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Abstract

Considerable research has been done on brand personality as a key factor in brand management, focusing mainly on how it is perceived by consumers, but without much attention to the managerial perspective. However, the latter is crucially important to ensure that the brand personality consumers perceive actually corresponds to what a company intends to communicate. This study offers an innovative methodology to achieve this dual-perspective objective, integrating notions of marketing and linguistics to investigate brand personality alignment as it emerges from authentic and spontaneous digital environments. Textual data were collected from both company and consumer web communications across a sample of 100+ fashion brands, and then processed with software to extract sets of adjectives as the expression of brand personality. The adjectives were interrelated to calculate ratios that measure (a) the degree of alignment between company-defined vs. consumer-perceived brand personality, (b) similarity in personality between brands and (c) consumer perception of similarity in personality between brands. Varying degrees of alignment were identified, suggesting differences in how effectively the companies communicate their brand personality. The combination of the ratios derived from

this research process can be utilized to evaluate the strength of brand differentiation and to redefine brand communication strategies.

Introduction: understanding brand personality¹

Today's companies are challenged to successfully define, manage and control their own brand personality in order to achieve a more sustainable advantage over competitors (Hunt 2000).

Brand personality can be a powerful tool to evoke emotions (Biel 1993), build trust and loyalty (Fournier 1998), and enhance consumer preference (Aaker 1999). Thus, it increases the uniqueness of brands which, in turn, contributes to brand equity (Biel 1993; Ogilvy 1985). The relational paradigm underlying brand personality is deep, intimate and interpenetrating. In fact, it is seen as a "set of human characteristics associated with a brand" (Aaker 1997, 347), which combine physical and functional attributes with inner features of brands expressed as traits of personality (Keller 1993; Plummer 2000; Batra, Lehmann, and Singh 1993). As a consequence, consumers relate to a "brand-persona" (Herskovitz and Crystal 2010, 21), interacting with the brand through self-expressive language, which facilitates identification processes: consumers see themselves in a brand or, vice-versa, they see a brand in themselves. This leads to increasing emotional connections as consumers interface with brands. The more a brand is seen as an expression of an actual or ideal consumer-self, the stronger the attachment to the brand will be (Malär et al. 2011). Moreover, consumers' perceptions of self in terms of a brand can intensify as they use it. Indeed, brand personality can "rub off" (Park and Roedder John 2010, 655) on consumers, thus reinforcing their self-image (Sirgy et al. 1997).

¹ The following abbreviations will be used in this article: CBA = Consumer-brand alignment, IBA = Interbrand alignment, CIBA = Consumer-interbrand alignment, CIBD = Consumer-interbrand disalignment.

Inspired by human personality research (cf. Norman 1963; Eysenck 1970; Pervin 2003), Aaker (1997) identified five major dimensions through which brand personality can be described: *sincerity, excitement, competence, sophistication* and *ruggedness*. Each dimension is internally articulated into a large number of different facets or traits, typically expressed by adjectives with positively-charged meanings. For example, sincerity refers to something that is *down-to-earth, honest, wholesome* or *cheerful*. Excitement is perceived in what is *daring, spirited, imaginative* or *up-to-date*. Competence includes such personality traits such as *reliable, intelligent* or *successful*. Sophistication is described in terms of being *upper-class* or *charming*. Finally, ruggedness means anything that is *outdoorsy* or *tough*. Various facets of these dimensions can converge into the brand personality that a company defines and communicates to consumers. Brand personality may be considered a subset of brand image (Blackston 1993; McCracken 1989; Ogilvy 1985), which in turn comprises “brand associations” that can be product-related, non product-related, experiential or attitudinal (Keller 1993, 2). However, while associations linked to brand image may include such tangible features as color, size or price (Keller 1993), those related to brand personality tend to be more intangible in nature. They reside in the visual and verbal components of brand-related communications and are thus a creation of marketing (Batra, Lehmann and Singh 1993). In addition, brand personality associations are usually more memorable (Aaker and Joachimsthaler 2000), meaningful (O’Shaughnessy and O’Shaughnessy 2004) and consistent (LePla and Parker 2002).

Because company-defined brand personality takes on meanings and subjective interpretations when filtered through the minds of consumers (Ivens and Valta 2012), it is of crucial importance to determine whether the brand personality communicated by a company is aligned with what consumers actually perceive. Self-identification in brand personality which is not based on an

aligned perception can generate cognitive discrepancies that negatively impact brand performance (Whan Park et al. 2010; Malär et al. 2011). What companies need to achieve is a self-congruence effect. In other words, there should be a fit between the individual's self-image and the perceived brand personality, i.e., a converging perspective of brand personality (Aaker 1999; Sirgy 1982). Without such alignment, consumers would identify themselves in something that they construct individually, while the company unwittingly fails to make marketing choices that trigger the desired self-expressive processes among consumers. This could cause a progressive misperception of brand personality: the same brand would take on diverging personality traits in consumers' minds that could produce an emotional detachment towards the brand (Thompson, Rindfleisch and Arsel 2006). As a result, brand personality would lose its differentiation power in that it would no longer be a reflection of real or ideal consumer-self. In light of the potential risks described above, we believe that it is essential to determine how alignment between company-defined and consumer-perceived brand personality can be measured and evaluated. An analysis of the scientific literature on brand personality has revealed a research gap in this area. Most of the studies thus far have dealt with the identification of brand personality dimensions from various perspectives. For example, consumers have been asked to imagine brands as human beings and describe personality traits associated with those brands (Das, Datta, and Guin 2012). While Aaker (1997), Aaker, Benet-Martinez, and Jordi Garolera (2001), Caprara, Barbaranelli, and Guido (2001), Sung and Tinkham (2005) and Geuens, Weijters, and De Wulf (2009) have proposed ad hoc scales to articulate brand personality, other researchers have elaborated idiographic scales (D'Astous and Lévesque 2003; Helgeson and Supphellen 2004). All these studies are based on a combination of qualitative techniques (e.g., in-depth interviews, focus groups) and quantitative research methods. The former distinguish

various themes of brand personality and the latter provide statistical analyses to measure and correlate the emerging themes while evaluating their reliability and validity. This line of research constitutes a fundamental conceptual basis upon which to construct further analyses that target other aspects of brand personality. For example, several studies have investigated dimensions of brand personality from the consumer's perspective by determining what influences their perceptions. Maehle and Supphellen (2011) suggested that company sources (e.g., employees, CEO, product attributes) and symbolic sources (e.g., logo, endorsers and typical users) of brand personality have an impact on how it is perceived. Maehle, Otnes and Supphellen (2011) found that dimensions of brand personality can be perceived differently, also on the basis of the product categories and brand characteristics to which they are related (e.g., quality, feminine/masculine nature). Ang and Lim (2006) demonstrated that metaphors in advertising may influence the perceived brand personality of utilitarian and symbolic products. In addition, brand personality appears to entail a high degree of perceived subjectivity. In this regard, Ivens and Valta (2012) found variation among the perception of brand personality across brands, but perhaps more interestingly, also within perceptions of individual brands. This strand of research encompasses all those studies that relate the perception of brand personality to consumer self-image.

In sum, all of the studies reviewed above have been useful to clarify the construct of brand personality and the way it relates to consumers. However, they have not tackled the important issue of how to compare the degree of alignment between the brand personality from the perspective of the company vs. the consumer in such a way that it can be measured and evaluated. An attempt in this direction was made by Malär et al. (2012, 728) who distinguished the factors which transform an "intended brand personality" (how companies want consumers to perceive it) into a "realized brand personality" (how consumers actually perceive it). According

to these authors (Malär et al. 2012, 728), such factors lay in “the singularity of the brand personality profile, the competitive differentiation of the brand, the credibility of brand communication, consumers’ depth of product involvement, and consumers’ prior attitude”.

While Malär et al.’s (2012) work has provided key insights into what can generate brand personality alignment, the aim of the present study is instead to show how such alignment can be systematically identified and measured. In this article, we propose a new interdisciplinary methodological approach to measure and evaluate the degree of alignment between consumer-perceived vs. company-defined brand personality, as well as perceptions of similarity in brand personality across a large sample of brands. The analysis builds on previous exploratory research that distinguished the phenomenon of match/mismatch in perceptions of brand associations (Crawford Camiciottoli, Ranfagni, and Guercini 2014).

The present research is contextualized in an online community as a social context that represents a new type of marketplace (Kozinets 1999; Muniz and O’Guinn 2001), where consumers interact as current or potential customers, enthusiasts or experts to exchange information and opinions (Cova 1997; Szmigin, Canning, and Reppel 2005). In this way, it is possible to analyze the dynamic and complex relations among consumers, companies and brands (De Valck 2005). We focus in particular on online communities of consumers of fashion brands for several reasons. First of all, perhaps more than others, the fashion industry is a context in which brands are often described in terms of human personality traits (cf. Thompson and Haytko 1997), and may possess an emotional component that can evoke strong feelings and attitudes (Xun and Reynolds 2010). In addition, previous research indicates that fashion consumers are especially keen to engage in interaction using digital platforms in the form of dedicated blogs or forums (cf. Rickman and Cosenza 2007; Boyd Thomas, Okleshen Peters, and Tolson 2007). These digital

resources allow fashion marketers to unobtrusively examine the ‘conversations’ of consumers who discuss their relationships with brands and express their perceptions (Kim and Jin 2006). Using the brand personality dimensions and facets articulated by Aaker (1997) as a starting point, we analyzed adjectives that could be interpreted as the linguistic expression of brand personality in texts produced by consumers in fashion online communities and by fashion companies in their web communications. This allowed us to develop an interdisciplinary method drawing from both marketing and linguistics, which is able to determine three key quantitative indicators that measure (1) the degree of alignment between company-defined and consumer-perceived brand personality, (2) the degree of similarity in personality between different brands, and (3) the degree to which consumers perceive brands as similar. More specifically, we intend to respond to the following research questions:

- RQ1 How can the degree of alignment between company-defined vs. consumer-perceived brand personality (i.e., consumer-brand alignment) be measured?
- RQ2 How can similarity in brand personality between brands (i.e., interbrand alignment) be measured?
- RQ3 How can consumer perception of similarity in personality between brands (i.e., consumer-interbrand alignment) be measured?

