2013). However, more recent empirical evidence (Hekkert, 2014; Post et al., 2014) suggests that both unity and variety (although may negatively correlate with each other) positively influence aesthetic appreciation and there is an optimal balance between them that is aesthetically preferred.

In fact, R. Post et al. (2017) experimentally investigated this principle in the aesthetic evaluations of websites. In this study, two sets of webpages were developed by manipulating for variety and unity. The results showed that, indeed, both unity and variety, independently, and positively, influence consumers’ aesthetic appreciation. Maximising both unity and variety simultaneously, though, lead to an optimal balance where aesthetic appreciation was in its highest.

A VMD, just like in the website evaluation research, is the optical stimulus consumers use when viewing and evaluating a product onsite. Nevertheless, unity-in-variety is an important but overlooked principle in the product presentation research. Extant research suggests VMD cues that can improve product evaluations but how harmoniously they can relate to each other and to a subject matter (overarching construct) is hardly considered. Logkizidou et al. (2019) provides a list (variety) of VMD cues that relate to the concept/subject of a museological display but still what makes the general VMD construct is rather unknown. Hence, next, a qualitative typology of VMD cues is proposed for future empirical study and further conceptual development.



## 2.4. A proposed VMD typology

The qualitative study of Kerfoot et al. (2003) suggests (although never tests) that the fixtures, their materials, the display layout, the manner of the merchandise presentation and the lighting are the non-product, display elements that affect consumers' product evaluations and purchases. Logkizidou et al. (2019) have relied on the same supposed typology to describe the construct of a museological display which correspondingly comprises museological display fixtures, materials, organisation/density, presentation and lighting techniques. However, testing whether the five suggested display factors load indeed on a higher-order VMD construct was never the focus of any of the above cited studies.

In this study, by organising the evidence in the relevant literature, a five-dimensional enriched VMD typology emerges comprising fixture type, quality of materials, organisation/density, staging technique, and lighting. This qualitative typology is proposed based on the following sources: (i) the conceptual and empirical studies that focus on store design cues in the early literature in store atmospherics (e.g. Baker et al., 1994, 2002; Grewal & Baker, 1994); (ii) the more recent qualitative research that explores the effect of the holistic organisation of several visual store environment cues on brand evaluations and brand image (e.g. Dion & Arnould, 2011; Joy et al., 2014; Kerfoot et al., 2003); (iii) the more recent empirical (quantitative) studies in marketing and retailing that investigate the effect of a single visual product presentation cue on consumers' product evaluations and purchase behaviour (e.g. Argo & Dahl, 2018; Hagtvedt & Patrick, 2008; Sevilla & Townsend, 2016) and, (iv) the results of two empirical studies (see Study 1 and Study 2).

Accordingly, *fixture type* refers to the display objects (design cues) that facilitate the product's presentation and found to influence consumers' product evaluations. In the luxury retailing literature (e.g. Argo & Dahl, 2018; Dion & Arnould, 2011; Hansen & Wänke, 2011), pedestals, cubes, tables, glass cases and tailor-style versus classic full-body mannequins are seen mostly as the fixtures that support the brand's image. Indeed, in Kerfoot et al.'s (2003) consumer study, the use of tables and cubes rather than the use of rails and shelves was thought to portray a smart appearance. Logkizidou et al. (2019) argue that in the museological tradition high value exhibits are seen on pedestals, often protected inside glass cabinets; thus, the evaluation of products that use similar fixtures is elevated. Products displayed on pedestals or raised platforms are evaluated more favourably also because are viewed closer to the consumer's eye level (Meyers-Levy & Peracchio, 1992).

*Quality of materials* has also been found to affect consumers' evaluations of the store's offering. Ornately gilded, finely marbled, polished wooden and glass fixtures seem to provide a symbolic (luxury) lustre to displayed products that plastic, for instance, cannot provide (Baker et al., 1994, 2002; Joy et al., 2014). Kerfoot et al. (2003) found that merchandise laid out on glass surfaces portrayed an up-market image. Participants also perceived wooden clothes hangers as showing quality, while the use of [red] plastic hangers was perceived as cheap and nasty. There is also an inextricable link between the perceived weight of a fixture and its perceived quality. Display objects made from materials that are, or are assumed to be, heavier (such as marble, gold or even concrete) perceived as being of better-quality (Spence & Gallace, 2011). Although researchers find it difficult to identify an exhaustive list of fixture materials that are likely to enhance the

consumers' product evaluations, often the use of perceptibly expensive (e.g. gilded gold) and reflective materials emerges as a factor that gives the whole store and its content a sparkling touch while at the same time is generating impressions of sterilisation, excellence, extra space and grandness (Joy et al., 2014; Yun & Good, 2007).

