Mirror, Mirror, on the Web: a Lexical-Semantic Analysis of Brand Positioning

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EXTENDED ABSTRACT - The World Wide Web (WWW) provides a vast amount of information on products and services. This includes both information put out by the organizations marketing the products as well as the general public’s comments and observations pertaining to those products. While marketers in the pre-Internet era had considerable influence on the information made available to their audiences, today they have much less control over what is disseminated about their products on the WWW (Ward and Ostrom 2003). This democratization of information dispersal over the Internet is exacerbated by the widespread availability and use of Internet search engines that give equal weight to official product sites and those created by consumers either in support of or opposition to the product or brand. While companies routinely scour the chat rooms and Areview sites to understand emerging patterns and to examine the reactions of individuals to products, there have been few attempts in the marketing literature to mine the wealth of data available across the entire web to draw meaningful conclusions on how products are perceived online. However, the combination of potent search engines that constantly update their databases with new web pages and the ready willingness of a variety of people to post information online offers a powerful opportunity for marketers to gain an understanding of how information about their brands are structured in this unique environment. It is possibly the lack of research on how to manage this morass of disjointed information that has led to a greater focus on the threat rather than the opportunity afforded by information dissemination on the web.

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EXTENDED ABSTRACT

The World Wide Web (WWW) provides a vast amount of information on products and services. This includes both information put out by the organizations marketing the products as well as the general public’s comments and observations pertaining to those products. While marketers in the pre-Internet era had considerable influence on the information made available to their audiences, today they have much less control over what is disseminated about their products on the WWW (Ward and Ostrom 2003). This democratization of information dispersion over the Internet is exacerbated by the widespread availability and use of Internet search engines that give equal weight to official product sites and those created by consumers either in support of or opposition to the product or brand. While companies routinely scour the chat rooms and “review” sites to understand emerging patterns and to examine the reactions of individuals to products, there have been few attempts in the marketing literature to mine the wealth of data available across the entire web to draw meaningful conclusions on how products are perceived online. However, the combination of potent search engines that constantly update their databases with new web pages and the ready willingness of a variety of people to post information online offers a powerful opportunity for marketers to gain an understanding of how information about their brands are structured in this unique environment. It is possibly the lack of research on how to manage this morass of disjointed information that has led to a greater focus on the threat rather than the opportunity afforded by information dissemination on the web.

Our goal with this manuscript is to take some first steps towards examining the vast amount of information stored in online search engine databases to uncover information useful to marketers. We believe that the sheer volume of information stored in these databases makes it an information resource that cannot be ignored. However, given the indiscriminate way in which search engines add web-based information to their databases, creative approaches are needed to glean useful information from this data. We draw upon research in lexical text analysis and brand positioning to propose some critical indices that can be used by marketers to glimpse the structural schema of their brands in the online world by examining links between brand names and key adjectives in these massive online databases. We propose some techniques and measures for drawing on data stored in search engines and present one “real” application of these techniques to create a perceptual map of a variety of competitive brands in a single product category.

With the increasing availability of text-based electronic resources, an increasing number of researchers are focusing on evaluating the content of large text-based corpora to get a greater insight into the meaning in the text. For example, typing the name of a brand or travel destination into a search engine will likely provide thousands of hits with no overall evaluation of the content of these sites. The researcher does not gain any information on whether these thousands of sites have positive, negative, or neutral things to say about the brand or travel destination (Turney 2002). So, how does one go about assigning meaning to a collection of text, especially as it relates to a neutral target, such as a brand name? Today, the study of lexical semantics–word meaning–draws on research from a variety of disciplines including computational linguistics, natural language processing, and statistics. Building on the research in lexical-semantic analysis and the use of word associations to identify semantic orientations, we developed a model to create positioning maps based on an analysis of web pages containing brand-related information and adjectives that define brand positions in the off-line world. We used custom-coded applets that built upon the application program interfaces (APIs) provided by Google to analyze the data in all 4+ billion web pages in their search engine database. We assume an association between a brand and an adjective if the search engine returns a “hit” when we query the search engine for both the brand and the adjective. While the adjectives are bound to be associated with multiple brands, if the adjectives truly associate with the brand, we would expect to see relative differences in the extent of association between each brand and the adjectives.

We show that by examining associations between brands and carefully selected adjectives, we can go beyond merely counting text content to uncovering the meaning of the content. The content reveals relationships that can guide marketing decision making. In the context of brand positioning, we verify that the data does, in fact, represent meaningful relationships between brands. This study achieves the critical objective of validating the usefulness of the search engine database for marketing analysis. It offers an exciting view of the future analytical potential of this freely available data set. We can further build on the theories in natural language processing and computational linguistics to understand the structure of brand perceptions in an online environment. Because the web provides a permanent record of brand-related communications and is dominated by user-generated content, it can be used by marketers to get a deep understanding of consumer relationships with brands.

REFERENCES