By comparing the emerging ratios, different marketing scenarios can be delineated in terms of the differentiating power of brand personality (Keller 2003). Thus, the method we propose can become a tool for managers to evaluate and enhance the competitiveness of their brand, based on an understanding of how the online community perceives its personality.

Methodology

In the following subsections, we describe in detail the interdisciplinary research process implemented to study brand personality alignment in online communities. Our method combines notions of marketing and quantitative techniques from the field of linguistics, thus going beyond other approaches based on digital data (cf. Kozinets 2002, 2010; Kozinets and Handelman 2004), which are qualitative and subjective, without providing in-depth and comprehensive analyses of the language used to describe and evaluate brands.

Data collection and sample construction

To address the research questions, it was necessary to collect textual data from two different sources: 1) a popular blog that is extensively used by the online community of fashion consumers to exchange opinions and perceptions about brands (the *blog dataset*), and 2) the websites and/or Facebook pages of fashion companies that offer promotional descriptions of their brands (the *company dataset*).

The blog dataset was compiled from a blog hosted by Style.com, a website dedicated to brands, people and events in the fashion industry. The blog posts were written by experts in the role of opinion leaders, to which any number of enthusiasts could respond with their own comments. According to Kozinets (2010, 241), this type of digital community is “ecosystem” in which all participants, regardless of their particular role, can be seen as “‘real’ consumers”. Following this interpretation, we construe the Style.com blog as an interactional context that is representative of

fashion consumers in general. As a form of technology-mediated social interaction, the blog thus provided a ‘window’ on consumer perceptions and attitudes in relation to fashion brands in a naturalistic interactional setting which could be observed unobtrusively for research purposes (cf. Kozinets 2002). Among the thousands of fashion blogs present in the blogosphere, the Style.com blog held a high ranking in terms of Alex traffic data, membership and incoming links (cf. Bardzell et al. 2009). In addition, because the posts/comments were archived for a relatively long period of time (up to approximately four years), enough data could be collected for the type of textual analysis undertaken in this study. Finally, the blog incorporated a system of tags that correspond to fashion brand names. This enabled the systematic collection of data for the individual fashion brands to be included in the research sample.

The starting point for data collection was the blog’s designer directory which listed tags for hundreds of fashion brands, representing a wide range of nationalities and categories, e.g., luxury/retail, women’s/men’s clothing, well established/emerging brands. From these tags, it was possible to identify posts and comments within the archived blogs in which individual brands were mentioned. The corresponding texts were collected into separate files representing 335 different fashion brands. The posts and comments that compile the blog dataset covered a timeframe spanning from August 2008 to August 2013.

We then collected the parallel company dataset, i.e., texts from the websites and/or Facebook pages of the same 335 brands in the blog dataset. During this process, we discovered that many of the less well-known brands did not have websites or Facebook pages. There were also a number of websites with blocked text that could not be copied and pasted into external files. In addition, some company websites contained mostly images without verbal descriptions of brands or products, and a few had textual material in languages other than English. All of these brands

were eliminated from the sample as it was essential to have strict matching between the blog and the company datasets for our research aims. This initial filtering process reduced the number of brands represented across the two parallel datasets to 167.

Given the importance of the interactional dimension in online consumer communities, we also decided to remove from the sample all the brands whose files did not contain any user comments in response to the initial posts, i.e., where consumers failed to engage in ‘conversations’ about the brands. Finally, we eliminated brands whose corresponding blog text files did not contain a sufficient amount of text (<1000 words). The threshold of 1000 words was established as the minimum quantity necessary a) to reflect an ongoing dialogue among fashion consumers, and b) to generate meaningful results that would permit the normalization of data derived from computer-assisted elaboration of the texts. After the various phases of filtering described above, there were 113 fashion brands represented across the two parallel datasets. An overview of the sample is shown in the appendix, reporting for each brand the number of corresponding posts and comments, as well as the individual word counts in the text files.

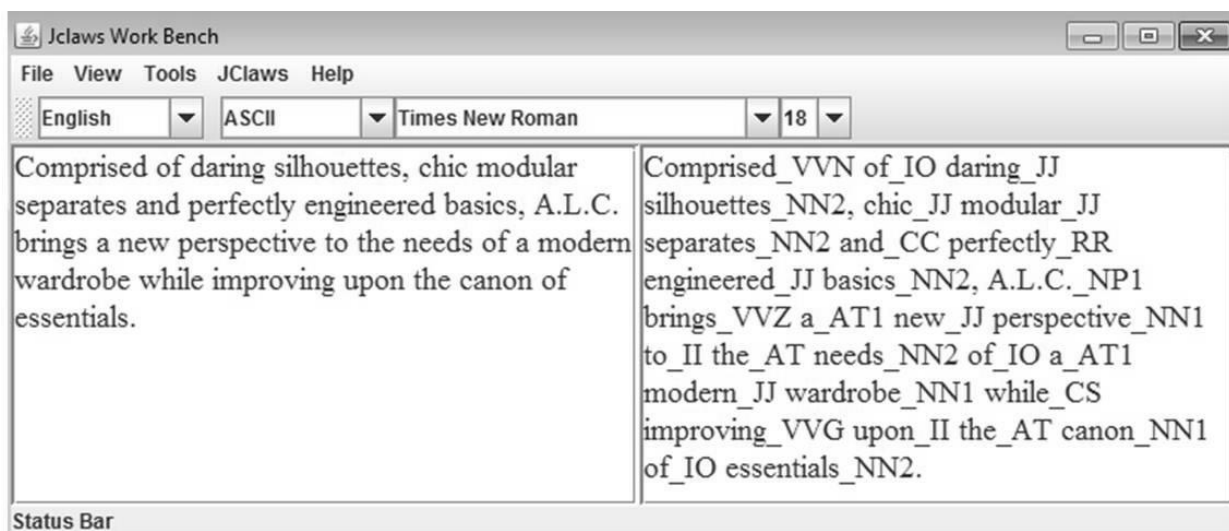
Data extraction

The text files contained in both the blog and company datasets were submitted to a series of procedures to systematically analyze adjectives as the linguistic expression of brand personality. In the field of linguistics, adjectives are a topic of considerable interest (cf. Swales and Burke 2003; Edo Marzá 2013), also because adjectives are seen as the canonical form of language through which we encode attitudes and emotions that arise from our experiences and perceptions in the world. Thus, in this study we assume that perceptions of brand personality can emerge

from 1) the adjectives used in texts produced by consumers during spontaneous online interactions to exchange opinions about brands, and 2) the adjectives found in texts produced by fashion companies through which they define the personalities of their brands.

The analytical methods and instruments were borrowed from the field of corpus linguistics which exploits software programs to perform automated analyses of relatively large quantities of electronically-stored texts. In this way, it is possible to reveal overall trends and patterning that could not be detected otherwise. In the present study, corpus instruments were used to exhaustively analyze the use of adjectives across the two datasets in various phases that will be illustrated step-by-step in the following paragraphs.

The 113 files contained in the company dataset were first run through the CLAWS4 (Constituent Likelihood Automatic Word Tagging System) part-of-speech tagger. This software automatically identifies the part-of-speech of each word and tags it accordingly. The CLAWS tagger was developed by UCREL (University Centre for Computer Corpus Research on Language) of Lancaster University (UK) and is described as having an accuracy rate of approximately 95%. For illustrative purposes, Figure 1 reproduces a screenshot of the software with a small sample of original text collected from a company website and the corresponding tagged version.



Tag legend: VVN=past participle lexical verb, IO=preposition of, JJ=general adjective, NN2=plural common noun, CC=conjunction, RR=general adverb, NP1=singular proper noun, VVZ= lexical verb, AT1=singular article, NN1=singular common noun, II=general preposition, AT=article, CS=subordinating conjunction, VVG=-ing participle of lexical verb

Figure 1. Jclaws GUI for the CLAWS tagger program (UCREL, Lancaster University, UK)

The tagged files were then processed with the text analysis software suite *WordSmith Tools* (Scott 2008) to automatically retrieve and analyze all the adjectives across the files by entering the general adjective tag (JJ) as the search item. The search results were then displayed in *concordances*, i.e., vertical lists of each retrieved instance of the search item along with some context to the right and left. The concordances can then be resorted to group together entire series of items, which greatly facilitates further elaboration and filtering of the retrieved items.

The initial JJ adjective tag search retrieved 17,347 items across the company dataset files. This raw output was then submitted to a series of editing phases to filter the results according to the research aims. First of all, because we were interested only in adjectives that companies used to convey attributes of brand image specifically related to brand personality (Keller, 1993), it was necessary to remove all neutral adjectives. In fact, there were thousands of items that were void of personality-related meanings (e.g., *other*, *prior*) and/or were not used to qualify the

company's brand. Through resorting procedures, these could be grouped together and easily deleted in large batches.