*Display organisation/density* refers to the way in which a VMD is configured and the number of products per square foot on display which relates to perceptions of product scarcity and extravagance (Joy et al., 2014). Not showing everything off suggests that the content of the store, and thus the brand, is precious. In Kerfoot et al.'s (2003) study, neat (not messy) and sparse displays were associated with more expensive and prestigious brands. The display of one pair of trousers laid out on its own was perceived as showing that the brand can afford the empty space and, thus, participants made high price and quality inferences for the brand, which was automatically assumed to be a designer brand. Sevilla and Townsend (2016), via a series of laboratory and field experiments, explored the effect of space-to-product ratio on consumer responses. They found that when more space was devoted to a product's display its purchase likelihood was improved because participants were perceiving the products as more aesthetically pleasing and the store as more prestigious.

*Staging technique* also emerges as an important VMD factor which refers to product performing which elevates consumers' responses. For example, Dion and Arnould (2011) explain how luxury retailers stage brands in their flagship stores by using store design cues that reference the artistic director/designer of the brand to infuse their charisma onto the displayed products (e.g. pictures and other referential signs of Karl Lagerfeld [for Chanel], Marc Jacobs [for Marc Jacobs] and are seen in-store or window displays). The use of art in presenting a product has also been seen to facilitate a product's staging and improve its perceived luxury (Dion & Arnould, 2011; Hagtvedt & Patrick, 2008; Joy et al., 2014; Lee et al., 2015; Pino et al., 2017; Vukadin et al., 2016). Even in the absence of a formal artwork though, museological staging techniques just by referencing the art world, found to infuse luxury perceptions to the displayed products (Logkizidou et al., 2019). Sometimes, it is just the theme of the display (conceptual displays) and the meaning it conveys to consumers through symbolism (e.g. by using humour, referencing social welfare issues or certain fashion eras) what creates favourable brand perceptions and a distinctive brand image (Borghini et al., 2009; Hagtvedt & Patrick, 2008). Storytelling displays (often facilitated by the use of in-store educational content, for example, educational signage, videos/short films/documentaries etc. on in-store video screens) that explain a brand's biography or the merchandise's production process, found to also elevate perceptions of authenticity and be associated with heritage and quality brands (Dion & Arnould, 2011; Hollenbeck et al., 2008). Often, technology itself and special display equipment (e.g. Atelier Cologne's in-store personification technology) facilitate a product's staging by entertaining, assisting, educating consumers while exhibiting the products on offer (Vukadin et al., 2016).

Finally, *display lighting* has also been highly noticed and cited as an important VMD element in the retailing research. Many scholars (Joy et al., 2014; Kerfoot et al., 2003) acknowledge the importance of lighting in showcasing products to make them stand out and look attractive. Certain types of lighting, though, such as fluorescent strip lighting, found to trigger inferences of low product quality associated with a down-market retailer (see Kerfoot et al., 2003). Reynolds-mcilnay et al. (2017) explain how background lighting

regulates the brightness contrast between the product and its background environment. The authors found that high brightness contrast improves the products' attention and aesthetic perceptions which, in turn, improves the products' preference and choice probability. However, that was the case when the displayed garments were also neatly organised (when messy products pop out because of their brightness contrast, participants' evaluation and choice likelihood dropped). In any case, accent lighting found to have mostly a positive impact on consumers product and store evaluations (Areni & Kim, 1994; Dion & Arnould, 2011; Logkizidou et al., 2019).

The two empirical studies that follow validate the evidence in the literature and the proposed VMD typology. Specific cues relating to each VMD dimension, along with related quotations taken from the qualitative inquiry in Study 1 are presented in [Table 1](#).

### 3. Study 1: Validation of the VMD typology

In order to provide further evidence about the key cues and dimensions that capture holistically the VMD construct and validate the typology in [Table 1](#), mixed research methods were employed (see Tashakkori & Teddlie, 2010). First, interviews ( $N = 40$ ) were conducted using a projective technique, following Chaplin and John (2007), to identify a list of effective prestige- and discount-image VMD cues (alike Baker et al., 1994) suggesting key VMD dimensions. A short survey was then administrated to the same sample of participants ( $N = 40$ ) to quantify the research assumptions. Finally, a field study (seminar workshop see Chaplin & John, 2007;  $N =$ , p. 40) was employed to further validate the proposed typology. The methods, procedure and results are discussed next.