The output was then further filtered to include only adjectives with meanings that could be interpreted as facets of brand personality, referring to Aaker's (1997) scale described in the Introduction. In comparison to strictly psychological interpretations of brand personality (cf. Geuens, Weijters and De Wulf 2009; Azoulay and Kapferer 2003), Aaker's (1997) broader conceptualization seemed better suited to our naturalistic data generated from richly expressive fashion discourse. In fact, it includes dimensions such as Sophistication and Ruggedness that emerged clearly from our data. These dimensions were instead excluded by Geuens, Weijters and De Wulf (2009) as unrelated to human personality. A case in point is the adjective *feminine*, classified by Aaker (1997) as a facet of Sophistication, but rejected by Azoulay and Kapferer (2003, 152), who argue that "gender is absent from psychological scales of personality". Another approach that proved useful in the filtering process is Martin and White's (2005) *Appraisal* theory, i.e., a framework for analyzing linguistic resources used to express positive/negative attitudes or personal evaluations in relation to entities. We combined these two approaches as criteria for selecting adjectives that expressed company-defined brand personality, while removing those that were only descriptive in nature, for example, relating to color, size/dimension, shape and nationality.

To control for reliability in the process of selecting which adjectives to maintain in the data, the three authors each rated a random sample of 100 items according to whether they were expressions of brand personality or not. Inter-rater reliability was then assessed with Fleiss' kappa at .81, indicating a very high level of agreement. Finally, duplicates of adjectives retrieved from the same file of an individual brand were eliminated. After this editing process, there

remained a total of 3,957 concordances containing all the adjectives used by the 113 brands to define brand personality across the company dataset. Figure 2 reproduces a software screenshot with a sample of 25 filtered concordances from the company dataset. As can be seen, the adjectives (tagged with JJ) are displayed in the center of the alphabetically-ordered concordances, along with some co-text to the right and to the left, as well as the indication of the particular file in which it appears.

N	Concordance	File
1	iconic_JJ style_NN1 accessible_JJ to_II all_DB ,_, Rachel_NP1	g\rachel zoe.cls
2	of_IO her_PPHO1 highly_RR acclaimed_JJ ready-to-wear_JJ collection_NN1 ._.	g\vera wang.cls
3	to_TO design_VVI for_IF the_AT active_JJ luxury_JJ brand_NN1 Bogner_NN1 ._.	tim coppens.cls
4	-_ Collection_NN1 very_RG active_JJ ,_, sporty_JJ ,_, nothing_PN1 to_TO	e westwood.cls
5	their_APPGE personal_JJ aesthetic_JJ sensibilities_NN2 and_CC broader_JJR	timo weiland.cls
6	for_IF a_AT1 sophisticated_JJ aesthetic_JJ at_II an_AT1 attainable_JJ price_NN1	g\tory burch.cls
7	Hilfiger_NP1 's_GE iconic_JJ aesthetic_JJ by_II fusing_VVG traditional_JJ	mmy hilfiger.cls
8	own_DA unique_JJ aesthetic_JJ and_CC perspective_NN1 to_II the_AT	\rag & bone.cls
9	._ The_AT VPL_NP1 aesthetic_JJ remains_NN2 rooted_VVN in_II the_AT	de 3 tag\wpl.cls
10	a_AT1 D.I.Y_NP1 ._. aesthetic_JJ ._. The_AT media_NN called_VVN	e westwood.cls
11	With_IW a_AT1 modern_JJ aesthetic_JJ and_CC a_AT1 frequent_JJ play_NN1	a mccartney.cls
12	with_II33 the_AT modern_JJ aesthetic_JJ of_IO the_AT brand_NN1 -_- there_EX	ace comm b.cls
13	clean_JJ and_CC edgy_JJ aesthetic_JJ ._. I_PPIS1 love_VV0 the_AT	de 3 tag\tibi.cls
14	's_VBZ signature_NN1 aesthetic_JJ can_VM be_VBI found_VVN in_II	igal azrouël.cls
15	'_GE unique_JJ aesthetic_JJ was_VBDZ captured_VVN in_II a_AT1	g\theyskens.cls
16	romantic_JJ in_II an_AT1 airy_JJ ,_, buoyant_JJ manner_NN1 ._.	tino comm b.cls
17	to_TO capture_VVI such_DA amazing_JJ expressions_NN2 and_CC	enty8twelve.cls
18	._ Two_MC of_IO our_APPGE amazing_JJ summer_NNT1 shoes_NN2 make_VV0	aria comejo.cls
19	,_ but_CCB there_EX are_VBR amazing_JJ colors_NN2 and_CC nuances_NN2	tag\thakoon.cls
20	miss_VVI all_DB these_DD2 amazing_JJ new_JJ colors_NN2 and_CC	g\vera wang.cls
21	for_IF all_DB of_IO the_AT amazing_JJ new_JJ arrivals_NN2 !!"_ If_CS	g\rachel roy.cls
22	all_DB manner_NN1 of_IO appealing_JJ embellished_JJ looks_NN2 ._. Here_RL	tino comm b.cls
23	perception_NN1 of_IO architectural_JJ spaces_NN2 ._. At_II Hangar_NN1	berto cavalli.cls
24	,_ modern_JJ ,_, architectural_JJ ,_, minimal_JJ ,_, feminine_JJ ,_,	aria comejo.cls
25	,_ extracted_VVN from_II architectural_JJ quality_NN1 of_IO vintage_NN1	de 3 tag\wpl.cls

Figure 2. Screenshot sample from *WordSmith Tools* (Scott 2008)

By resorting the concordances to group them by the company files in which they appeared instead of alphabetically, it was then possible to compile lists of adjective types that each company used in its web-based communications. These lists were used to identify the adjectives that were also present in the blog dataset as a way to determine alignments in the perception of brand personality among fashion consumers. More specifically, each adjective type found in the individual files of the company dataset was then cross-searched in the corresponding blog files to detect any overlapping. This process was facilitated and rendered systematically through the use of another software application for text analysis, i.e., *AntConc* (Anthony 2011), which is able to perform automatic searches on multiple items within a given text file and then display them in lists. For all the overlapping adjectives retrieved, it was then necessary to verify that they were actually used by bloggers to express a personality facet of the particular brand in question. In fact, in many cases the adjectives qualified other entities mentioned in the blog post/comment. For example, the common adjective *elegant* was used by a fashion company on its website to define as aspect of brand personality (*We create elegant collections that feel right*) and by a blogger to encode his/her perception of the brand's personality (*This little black dress is so simple and elegant*). However, the same adjective was also found in the blog to express a perception that was not specifically related to a brand (*The thirties is the most elegant period*), and therefore was not of interest to our study. Fortunately, *AntConc* incorporates a useful tool for toggling between the list of retrieved adjectives and the corresponding full text files that simplified this cross-checking procedure.

The completion of the process described above allowed us to 1) identify all the adjective types that each company used to express facets of brand personality in its web-based communications,

and 2) determine which of those adjectives had also been used by the fashion bloggers to express their perceptions of the brand's personality.

Data analysis

The adjectives extracted through the process described above were then further analyzed to determine the degree of alignment in brand personality on three different levels as will be explained below.

1. Consumer-brand alignment (CBA) (RQ1)

The CBA ratio measures the degree of alignment between brand personality as defined by companies and as perceived by the bloggers who represent an online community of fashion consumers. For each brand, raw frequencies of common adjectives between the company and blog datasets were tallied and then normalized as the number of occurrences per 1000 words in each blog file. According to Meyer (2002), normalization by word count is necessary for an accurate description of variation when comparing linguistic datasets of different sizes (see the blog file word counts in the appendix). The higher the CBA ratio, the greater the degree of alignment.

2. Interbrand alignment (IBA) (RQ2)

The IBA ratio was calculated as the percentage of intersecting adjectives between brands in relation to their total number of adjectives. To measure IBA, from the lists that contained the adjectives found in the web-based communications of each company, we identified sets of intersecting adjective types across the brands. The higher the IBA ratio, the higher level of similarity in the brand personality communicated by companies.

3. Consumer-interbrand alignment (CIBA) (RQ3)

The CIBA ratio measures the similarity in personality perceived by consumers across brands. To calculate CIBA, we determined the number of adjectives within the intersecting sets described above (IBA) that were also expressed by consumers in the corresponding blog files (CBA). These frequencies were again normalized to the number of occurrences per 1000 words. This yielded the CIBA ratio which determines how many of the intersecting adjectives across brands (IBA) are also perceived by consumers. The higher the CIBA ratio, the greater the number of intersecting adjectives that form the perceived brand personality. Figure 3 shows a simulation of the CIBA ratio based on two brands.

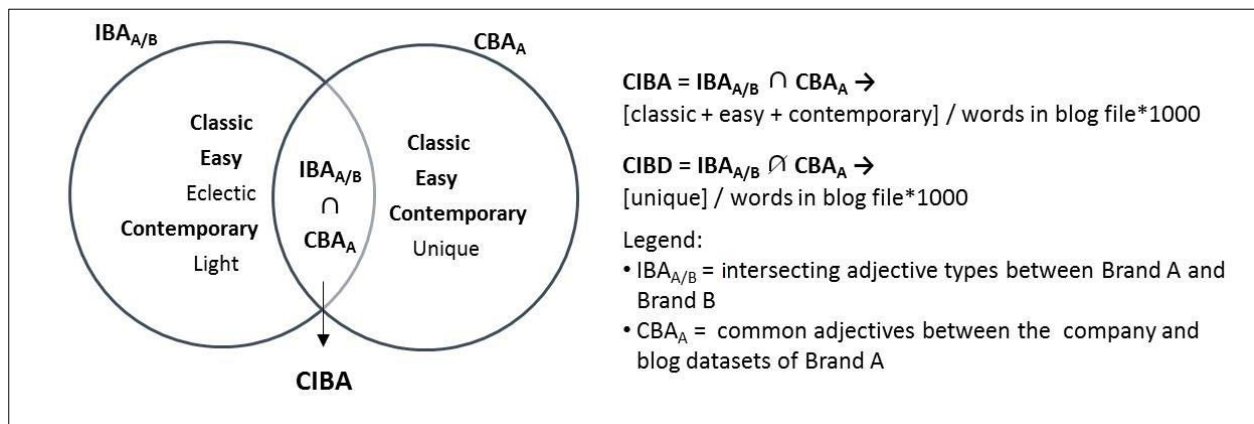


Figure 3. CIBA

As the figure shows, in addition to CIBA, we also distinguished the opposite ratio CIBD (Consumer Interbrand Disalignment), i.e., the adjectives perceived by consumers in the corresponding blog files (CBA), but that do not belong to the intersecting sets (IBA), again normalized to number of occurrences per 1000 words. This parameter was necessary to accurately interpret the power of brand personality differentiation on the basis of combined CBA, IBA and CIBA.

In order to calculate both the IBA and CIBA ratios as described above, frequencies of brand personality adjectives were processed using dataset comparison tools of SPSS statistical software. In particular, we first identified the intersecting adjectives between all pairs of brands in the sample and then compared these adjectives with those that emerged from the individual blog files, as will be explained in greater detail in the next section.

Results

CBA

Table 1 illustrates the adjectives extracted from the company dataset, the common adjectives within the corresponding blog files and the resulting CBA ratio. For reasons of space, only ten companies represented in the sample are shown.

Table 1. Extracted adjectives and CBA ratio in a sample of ten companies

Company	Adjective types extracted from website (N)	Adjectives expressed in the blog files (N)	CBA ratio
A.L.C.	chic, contemporary, daring, engineered, modern, modular, new (7)	chic, modern, new (3)	2.43
Akris	acclaimed, aesthetic, comfortable, cultivated, distinctive, exclusive, exquisite, high-end, important, inspired, modern, refined, renowned, sensual, sleek, sophisticated, state-of-the art, subtle (18)	aesthetic, modern, sophisticated (3)	0.95
Alberta Ferretti	accessible, aesthetic, affordable, architectural, bohemian, bold, breezy, bright, chic, classic, clean, colorful, contemporary, cosy, decorative, delicate, demi-couture, different, distinctive, elegant, ethereal, exclusive, fabulous, fashionable, feminine, figure-conscious, floating, fresh, functional, handmade, harmonious, high-end, high-quality, innovative, intuitive, invisible, iridescent, irresistible, lacy, light, luxury, magnificent, masculine, modern, muted, new, precious, precise, prestigious, pure, romantic, seductive, sensual, sensuous, sentimental, simple, sophisticated, special, spectacular, style-conscious, sweet, timeless, unique, urban, vibrant, whimsical (66)	accessible, architectural, bright, chic, colourful, contemporary, different, feminine/2, fresh, innovative, light, modern, new/2, pure, romantic, simple, sophisticated, special, unique, urban/2 (23)	3.17
Alexander McQueen	acclaimed, contemporary, contrasting, crafted, effortless, embellished, everyday, fine, higher-end, iconic, impeccable, light, recognisable, rich, romantic, traditional (16)	romantic, contemporary (2)	0.25
Alexis Mabille	arabesque, attractive, beautiful, captivating, celebrated, chic, cute, distinctive, edgy, elegant, feminine, festive, light, modern-day, natural, new, precious, sharp, Sicilian, sophisticated, trim, unexpected (22)	beautiful, chic/2, light, sharp, sophisticated, trim (7)	1.39
Altuzarra	aesthetic, body-conscious, amazing, beautiful, feminine, handmade, light, new, refined, strong, stunning, sumptuous, young (13)	light, new, strong (3)	0.65
Azzaro	adventurous, aesthetic, aquatic, aromatic, assertive, astounding, attractive, audacious, authentic, avant-garde, beautiful, bold, brilliant, casual, charismatic, chic, contemporary, cosy, crafted, customized, dazzling, different, distinct, distinctive, easy, elegant, emblematic, enchanting, enigmatic, essential, everyday, exceptional, fascinating, feminine, fine, frank, fresh, functional, glamorous, haute-couture, hedonistic, hesperidean, innate, Italian-style, laid-back, Latin, luxurious, masculine, Mediterranean, natural, new, noble, novel, original, ostentatious, pioneering, poetic, powerful, present-day, pure, quintessential, rare, rebellious, resplendent, revitalizing, sensual, sensuous, sexy, sharp, silky, simple, sleek, slender, smooth, soft, solemn, sparkling, spiced, spicy, suave, sublime, sun-infused, sunny, supple, timeless, trendy, ultimate, unadulterated, unforgettable, unique, vibrant, virile, wild, woody, young-at-heart (95)	chic, different, elegant/4, sleek (7)	3.45
Balenciaga	airy, antique, assertive, beautiful, bold, chic, clean, contemporary, delicate, demure, different, elegant, enchanting, essential, exquisite, feminine, forceful, fragrant, honest, iconic, impassioned, inaccessible, incisive, innate, iridescent, juvenile, military, modern, new, obscure, old-fashioned, opulent, original, peppery, precious, progressive, provocative, pure, radical, reflective, rigorous, romantic, sensual, sexy, sharp, sharp-edged, singular, soft, strong, unambiguous, unexpected, unique, unruly, urbane, whimsical, wild, youthful (57)	beautiful/2, chic, contemporary, elegant, iridescent, new/2, sexy/3, unexpected (12)	2.45
Banana Republic	accessible, amazing, beautiful, bold, colorful, comfortable, different, first-class, fresh, incredible, modern, new, perfect, timeless (14)	beautiful, new/3 (4)	1.65
Joie	aesthetic, casual, chic, contemporary, fresh, luxurious, modern, new, soft, sophisticated, timeless, unparalleled (12)	casual, contemporary, chic (3)	1.79

With reference to the adjectives extracted from the company dataset, it is important to recognize that fashion companies make very different choices in terms of how they utilize web sources to communicate brand personality. As can be seen, even across only ten companies, there was considerable variation in how many adjective types were extracted from each source of company data, ranging from 7 to 95. This was likely impacted by the quantity of text that was downloaded from the web-based communications and the number of adjectives that companies opt to use when describing brand personality.

Concerning the different types of adjectives that were extracted, many clearly correspond to Aaker's (1997) five dimensions of brand personality. For example, among the adjectives extracted for the first company A.L.C., we find *chic* (the dimension of sophistication), *daring*, *new*, *modern*, and *contemporary* (the dimension of excitement), and *engineered* and *modular* (the dimension of sophistication). In Azzaro, *authentic*, *original*, *natural*, and *unadulterated* reflect the dimension of sincerity, while in Balenciaga *forceful*, *military*, *strong*, and *wild* correspond to the dimension of ruggedness. However, our data also contain numerous adjectives that evoke the idea of *exclusiveness* (e.g., *distinct*, *distinctive*, *different*, *exclusive*, *iconic*, *inimitable*, *limited-edition*, *unique*, *recognisable*), suggesting that additional dimensions of personality might be important when dealing specifically with fashion brands.

The common adjectives that were expressed within the blog files are shown in the third column of Table 1. Some adjectives appeared more than once in the corresponding blog files, indicated by a slash followed by the number of occurrences. Because the blog files reflect the perceptions of many consumers, unlike the company files which instead represent the communication of a single entity, we considered multiple occurrences of adjectives in the blog dataset to be significant and therefore opted to include them in this parameter. The last column reports the

resulting CBA ratio (RQ1), which operationally defines the common adjectives found in the company files and the corresponding blog files, normalized by the blog word counts (see the appendix), as explained in the Methodology section. For example, if we consider the first company (A.L.C), among the seven adjectives extracted from its web communications (*chic, contemporary, daring, engineered, modern, modular* and *new*), three (*chic, modern* and *new*) were also expressed by consumers in their blog posts and comments that totaled 1235 words, which corresponds to a CBA ratio of 2.43. Across the sample, the CBA ratios ranged from a minimum of 0.13 to maximum of 5.16, which can be interpreted as follows: the higher the CBA, the greater the capacity of the company to communicate its brand. More specifically, consumers tend to decodify brand personality communications as companies codify them. Thus, consumers and companies share the same language and, in turn, the underlying meanings (Pickering and Garrods 2004).

Among the 113 brands, in 22 cases there were no common adjectives. These were eliminated from the sample and, as a consequence, all subsequent analyses refer to the remaining 91 brands. The calculation of the CBA ratios across the sample enabled us to perform a comparative analysis to measure differences in terms of the degree of alignment in consumer perceptions of brand personality. This can shed light on the differentiating power of brand personality when combined with the IBA and CIBA ratios which will be discussed in detail below.

IBA

We calculated IBA by comparing each of the remaining 91 brands under analysis in pairs (91 x 91= 8241 ratios). For reasons of space, we show a sample of the IBA ratios for 15 brand pairs in Table 2.