#### 3.1. Method and procedure

To support the notion derived from the literature, a qualitative inquiry was first employed by interviewing two groups of participants (mixed females and males): one group of 20 students ( $M_{\text{age}} = 22.87$ ,  $SD = 4.30$ ) and one group of 20 adults ( $M_{\text{age}} = 48.67$ ,  $SD = 16.89$ ). This decision was made to ensure that the differences between the samples (and gender differences within groups) did not affect the general judgment of: (i) what are the key VMD dimensions and (ii) what is seen as a high-image versus low-image cue in each VMD dimension. Participants were incentivised with a participation fee. The undergraduate students and UK adult shoppers were separately familiarised with the VMD topic by the moderator of the discussion. Specifically, a list of 44 VMD cues (see [Table 1](#), columns 2 and 3) was given to participants in both groups along with a written, strictly neutral, description for each cue. Each written/verbal description had previously been assessed to be clear, neutral, and representative (see Gardner & Siomkos, 1986) by three researchers in a large UK University, following a procedure used by Bearden et al. (2001), among others. A discussion and a sorting task exercise then took place. The informants were asked to discern from the original list the high-image VMD cues connoting higher quality and prestige from the low-image VMD cues connoting low quality and low prestige. They were also encouraged to: (i) provide a short description of the rationale behind each sorting decision, (ii) provide examples from their general knowledge and marketplace observations, and (iii) suggest additional display cues that the original list did not contain (see [Table 1](#)).

Quantitative data were also collected (short survey) in order to compare the high-image and low-image VMD cues and identify which cues participants considered as the most powerful (scoring at the endpoints of a high-image scale). Specifically, all 40 participants were asked to rate on a seven-point Likert-type scale (ranging from 1 = not at all to 7 = definitely) the extent to which they would consider each VMD cue as a high-end (prestigious) way of presenting a product.

Finally, following Chaplin and John (2007), the same informants ( $N = 40$ ) were invited to a seminar workshop and asked to draw five circles on a blank sheet and write inside them (i.e. group together) all the VMD cues that they believed were just variations of the same product display element (e.g. all different fixture types together in one cycle, etc.) crossing out those from the original list of the 44 VMD cues. Following Han et al. (2010), each anticipated circle and cues was coded. For example, the 'fixture type' circle was coded as 01 and all anticipated cues in it (see Table 1) were coded as 011, 012, and so on. Similarly, the "materials" circle was coded as 02 and its corresponding cues were coded as 021, 022, and so on. When all participants completed the task, 20 more minutes were given to them to: (i) revisit their groupings and reconsider, (ii) increase or decrease the number of the cycles (groups) if they wanted and, (iii) think of a heading for each circle. Finally, 20 more minutes were given to the participants to adjust things if they wanted to, move around (across cycles) VMD cues, or even cross out completely the VMD cues that they thought they did not belong to any grouping.

## **3.2. Results**

### **3.2.1. Interviews**

Given the nominal nature of the data in the qualitative exercise (interviews), a series of chi-squared tests were run for each VMD cue to assess whether the proportion of students seeing each VMD cue (see Table 1) as high-image or low-image was equal to the proportion of adult participants seeing that cue in a similar manner. The results were statistically non-significant ( $p > .05$ ) for all attributes, and all tests suggested that the null hypothesis assuming that the perceptions linked to each VMD cue do not differ between (and within male vs. female) samples could not be rejected.

### **3.2.2. Short survey**

Moreover, using the data from the quantitative exercise (short survey) the means of each high-image and low-image VMDs were compared for student and adults. By running a series of t-tests the statistically non-significant results ( $p > .05$  for each VMD cue) suggested that participants' rating of each VMD cue did not depend on whether they were students or adult shoppers (see Appendix 1). This suggested that pooling the two groups together for further or future analysis would be appropriate as these sub-samples appeared to categorise and see the VMD cues in a similar way and to the same extent. Finally, the results confirmed that, for all participants ( $N = 40$ ), certain cues such as neat and tidy display organisation ( $M = 6.18$ ), abstract mannequins ( $M = 6.05$ ) and glass cases ( $M = 6.03$ ) were identified as high-end VMD cues. In contrast, others, such as messy and cluttered display organisation ( $M = 2.03$ ), artistic vacuum ( $M = 2.23$ ) and low-brightness contrast ( $M = 2.33$ ) were identified, as