Table 2. Sample of IBA ratios in 15 pairs of brands

Brands	A.L.C.	Calvin Klein	Christian Lacroix	Gucci	Hardy Amies	Henrik Vibskov	Jason Wu	John Varvatos	Joie	Olivier Theyskens	Pringles of Scotland	Rebecca Taylor	Steven Alan	Vera Wang	Yigal Azrouel
A.L.C.	50.00 (0.00)	7.69 (0.18)	20.00 (0.38)	4.00 (0.53)	15.79 (0.18)	10.00 (0.19)	16.00 (0.34)	6.67 (0.02)	21.05 (0.24)	16.67 (0.16)	8.57 (0.32)	13.64 (0.23)	14.29 (0.00)	7.41 (0.19)	14.28 (0.14)
Calvin Klein	7.69 (0.18)	50.00 (0.00)	4.55 (0.28)	10.71 (0.50)	12.90 (0.12)	4.55 (0.28)	10.81 (0.01)	7.41 (0.14)	22.58 (0.21)	13.33 (0.15)	14.89 (0.12)	8.82 (0.04)	7.69 (0.18)	15.38 (0.02)	9.09 (0.05)
Christian Lacroix	20.00 (0.38)	4.55 (0.61)	50.00 (0.00)	3.13 (0.97)	20.00 (0.75)	33.33 (0.00)	14.29 (0.83)	18.18 (0.42)	13.33 (0.50)	21.43 (0.73)	6.45 (0.60)	16.67 (0.80)	20.00 (0.38)	4.35 (0.28)	17.65 (0.78)
Gucci	4.00 (0.53)	10.71 (0.61)	3.13 (0.97)	50.00 (0.00)	6.67 (0.51)	3.13 (0.97)	10.81 (0.53)	3.96 (0.46)	9.52 (0.73)	5.77 (0.48)	18.18 (0.55)	7.41 0.45	3.00 0.40	10.62 0.47	8.41 0.54
Hardy Amies	15.79 (0.18)	12.90 (0.04)	20.00 (0.75)	6.67 (0.51)	50.00 (0.00)	13.33 (0.50)	16.67 (0.13)	20.00 (0.17)	16.67 (0.00)	26.09 (0.05)	12.50 (0.24)	18.52 (0.08)	15.79 (0.18)	9.38 (0.10)	23.08 (0.07)
Henrik Vibskov	10.00 (0.19)	4.55 (0.61)	33.33 (0.03)	3.13 (0.97)	13.33 (0.50)	50.00 (0.00)	9.52 (0.55)	18.18 (0.42)	6.67 (0.25)	14.29 (0.48)	3.23 (0.30)	11.11 (0.53)	20.00 (0.38)	4.35 (0.28)	11.76 (0.52)
Jason Wu	16.00 (0.34)	10.81 (0.01)	14.29 (0.83)	10.81 (0.53)	16.67 (0.13)	9.52 (0.55)	50.00 (0.00)	7.69 (0.13)	20.00 (0.16)	17.24 (0.17)	15.22 (0.13)	15.15 (0.05)	20.00 (0.26)	15.79 (0.033)	15.63 (0.07)
John Varvatos	6.67 (0.02)	7.41 (0.14)	18.18 (0.42)	3.96 (0.46)	20.00 (0.17)	18.18 (0.42)	7.69 (0.13)	50.00 (0.00)	5.00 (0.04)	10.53 (0.07)	8.33 (0.27)	8.70 (0.12)	13.33 (0.04)	3.57 (0.08)	9.09 (0.10)
Joie	21.05 (0.24)	22.58 (0.20)	13.33 (0.50)	9.52 (0.73)	16.67 (0.00)	6.67 (0.25)	20.00 (0.16)	5.00 (0.04)	50.00 (0.00)	17.39 (0.03)	17.50 (0.33)	14.81 (0.07)	15.79 (0.18)	18.75 (0.20)	15.38 (0.04)
Olivier Theyskens	16.67 (0.16)	13.33 (0.03)	21.43 (0.73)	5.77 (0.48)	26.09 (0.05)	14.29 (0.48)	17.24 (0.17)	10.53 (0.07)	17.39 (0.03)	50.00 (0.00)	10.26 (0.22)	15.38 (0.10)	16.67 (0.16)	9.68 (0.12)	16.00 (0.07)
Pringles of Scotland	8.57 (0.32)	14.89 (0.30)	6.45 (0.60)	18.18 (0.55)	12.50 (0.24)	3.23 (0.30)	15.22 (0.13)	8.33 (0.27)	17.50 (0.33)	10.26 (0.22)	50.00 (0.00)	16.28 (0.22)	5.71 (0.21)	16.67 (0.11)	11.90 (0.17)
Rebecca Taylor	13.64 (0.23)	8.82 (0.02)	16.67 (0.80)	7.41 (0.45)	18.52 (0.08)	11.11 (0.53)	15.15 (0.05)	8.70 (0.12)	14.81 (0.07)	15.38 (0.10)	16.28 (0.22)	50.00 (0.00)	13.64 (0.23)	11.43 (0.07)	24.14 (0.03)
Steven Alan	14.29 (0.00)	7.69 (0.18)	20.00 (0.38)	3.00 (0.40)	15.79 (0.18)	20.00 (0.38)	20.00 (0.26)	13.33 (0.04)	15.79 (0.18)	16.67 (0.16)	5.71 (0.21)	13.64 (0.23)	50.00 (0.00)	7.41 (0.19)	14.29 (0.21)
Vera Wang	7.41 (0.19)	15.38 (0.22)	4.35 (0.28)	10.62 (0.47)	9.38 (0.10)	4.35 (0.28)	15.79 (0.03)	3.57 (0.08)	18.75 (0.20)	9.68 (0.12)	16.67 (0.11)	11.43 (0.07)	7.41 (0.19)	50.00 (0.00)	8.82 (0.064)
Yigal Azrouel	14.29 (0.21)	9.09 (0.02)	17.65 (0.79)	8.41 (0.55)	23.08 (0.07)	11.76 (0.52)	15.63 (0.07)	9.09 (0.11)	15.38 (0.05)	16.00 (0.08)	11.90 (0.18)	24.14 (0.03)	14.29 (0.21)	8.82 (0.06)	50.00 (0.00)

The maximum IBA ratio (percentage of intersecting adjectives) is shown in diagonal across the matrix emerges when the same brand is compared with itself and thus all of the adjectives are intersecting. The resulting IBA ratios ranged from 0 to 37.5%, allowing us to establish three levels of IBA as follows: a) low: <12.5% (81.15% of pairs); b) medium: 12.5-25%; (8.56% of pairs); and c) high: 25-37.5% (0.07% of pairs). The values in parentheses that appear under IBA correspond to Δ IBA, i.e., the difference (in absolute value) between the number of intersecting adjectives in relation to the total number of adjectives for each brand. Low differences associated with high IBA values indicate situations of high but also balanced similarity in how the two companies communicate brand personality (RQ2): the intersecting adjectives describe in the same proportion the personality of the individual brands.

As can be seen from the data in Table 2, the IBA ratio of the pair A.L.C. - Joie is 21.05%. A.L.C. and Joie share 4 adjective types (*chic, contemporary, modern, new*) out of a total of 19 (7 for A.L.C and 12 for Joie). The Δ IBA is 0.24 as the absolute difference between 0.57 (4/7) and 0.33 (4/12). In the sample shown in the table, medium to high IBA ratios (shown in bold) emerged most frequently for Christian Lacroix and Hardy Amies when they were compared with other brands. In particular, Christian Lacroix describes its personality with adjectives that intersect with those used by six other brands at the following levels: Henrik Vibskov (33.33), Olivier Theyskens (21.43), A.L.C. (20), Hardy Amies (20), Steven Alan (20) and John Varvatos (18.18). The similarity of Christian Lacroix with Henrik Vibskov, A.L.C. and Steven Alan is also reciprocally proportional; in fact, the Δ IBA is lower than Olivier Theyskens and Hardy Amies. At the same time, Hardy Amies has intersecting adjectives with five other brands: Christian Lacroix (20), John Varvatos (20), Rebecca Taylor (18.52), Yigal Azrouel (23.08) and Olivier Theyskens (26.09). Among these pairs, the similarity between Hardy Amies and Olivier

Thyskens, Yigal Azrouel and Rebecca Taylor is also stronger as indicated by the low ΔIBA associated with each pair. Joie, Henrik Vibskov and John Varvatos are other interesting cases to point out. Each of these brands has a high level of IBA when compared to other brands as illustrated by the data shown in bold.

CIBA

Tables 3 and 4 illustrate CIBA ratios for 38 pairs of brands with IBA ratios of >18 . We opted to focus on these cases that represent medium-high similarity between brands in order to determine whether this similarity is also perceived by consumers (RQ3). The number 38 corresponds to half the pairs of brands with IBA ratios >18 which actually comprised 76 symmetrical pairs (e.g., Gucci-Calvin Klein and Calvin Klein-Gucci) that yielded the same ratios. Thus, we eliminated the duplicates and remained with 38 pairs of brands for the analysis of CIBA. For each pair, the tables show $IBA/\Delta IBA$, $CIBA/\Delta CIBA$, $CIBD/\Delta CIBD$, and $CBA/\Delta CBA$ (the latter will serve for the discussion in the next section).

Table 3. IBA/ Δ IBA, CIBA/ Δ CIBA, CIBD/ Δ CIBD, and CBA/ Δ CBA of pairs with IBA ratios of >18

	Brand A	Brand B	IBA_{A/B}	Δ IBA	CIBA_A	CIBA_B	ΔCIBA_{A-B}	CIBD_A	CIBD_B	ΔCIBD_{A-B}	CBA_A	CBA_B	Δ CBA_{A-B}
1	A.L.C.	Joie	21.05	0.24	2.43	1.19	1.24	0.00	0.61	-0.61	2.43	1.80	0.63
2	A. Ferretti	Dolce & Gabb.	19.26	0.02	0.96	1.06	-0.10	2.21	1.34	0.87	3.17	2.40	0.77
3	A. Ferretti	Valentino	18.05	0.06	0.82	0.94	-0.12	2.35	1.33	1.02	3.17	2.27	0.90
4	Banana Repub.	Matohu	28.57	0.29	1.65	0.00	1.65	0.00	0.29	-0.29	1.65	0.29	1.35
5	Banana Repub.	Vera Wang	21.21	0.18	1.65	0.31	1.34	0.00	0.31	-0.31	1.65	0.62	1.03
6	Calvin Klein	Joie	22.58	0.21	1.09	0.00	1.09	0.96	1.80	-0.84	2.05	1.80	0.25
7	Calvin Klein	N. Rodriguez	18.91	0.25	1.09	0.80	0.29	0.96	0.13	0.83	2.05	0.93	1.12
8	C. Herrera	Jason Wu	18.70	0.10	0.37	0.35	0.02	0.00	1.32	-1.32	0.37	1.67	-1.30
9	C. Ronson	O. Ceremony	19.30	0.13	0.25	0.07	0.18	0.52	0.29	0.23	0.77	0.36	0.41
10	C. Lacroix	O. Theyskens	21.43	0.73	0.36	0.35	0.01	0.00	0.27	-0.27	0.36	0.62	-0.26
11	C. Lacroix	J. Varvatos	18.18	0.42	0.36	1.07	-0.72	0.00	0.36	-0.36	0.36	1.43	-1.07
12	C. Lacroix	H. Amies	20.00	0.75	0.35	0.42	-0.07	0.00	0.83	-0.83	0.35	1.25	-0.90
13	C. Lacroix	A.L.C.	20.00	0.38	0.35	0.80	-0.45	0.00	1.63	-1.63	0.35	2.43	-2.08
14	C. Lacroix	H. Vibskov	33.30	0.00	0.36	1.09	-0.73	0.00	0.01	-0.01	0.36	1.10	-0.74
15	C. Lacroix	Steven Alan	20.00	0.38	0.36	0.28	0.08	0.00	0.29	-0.29	0.36	0.57	-0.21
16	Dolce & Gabb.	G. Armani	18.61	0.36	0.27	0.62	-0.35	2.13	1.93	0.20	2.40	2.55	-0.15
17	G. Armani	Gucci	18.03	0.21	0.99	0.25	0.74	1.55	0.26	1.29	2.54	0.51	2.03
18	Gucci	Pr. of Scot.	18.18	0.55	0.25	0.72	-0.47	0.26	0.71	-0.45	0.51	1.43	-0.92

Table 4. IBA/ Δ IBA, CIBA/ Δ CIBA, CIBD/ Δ CIBD, and CBA/ Δ CBA of pairs with IBA ratios of >18

	Brand A	Brand B	IBA_{A/B}	Δ IBA	CIBA_A	CIBA_B	ΔCIBA_{A-B}	CIBD_A	CIBD_B	ΔCIBD_{A-B}	CBA_A	CBA_B	Δ CBA_{A-B}
19	H. Amies	R. Taylor	18.52	0.08	0.41	2.09	-1.68	0.84	0.84	0.00	1.25	2.93	-1.68
20	H. Amies	J. Varvatos	20.00	0.17	1.25	1.07	0.18	0.00	0.36	-0.36	1.25	1.43	-0.18
21	H. Amies	O. Theyskens	26.09	0.05	0.41	0.44	-0.03	0.84	0.18	0.66	1.25	0.62	0.63
22	H. Amies	Y. Azrouel	23.08	0.07	0.41	1.17	-0.76	0.84	0.39	0.45	1.25	1.56	-0.31
23	H. Vibskov	Steven Alan	20.00	0.38	1.09	0.28	0.81	0.01	0.29	-0.28	1.10	0.57	0.53
24	H. Vibskov	J. Varvatos	18.18	0.41	1.09	1.07	0.02	0.01	0.36	-0.35	1.10	1.43	-0.33
25	J. Wu	Joie	20.00	0.16	0.97	1.19	-0.22	0.68	0.61	0.07	1.68	1.80	-0.12
26	J. Wu	T. London	20.00	0.08	0.97	0.51	0.46	0.71	3.04	-2.33	1.68	3.55	-1.87
27	Joie	Vera Wang	18.75	0.20	0.00	0.31	-0.31	1.80	0.31	1.49	1.80	0.62	1.18
28	Joseph	Pr. of Scot.	19.01	0.13	0.00	0.60	-0.60	1.86	0.83	1.03	1.86	1.43	0.43
29	Matohu	Felder Felder	20.00	0.05	0.00	0.95	-0.95	0.29	0.95	-0.66	0.29	1.90	-1.61
30	Matohu	Jen Kao	23.10	0.23	0.29	0.31	-0.02	0.00	0.00	0.00	0.29	0.31	-0.02
31	O. Ceremony	R. Krakoff	20.00	0.10	0.14	0.84	-0.70	0.21	0.42	-0.21	0.35	1.26	-0.91
32	Peter Som	Tory Burch	18.60	0.01	0.26	1.05	-0.79	0.14	0.00	0.14	0.40	1.05	-0.65
33	Prada	Pr. of Scot.	18.20	0.00	0.22	0.60	-0.38	0.34	0.83	-0.49	0.56	1.43	-0.87
34	Pr. of Scot.	R. Krakoff	22.22	0.23	0.59	1.04	-0.45	0.84	0.21	0.63	1.43	1.25	0.18
35	P. Schouler	Y. Azrouel	18.18	0.21	0.00	0.78	-0.78	0.18	0.78	-0.6	0.18	1.56	-1.38
36	R. Taylor	Y. Azrouel	24.14	0.03	2.09	1.17	0.92	0.84	0.39	0.45	2.93	1.56	1.37
37	R. Krakoff	Suno	21.40	0.20	0.42	0.22	0.20	0.84	0.22	0.62	1.26	0.44	0.82
38	R. Krakoff	B. Bui	20.00	0.28	0.84	0.87	-0.03	0.42	0.01	0.41	1.26	0.88	0.38

We will first focus on CIBA, using as an example a comparison of A.L.C and Joie. $CIBA_{ALC}$ is 2.43, which is the result of the three (*chic, modern, new*) intersecting adjectives ($IBA_{ALC/J}$) that are also expressed by consumers in the A.L.C blog file (CBA_{ALC}) and normalized to occurrences per 1000 words in relation to the number of words in the A.L.C. blog file (1235). Likewise, $CIBA_J$ is the result of the two (*chic, contemporary*) intersecting adjectives ($IBA_{ALC/J}$) also expressed by consumers in the Joie blog file (CBA_{ALC}), again normalized to occurrences per 1000 words in relation to the number of words in the Joie blog file (1669). The emerging $\Delta CIBA$ is 1.24. Comparing CIBA ratios for each pair, we can identify three different situations:

1. $CIBA_A > CIBA_B$: In this situation, the intersecting adjectives between Brand A and B ($IBA_{A/B}$) contribute to consumer-perceived personality more for A than for B. More specifically, for every 1000 words in the corresponding blog files, the number of intersecting adjectives used by consumers when referring to A exceeds those used to refer to B. Thus, the perceived similarity is higher for A than for B. Several cases illustrate this situation: A.L.C vs. Joie ($\Delta CIBA = 1.24$), Banana Republic vs. Matohu ($\Delta CIBA = 1.65$), Calvin Klein vs. Joie ($\Delta CIBA = 1.09$) and Giorgio Armani vs. Gucci ($\Delta CIBA = 0.74$). In each of these, the value of $CIBA_A$ is more than twice that of $CIBA_B$, which results in relatively high positive values for $\Delta CIBA_{A-B}$.
2. $CIBA_B > CIBA_A$: This represents the opposite situation in which the intersecting adjectives between two brands contribute to consumer-perceived personality more for Brand B than for Brand A. In particular, for every 1000 words in the blog files, there are more intersecting adjectives associated with B than with A, meaning that the perceived similarity is higher for B than for A. From this perspective, we can see that intersecting adjectives characterize to a greater degree consumers' perceptions of Rebecca Taylor vs. Hardy

- Amies ($\Delta\text{CIBA} = -1.68$), Tory Burch vs. Peter Som ($\Delta\text{CIBA} = -0.79$), Henrik Vibskov vs. Christian Lacroix ($\Delta\text{CIBA} = -0.73$). In these cases, the CIBA_B value is more than twice that of CIBA_A , which results in relatively high negative values for ΔCIBA_{A-B} .
3. $\text{CIBA}_A \approx \text{CIBA}_B$: In this situation, the intersecting adjectives between two brands are used by consumers to refer to their brand personalities in a similar way. Thus, for every 1000 words in the blog files, the intersecting adjectives used by consumers for Brand A and Brand B tend to be the same. This situation of equilibrium characterizes various pairs of brands: Christian Lacroix-Olivier Theyskens ($\Delta\text{CIBA} = 0.01$), Matohu-Jen Kao ($\Delta\text{CIBA} = -0.02$), Henrik Vibskov-John Varvatos ($\Delta\text{CIBA} = 0.02$), Hardy Amies-Olivier Theyskens ($\Delta\text{CIBA} = -0.03$), Alberta Ferretti-Dolce & Gabbana ($\Delta\text{CIBA} = -0.10$). In all of them, ΔCIBA_{A-B} has a value of close to zero.