anticipated, as low-image VMD cues. A series of one-sample tests was run for all 40 pooled participants to compare each VMD cue against the scale's midpoint of 4 (see Appendix 2). The results suggest that, indeed, 22 high-image VMD cues and 22 low-image VMD cues were identified. Among them, the messy/cluttered ( $M = 2.03$ ) and the neat/tidy ( $M = 6.18$ ) display organisation seem to represent the two endpoints of a high-image VMD type of scale, respectively.

### 3.2.3. Seminar workshop

Most importantly, the results from the groupings' coding in the seminar workshop were in line the results of the sorting task in the interviews suggesting five emerged VMD dimensions and are all summarised in Table 1.

## 3.3. Discussion

The qualitative results in Study 1 suggest five VMD dimensions describing display fixture types, materials, organisation/density, staging techniques and lighting. Although this five-factor VMD solution is further tested and validated quantitatively in Study 2, the present qualitative inquiry also illustrated participants' tendency (similar for both students and adults) to describe the interactivity and make inferences based on the combined effect of certain VMD cues within and across the five factors. For example, participants combined fixture with lighting cues to make product value assumption: "... if there is lighting inside the glass cabinet, then it is even more precious". Fixture type or material together with display organisation/density cues drove also participants' store and product perceptions: "[Pedestals] make me think that the display will be sparse ... it presents the product as something important that has its own place"; "[Plastic] it reminds me of bulk items in a store to allow easy browsing". At other times, the display fixture of a certain material with the artist's credentials determined their perceptions: "Artist's wooden type mannequins signify a high-end retailer". Such interactivity is hard to ignore in the participants' responses and is certainly not neglected in retail practice.

## 4. Study 2: Principal components analysis

Study 2 tests the conceptualisation of VMD as one overarching (retailing) construct comprising display fixtures, materials, organisation/density, staging techniques and lighting. Following Baker et al. (1994) and to simplify the analysis, only the 22 high-image VMD cues from Study 1 were used to develop relevant perception indicators suitable for a survey investigation. Ten faculty members in a large UK University assessed the content validity of each indicator following a procedure used by Bearden et al. (2001), among others. Specifically, indicators were evaluated as "clearly", "somewhat" or "not representative" of each dimension based on the definitions provided. Only those items considered to be "clearly representative" but "neutral" in their wording were retained while the rest had to be removed or reworded and passed through a second round of evaluation.

Then, 48 female undergraduates in a large UK University completed an online survey in exchange for a chance to win a £50 gift card from a big online retailer. Participants were asked to indicate on a seven-point Likert-type scale (ranging from 1 = not at all, to

7 = definitely) how likely each VMD cue is to be seen in displaying a high-end product. For example, (sample indicators, see Appendix 3), when: “A pedestal is used to display the product” (Indicator 1), “The product is displayed/organised neatly and tidily” (Indicator 11) and so on. The descriptive statistics and one sample tests per indicator are consistent, as demonstrated in Appendix 3, with that of Study 1.

The items were then analysed using principal components (PCA) with varimax rotation. PCA is recommended (see Hair et al., 1995) for the quantitative analysis of a qualitative typology (often also employed for validation of cluster profiles and so on) to better understand the underlying structure of the data. While this analysis requires a larger sample size when using categorical qualitative data, when metric data are developed instead (e.g. perception indicators like in this study), a small sample is adequate for a PCA to produce robust results (see Hair et al., 1995). The rotated results of the principal components analysis are shown in Appendix 3. As anticipated, a five-factor solution emerged (consistent with the results in Study 1) based on the eigenvalue > 1 criterion, which explained 85.85% of the total variance. As demonstrated in Appendix 3, all indicators' loadings on the intended dimension were high (>.6), with a few expected (mainly because of the difficulty in wording certain VMDs) low cross-loadings (< .4) (Bloch et al., 2003). More importantly, all inter-factor correlations were moderately high, ranging from 0.57 to 0.71, consistent with the conceptualisation of VMD as an overarching construct mainly consisting of VMD fixtures, materials, organisation/density, staging techniques and lighting. Specifically, the composite scores for the five factors loaded together on one higher order VMD construct with loadings ranging from 0.81 to 0.87. Therefore, following the earlier study of Baker et al. (1994), it is reasonable to assume that display fixtures, materials, organisation, staging and lighting are indeed five key components (elements) that shape together the VMD construct (explaining the 85.85% of the total variance).