Now we complete the analysis of our results by explaining CIBD, the opposite ratio of CIBA. The CIBD ratio will be particularly useful to enrich the discussion in the next section. We can interpret the CIBD values in Tables 3 and 4 by comparing the same two brands as an example: A.L.C.-Joie. The CIBD of A.L.C is 0, while the CIBD of Joie is 0.61. CIBD_{ALC} is the result of the adjectives expressed by consumers in the A.L.C. blog file (CBA_{ALC}), but do not belong to the intersecting sets ($\text{IBA}_{\text{ALC}/J}$), which in this case amounts to 0. CIBD_J is the result of the only adjective (*casual*) that is expressed by consumers in the Joie blog file (CBA_{ALC}), but does not belong to the intersecting sets, normalized to occurrences per 1000 words in relation to the number of words in the Joie blog file (1669). The ΔCIBD is thus -0.61. The main results for CIBD can be grouped according to the three following cases:

1. $CIBD_A > CIBD_B$: The non-intersecting adjectives form the perceived personality of Brand A more than Brand B. For example, from Tables 3 and 4 we can see that they form the perception of Giorgio Armani more than Gucci ($\Delta CIBD = 1.29$), Joie more than Vera Wang ($\Delta CIBD = 1.49$), and Reed Krakoff more than Suno ($\Delta CIBD = 0.62$). In each of these cases, the $CIBD_A$ value is more than twice the value of $CIBD_B$ and there are relatively high positive values of $\Delta CIBD_{(A-B)}$.
2. $CIBD_A < CIBD_B$: The non-intersecting adjectives characterize the perceived personality of Brand B more than Brand A. As can be seen from Table 4, they characterize the perception of Pringles of Scotland more than Prada ($\Delta CIBD = -0.49$), Temperley London more than Jason Wu ($\Delta CIBD = -2.33$), and Steven Alan more than Henrik Vibskov ($\Delta CIBD = -0.28$). In each of these cases, the $CIBD_B$ value is equal to more than twice the value of $CIBD_A$ and there are relatively high negative values of $\Delta CIBD$.
3. $CIBD_A \approx CIBD_B$: The non-intersecting adjectives form the perception that consumers have of Brands A and B in a similar way. This balanced situation is not very frequent, but can be found in the pair Jason Wu-Joie seen in Table 4 ($\Delta CIBD = 0.07$).

Discussion

When comparing IBA and CIBA ratios, we discover situations in which brands are similar, but are not perceived as such by consumers. This can happen when pairs with a high IBA ratio are accompanied by a high $\Delta CIBA$, which means that the intersecting adjectives form the perceived personality of one brand more than the other. We can also integrate the analysis of IBA and CIBA with the previously identified CBA values. More specifically, we can interpret pairs

where, for example, IBA and $\Delta CIBA$ are high and CBA of one brand is higher (or lower) than CBA of another brand. To do so, we have to relate IBA and $\Delta CIBA$ values to the differential value of CBA, i.e., ΔCBA (see Tables 3 and 4) broken down into its constituent parts $\Delta CIBA$ and $\Delta CIBD$. Now referring to all the data in Tables 3 and 4, we can identify several interesting cases. Each reflects an expression of the differentiating power of brand personality that can emerge from online communities, as will be discussed in detail below.

1. IBA is high, but the intersecting adjectives form the perceived personality of Brand A more than Brand B ($CIBA_A > CIBA_B$) and $CBA_A > CBA_B$. In this case, if the additional adjectives recognized for A are intersecting adjectives (positive $\Delta CIBA_{A-B}$), and are more than the additional non-intersecting adjectives recognized for B (negative $\Delta CIBD_{A-B}$), i.e., $\Delta CIBA_{A-B} > |\Delta CIBD_{A-B}|$, then we can infer that A is better able to communicate the intersecting adjectives than B is able to communicate non-intersecting ones. Thus, the differentiating power of A is greater than B and it is based on a perceived differentiation (Keller 2012) of adjectives common to A and B. The perceived differentiation of A produces $CBA_A > CBA_B$ and results in $CIBA_A > CIBA_B$ even with a high IBA value. Many pairs shown in Tables 3 and 4 are examples of this first case. For example, in Table 3, Banana Republic and Matohu have a high IBA (28.57), but the perceived similarity in Banana Republic is higher than Matohu. Since $CBA_{BR} > CBA_M$ with $\Delta CIBA_{BR-M} > |\Delta CIBD_{BR-M}|$, we can deduce that Banana Republic seems more able than in Matohu to communicate intersecting adjectives. Other pairs that can be interpreted in the same way are A.L.C-Joie, Calvin Klein-Joie and Banana Republic-Vera Wang. A parallel situation occurs when IBA is high, $CIBA_B > CIBA_A$ and $CBA_B > CBA_A$. If $|\Delta CIBA_{A-B}| > \Delta CIBD_{A-B}$,

B generates a perceived differentiation of the non-intersecting adjectives. This occurs with the pairs Hardy Amies-Rebecca Taylor, Peter Som-Tory Burch, and Jason Wu-Joie.

2. IBA is high, $CIBA_A > CIBA_B$, but $CBA_B > CBA_A$. In this case, even if the intersecting adjectives form the perceived personality of Brand A more than Brand B (as in the first case, i.e., $CIBA_A > CIBA_B$), the additional intersecting adjectives recognized for A (positive $\Delta CIBA_{A-B}$) are fewer than the additional non-intersecting adjectives recognized for B (negative $\Delta CIBD_{A-B}$), i.e., $\Delta CIBA_{A-B} < |\Delta CIBD_{A-B}|$. We can infer that B can communicate non-intersecting adjectives more than A is able to communicate intersecting adjectives. In this case, the differentiating power of B is greater than A, and it is based on an effective differentiation (Keller 2012) of brand personality. Thus, the effective differentiation of B generates $CBA_B > CBA_A$ and results in $CIBD_A < CIBD_B$, and therefore $CIBA_A > CIBA_B$ even with a high IBA value. An example of this situation can be seen in the pair Jason Wu-Temperley London. The IBA value is high (20), but the perceived similarity is higher in Jason Wu than in Temperley London (Table 4). Even if $CIBA_{JW} > CIBA_{TL}$, $\Delta CIBA_{JW-TL} < |\Delta CIBD_{JW-TL}|$, indicating that Temperley London seems better able to communicate non-intersecting adjectives than Jason Wu can communicate intersecting adjectives. In this way, Temperley London achieves an effective differentiation. Other cases are Hardy Amies-John Varvatos, and Christian Lacroix-Steven Alan. A parallel situation occurs when IBA is high, $CIBA_B > CIBA_A$, but $CBA_A > CBA_B$. If $|\Delta CIBA_{A-B}| < \Delta CIBD_{A-B}$, then A generates an effective differentiation of brand personality. Cases of this type are seen in the pairs Joie-Vera Wang, Joseph-Pringles of Scotland, and Pringles of Scotland-Reed Krakoff.

3. As in (1), IBA is high, $CIBA_A > CIBA_B$ and $CBA_A > CBA_B$. However, in this case the additional adjectives recognized for A are both intersecting and non-intersecting. This can lead to two situations. The first is when the additional intersecting adjectives are more than the additional non-intersecting adjectives, i.e., $\Delta CIBA_{A-B} > \Delta CIBD_{A-B}$. This means that A is able to communicate the intersecting adjectives more than the non-intersecting ones. Here perceived differentiation is stronger than effective differentiation, and thus results in $CIBA_A > CIBA_B$ even with a high IBA. An example here is the pair Rebecca Taylor-Yigal Azrouel (Table 4). The second situation is when the non-intersecting additional adjectives are more than the additional intersecting ones, i.e., $\Delta CIBA_{A-B} < \Delta CIBD_{A-B}$. We can interpret this to indicate that A can communicate the non-intersecting adjectives more than the intersecting ones. In this case, effective differentiation is stronger than perceived differentiation. Thus, the effective differentiation results in $CIBD_A > CIBD_B$ and particularly in the combined $CIBA_A > CIBA_B$. Examples of this situation are Giorgio Armani-Gucci and Calvin Klein-Narciso Rodriguez (Table 3). Parallel situations occur when IBA is high, $CIBA_B > CIBA_A$ and $CBA_B > CBA_A$. The additional adjectives recognized for B are both intersecting and non-intersecting. If $|\Delta CIBA_{A-B}| > |\Delta CIBD_{A-B}|$, perceived differentiation generated by B is stronger than effective differentiation. Pairs of this type are Gucci-Pringles of Scotland (Table 3) and Opening Ceremony-Reed Krakoff (Table 4). In contrast, the effective differentiation of B is stronger than the perceptive differentiation if $|\Delta CIBA_{A-B}| < |\Delta CIBD_{A-B}|$, as in the pairs Prada-Pringles of Scotland and Christian Lacroix-A.L.C., for example.

To conclude, the cases in Tables 3 and 4 in which CIBA has a value of approximately zero correspond to pairs whose personalities are perceived as similar for intersecting adjectives. In these situations, ΔCBA values depend on $\Delta CIBD$ values, and thus on the capacity to generate an effective differentiation. All three situations that we have discussed above show how the combination of ratios can diagnose competitive advantage in relation to brand personality, i.e., whether it is based on perceived differentiation or effective differentiation.

Managerial implications and conclusions

The methodology that we have proposed exploits online consumer conversations about fashion brands to produce a series of ratios that respond to the three research questions posed at the outset: how to measure the degree of alignment between company-defined and consumer-perceived brand personality (RQ1), as well as similarities between brands (RQ2) and consumer perceived similarity across brands (RQ3). When combined, these ratios can become effective tools to reveal the differentiating power of brand personality as it emerges from consumer perceptions.

We believe that our methodology reflects an innovative approach to acquire insights into brand personality on several different levels. First of all, brand personality is investigated through the analysis of authentic linguistic data produced by online communities of consumers, thus exploring the concept in digital market places rather than physical ones. For this reason, the methodology does not rely on traditional techniques of market research (both quantitative and qualitative) that engage consumers directly (cf. Aaker 1997, Helgeson and Supphellen 2004), but is instead based on spontaneous and naturalistic conversations that consumers have about brands

when interacting online. In addition, to elaborate and analyze the data collected from online sources, we used techniques that originate from the field of corpus linguistics, implementing various types of text analysis software to extract and perform an exhaustive and highly-nuanced analysis of the linguistic expression of brand personality. Thus, this approach goes beyond other studies that have also used automated procedures to explore online consumer interactions, but are limited to less finely-tuned types of linguistic analysis, for example, semantic networks to explore market structure (Netzer et al. 2012) or positive/negative polarity in the context of sentiment analysis (Lee and Bradlow 2011). In this way, we were able to also expand considerably on previous qualitatively-oriented research on consumers in digital settings (cf. Kozinets 1999, 2002, 2010). Thus, the methodology reflects an innovative interdisciplinary approach through the integration of competences that encompass both management and linguistics.

Our methodology has further enabled us to broaden the analytical perspective beyond the consumer's perception of brand personality to also investigate aspects of personality that a company attributes to its brand through its own web-based communications, as well as the relationship between the two. In fact, the ratio of CBA and its further articulation in CIBA and CIBD are not built on only what consumers perceive about the brand (cf. Maehle and Supphellen 2011; Maehle et al. 2011), but as suggested by Malär et al. (2012), also on the combination between the perceived brand personality and the communicated brand personality. The combination can also be investigated across brands that are competitive. In other words, the methodology we propose achieves a *competitive-based* analysis of brand personality. If competitive brands calculate and combine IBA and CIBA values in relation to CBA, they can in

fact measure and evaluate brand personality differentiation as it emerges from online consumer perceptions.

In terms of managerial implications, the methodology that we have developed undoubtedly offers some interesting possibilities. On a general level, a ‘disalignment’ between what companies communicate on their websites and how this information is discussed among users not only exists, but may be quite significant and widespread (cf. Calabrese and Morriello 2014). In fact, we know that the digital world presents many opportunities for today’s managers, but also carries risks, one of which is a loss of control over what consumers are saying about their brands. This may lead to situations characterized by ‘viral’ Internet conversations among consumers that can have negative repercussions on how a brand is perceived. From this perspective, it is important to have analytical instruments that are able to verify gaps between what a brand aims to be and how it is actually perceived on the web. For brand managers, the awareness and understanding of this type of gap is a fundamental prerequisite for undertaking brand strategies that are able to effectively reduce it, and thus increase customer-based brand equity. As a consequence, they can decide to implement a “brand reinforcement strategy” (Keller 2003, 634), based on redefined marketing actions that strengthen the existing traits of brand personality, or a “revitalization brand strategy” (Keller 2003, 651) that instead refreshes existing traits or even identifies new ones, thereby generating changes in competitive positioning. Our methodology helps to achieve these strategic decisions because it offers managers the possibility to perform a comparative analysis of brand personality perception with respect to their competitors. This would help them to overcome one of most significant challenges that companies face today that is not so much which of the two strategies to follow, but how to successfully create a bridge between them by combining *perceived differentiation* and *effective*

differentiation (Keller 2003), i.e., how to make distinctive what is shared with competitors. In doing so, companies can renew their brand, but without losing sight of what it has always been. Thus, they can preserve the personality of the brand along a continuum of identity, which would clearly represent a competitive advantage (Beverland, Lindgreen, and Vink 2008).

The methodology that we present is relatively user-friendly and can be adapted by companies to perform brand personality analysis in an on-going and non-invasive way, according to their own needs and depending on the type and quantity of data to be elaborated. In fact, the brand personality analyst will need to be rigorously selective in compiling data, especially in terms of choosing among the multitude of online resources that are available. The constantly growing number of digital platforms (e.g., blogs, forums, social media) can certainly favor the quantity of data that can be collected, but can also work to the detriment of data quality (Alavi and Leidner 2001).

Alongside the numerous benefits discussed above, we must mention some limitations of our study that need to be addressed in further research. First of all, our source of data was limited to a single digital environment, albeit a high-ranking and multi-authored fashion blog, and did not explore brand personality perceptions that may emerge in other spontaneous online communities (e.g., other blogs, forums). It would be worthwhile to integrate the data with such resources as a way to offer additional insights. Moreover, as spontaneous online communities, blogs and forums do not provide access to information related to consumer profiles in order to analyze consumer segmentation. To address this issue, it would be necessary to apply our approach to an online research community (Comley 2008), where socio-demographic information is openly declared.

It is also important to recognize that brand personality can emerge through other semiotic resources and modes (e.g., images, films, sounds, colors) beyond the verbal message. Clearly, other types of analytical frameworks and tools would be necessary to understand more about these aspects as a way to complement the type of language-oriented research undertaken here. The analysis could further be integrated with questionnaires sent to companies or interviews with brand managers in relation to intended brand personality. This would also serve to validate the attributes of brand personality derived from their web communications.

Another aspect that is beyond the scope of the present study, but would nonetheless be interesting to explore is the application of the methodology to groups of competitive brands, rather than only pairs of brands. Our analysis focused on pairs that share a relatively high number of brand personality adjectives and can perhaps be seen as competitors. However, for a better understanding of this aspect our experimental results need to be integrated with data provided by companies concerning brand competitive positioning. This could help determine whether the brands in question are effectively competitors, in which case the possibility to compare brand perceptions using our methodology would assume strategic importance. It would also be useful to investigate the potential relationship between the results that emerged from the combination of the ratios that we have proposed, company structural data (e.g., nationality, evolution of ownership, brand and product portfolio) and brand performance indicators. Finally, these ratios could be correlated to the number of different adjectives types companies use to define brand personality in online communications, which could reflect a specific brand differentiation strategy based on either a limited or expanded set of personality traits. In this way, it would be possible to verify if “a brand becomes stronger when you narrow its focus” (Ries and Ries 1998, 17). Further research on all of these issues would allow us to refine our methodology

to render it as functional as possible, while also enhancing mutually-beneficial collaboration between academic research and the world of management.

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Appendix. Overview of the blog dataset

Brand	Posts/ Com	Words
A.L.C.	4/10	1235
Akris	9/20	3157
A. Ferretti	20/22	7248
A. McQueen	32/9	8074
A. Wang	26/11	5527
A. Mabille	14/67	5021
Altuzarra	15/18	4628
Azzaro	8/10	2028
Balenciaga	19/8	4905
B. Republic	10/6	2427
B. Bui	6/1	1137
B. Johnson	13/14	3393
B. Mohapatra	11/2	3264
B. Reid	13/2	4198
M. Birger	3/2	1061
B. Veneta	13/2	4049
B. Jarrar	7/8	2454
Burberry	13/16	3091
C. Klein	17/3	7304
C. Herrera	20/5	5338
Carven	16/12	3323
C. Malandrino	13/7	4098
Chanel	28/34	8855
C. Ronson	13/6	3894
C. Monday	9/3	3507
C. Sevigny	9/4	2031
C. Dior	28/10	6414
C. Lacroix	9/8	2813
C. Lemaire	6/1	1176
C. Raeburn	11/2	2800
D. Doma	9/1	2145
D. Furstenberg	12/4	2720
D. & Gabbana	26/56	7497
Edun	12/4	3618
E. Pucci	15/50	4647
Escada	6/1	2738
Felder Felder	4/4	2103
Fendi	55/41	14840

Brand	Posts/ Com	Words
G. Valli	23/7	6780
G. Armani	25/20	16052
Givenchy	17/5	3955
Gryphon	10/12	2884
Gucci	25/5	7882
H. Amies	4/2	2400
H. Vibskov	7/4	1823
Hermes	15/17	6246
H. Fulton	14/4	4300
J. Mendel	9/8	2633
J. Crew	24/19	7218
J.W. Anderson	28/8	8632
J. Wu	45/18	11344
J. Ahr	4/2	1107
J. Kao	11/7	3206
J. Kayne	10/4	2005
J. Bartlett	6/9	1534
J. Varvatos	11/5	2793
Joie	6/8	1669
Joseph	8/1	1610
J. Couture	9/12	3461
J. Macdonald	5/3	1066
K. Lagerfeld	70/34	20456
K. Van Assche	8/2	2030
L. Berlin	4/2	2113
M. Jacobs	72/29	21263
Matohu	4/1	3405
Missoni	25/10	4902
N. Rodriguez	30/13	7498
O. Theyskens	31/20	8569
O. Ceremony	46/23	14121
O. D La Renta	36/38	11047
P. Som	20/82	7450
P. Balmain	24/11	7066
P. Gurung	53/21	14195
Prada	59/66	17787
P. of Scotland	32/25	8403
P. Schouler	66/42	17031
R. Roy	10/15	2860
R. Zoe	16/1	3743

Brand	Posts/ Com	Words
Rag & Bone	26/16	6305
R. Minkoff	22/9	5167
R. Taylor	9/3	2391
R. Krakoff	20/9	4786
R. Cavalli	14/6	3691
Rodarte	27/8	6963
Rogan	10/3	2928
Sabyasachi	2/1	1254
S. Ferragamo	20/17	7068
S. & Halmos	6/2	1352
S. Rocha	8/2	2601
S. McCartney	51/24	12482
S. Alan	14/3	3524
Suno	17/12	4533
Temp. London	6/11	1977
Thakoon	14/14	5047
The Row	14/8	2876
Tibi	8/5	2023
T. Coppens	4/3	1109
T. Weiland	8/1	3017
T. Ford	31/13	9148
T. Maier	9/5	1877
T. Hilfiger	14/1	3730
T. Burch	19/4	4765
T.8Twelve	5/1	1163
Valentino	39/32	10556
V. Wang	11/5	3265
Versace	33/32	9420
V. Westwood	24/5	7494
VPL	9/6	2700
W. Gordon	6/1	1998
Y. Teng	4/2	1062
Y. Azrouel	10/8	2561
Z.+M.Cornejo	6/3	1722
Z. Murad	2/28	1649