## 5. General discussion

Today, because of the abundance of financial failures of high-profile retailers and a consistent decline in foot traffic, no retailer feels safe. During only the first half of 2019, PricewaterhouseCoopers reported 1,234 stores disappearing from the UK's top 500 fashion retailers. This pattern of plummeting footfall and store closure has been spreading across the UK and US.

As consumers turn their preference and spending on experiences rather than tangible commodities, retailers' offering a holistic in-store experience seems to be the only weapon against the declining footfall. However, this requires the visual, mostly in nature, store environment elements to work in conjunction and be tailored to the brand and the retailer in order to be successful. While retailers and academics seem to agree on this view, the research in the marketing and retailing literature has focused mostly on investigating the effect of a single store cue at a time on consumers' responses. Although by controlling for confounding cues researchers improve the reliability and internal validity of their assumptions, the external validity and applicability of the results is often limited.

This article argues that even in the micro, VMD level it usually takes more than one retail display cues to build a product's visual presentation. Those cues then collectively



influence consumer product perceptions and purchase intentions. More recent empirical research (e.g. Reynolds-mcilnay et al., 2017) corroborates this view and has started exploring the interactivity of a combination of product presentation cues (e.g. product-background brightness contrast and product organisation) offering better guidance for retailers. This paper contributes towards this trend of research and addresses the gap in the literature by proposing a qualitative typology of VMD cues that captures holistically the VMD construct. By reviewing the relevant literature (e.g. Ailawadi & Keller, 2004; Argo & Dahl, 2018; Baker et al., 1994; Dion & Arnould, 2011; Joy et al., 2014; Kerfoot et al., 2003; Logkizidou et al., 2019; Sevilla & Townsend, 2016) key VMD cues were identified and classified into five VMD element categories (dimensions). The emerged typology was then confirmed via two studies, with both the qualitative and quantitative results suggesting a five-dimensional VMD solution comprising display fixtures, materials, organisation/density, staging technique, and lighting.

### **5.1. Theoretical and managerial contributions**

Scholars in the product presentation literature (e.g. Hagtvedt & Patrick, 2008; Pino et al., 2017; Sevilla & Townsend, 2016) study special spillover effects or use contagion theory to explain the influence of a single display cue on consumer responses. However, a latent interactivity between VMD cues that are normally combined in practice could alter researchers' original assumptions. For example, while displaying a product on top of a pedestal is found to successfully accommodate a product's perceived luxury (see Logkizidou et al., 2019), if that pedestal is made from plastic, a reverse effect on product evaluations might be observed.

This research contributes to the product presentation literature by breaking down the construct of a retail display (namely as VMD) to understand the key dimensions that shapes its construct. The results suggest that pairing certain VMD cues together may enhance consumers' evaluations. For example, (extending Reynolds-McIlnay et al.'s research assumption) combining certain fixtures (glass cabinets) with specific lighting (accent product-focused lighting) may improve consumers' product perceptions. Certain fixture materials (plastic) and organisation cues (high-merchandise display density) can also interact in affecting consumers' evaluations. So, when the designer's signature (credential) is on a plastic [red] hanger the results on consumers' evaluations might be significantly different from what Kerfoot et al. (2003) have originally predicted. Since isolating these cues in real practice can be unrealistic, this article underlines the importance of considering the unity between VMD cues suggesting that the future research on store cues requires a more holistic (rather than a single-factor) approach.

### **5.2. Limitations and suggestions for further research**

This study focuses on identifying key cues and the dimensions that define the VMD construct. However, the predictive validity of the overarching VMD construct on consumer responses needs to be empirically tested. Future research could test the unity-in-variety principle by facilitating a combination of product presentation cues. Although the



use of written descriptions of the VMD cues is considered appropriate in testing the dimensionality of the VMD construct (see Baker et al., 1994), future research could develop pictorial materials to test the effect and further validate or update the dimensionality of the VMD construct. Finally, while the proposed VMD typology applies mostly to a physical store context, future research could identify present-day online cues (e.g. 2-D versus 3-D product view, etc.) and define the dimensions of online VMD. Overall, and despite its limitations, the present research suggests a new way of considering VMD which opens avenues for further empirical research with more pertinent results for the new-age retailers.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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