A dual-process model of brand extension: Taxonomic feature-based and thematic relation-based similarity independently drive brand extension evaluation

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Abstract

The success of a brand extension depends largely on the similarity between the brand and its extension product. Recent psychological and neuroscientific evidence supports a dual-process model that distinguishes taxonomic feature-based similarity from thematic relation-based similarity. In addition to providing a parsimonious organizational framework for prior brand extension research, this dual-process model also provides novel predictions about the processing and evaluation of taxonomic brand extensions (e.g., Budweiser cola) and thematic brand extensions (e.g., Budweiser chips). Results indicate that taxonomic and thematic similarities independently contribute to branding professionals' and lay consumers' evaluations of real and hypothetical brand extensions (Studies 1A and 1B). Counter-intuitively, thematic brand extensions are processed more rapidly (Study 2), judged more novel, and evaluated more positively than taxonomic extensions (Study 3). When induced to consider the commonalities between the brand and the extension product, however, taxonomic extensions are judged more novel and evaluated more positively (Study 3). Implications for brand extension and marketing more generally are discussed.
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Introduction

Approximately 80% of new products introduced each year are brand extensions (Keller, 1998), so it is important for marketing researchers and brand managers to understand how consumers evaluate them. Indeed, what makes one brand extension succeed and another fail? In theory, the advice for brand managers when confronted with the task of extending their parent brand into a new category can be summarized in one simple word: "fit". Essentially, "fit" is the relation between the extension product and the brand's core product, and a great deal of research indicates that the extension should be *similar* to the brand (e.g., Aaker & Keller, 1990; Boush & Loken, 1991; Martin & Stewart, 2001;

Volckner & Sattler, 2007). We therefore investigate how current psychological theorizing about similarity can advance our understanding of brand extension evaluation.

Recent research in cognitive psychology and neuroscience supports a dual-process model, whereby feature-based "taxonomic similarity" and relation-based "thematic similarity" *independently* contribute to our perception of similarity (Estes, 2003a; Schwartz et al., 2011; Wisniewski & Bassok, 1999). The present article redefines brand extension fit in terms of these two distinct sources of similarity. This new organizational framework provides clarity and parsimony to the rich but disjointed literature on brand extension, thus enabling a novel interpretation of several important drivers of brand extension evaluation identified in past research.

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The dual-process model of similarity also generates novel and counter-intuitive predictions about the processing and evaluation of brand extensions. Specifically, recent psychological and neuro-scientific evidence suggests that taxonomic (e.g., *Budweiser* cola) and thematic brand extensions (e.g., *Budweiser* chips) may differ in processing ease, which in turn may affect evaluations of those different types of brand extensions (e.g., Lee & Labroo, 2004). Because processing ease can be manipulated as a marketing tool, for instance in advertising and point-of sales (Labroo et al., 2008), our conclusions also provide important thrusts for new managerial applications.[1]

The article is organized as follows. First we introduce the dual-process model that has emerged recently in the psychology literature on similarity judgments. After considering the implications of this model for prior research on brand extension, we then describe some of its novel predictions about brand extension. Finally we report four studies that demonstrate the unique contributions of taxonomic and thematic similarities to brand extension evaluation, and the differential processing and evaluation of taxonomic and thematic brand extensions.

A dual-process model of similarity

Until recently, similarity was thought to result solely from a comparison process that identifies the common and distinctive features between objects (Gentner & Markman, 1997; Tversky, 1977). Much evidence now indicates, however, that similarity is also based on the relations between objects. Thus, a dual-process model distinguishes taxonomic feature-based similarity from thematic relation-based similarity (Wisniewski & Bassok, 1999).

Taxonomic relations entail membership in a common category on the basis of shared features. For example, CARS and MOTORCYCLES share important features (e.g., having an engine and wheels) and hence belong to the same taxonomic category of "vehicles." PIZZA and CHIPS, due to their shared feature of being edible, are both members of the "food" category. Concepts belong in a taxonomic category, and hence are taxonomically related to all other category members, by virtue of shared features. For example, in order for something to be "food," it must be edible. As a consequence, taxonomically related concepts tend to be similar to one another. Thus, taxonomic relations are characterized by (1) internality, in that they are based on the features of the objects themselves, and (2) similarity, in that they cohere around shared features (Hampton, 2006; Markman & Wisniewski, 1997).

Thematic relations are spatial, temporal, or functional relations between two or more things that perform different roles in the same scenario or event (Estes et al., 2011; Lin & Murphy, 2001). For example, MOTORCYCLES and HELMETS are thematically related, as are PIZZA and BEER. Critically, thematic relations are "external" in that they occur between multiple objects, concepts, people, or events. This contrasts "internal" features, which occur within a single entity, and which form the

basis of taxonomic relations. To illustrate, MOTORCYCLES have an engine and wheels. Both of these are internal features because they predicate the concept in itself; they entail no other object, concept, person, or event. But MOTORCYCLES and HELMETS are related externally because they perform different roles in the same theme of motorcycle travel. Indeed, due to their playing different roles in a common scenario, thematically related concepts tend to be featurally dissimilar (Estes, 2003a; Wilkenfeld & Ward, 2001; Wisniewski, 1996). Thus, thematic relations are characterized by (1) externality, in that they arise between two or more things, and (2) differentiation, in that those things must perform different functional roles in that relation.[2]

A great deal of recent psychological and neuroscientific evidence indicates that taxonomic and thematic relations are processed differently (for review see Estes et al., 2011). Neuroimaging studies reveal that taxonomic and thematic processing activate distinct neural circuits (Sachs et al., 2008; Sachs et al., 2008; Sass et al., 2009), and neurological cases have also dissociated taxonomic and thematic processing (Davidoff & Roberson, 2004; Schwartz et al., 2011). Taxonomic and thematic processing also *independently* affect similarity judgments. People tend to thematically relate stimuli when judging their similarity (Bassok & Medin, 1997), thematically related concepts such as MILK and COFFEE are judged more similar than unrelated concepts such as MILK and LEMONADE (Golonka & Estes, 2009; Simmons & Estes, 2008; Wisniewski & Bassok, 1999), and concepts are judged more similar when a thematic relation between them is explicitly stated (Jones & Love, 2007) or merely inferred (Estes, 2003a). So in sum, taxonomic and thematic relations (1) are processed in distinct brain circuits, (2) may be selectively impaired or preserved, and (3) differentially affect similarity.

Taxonomic similarity and thematic similarity in brand extension

Taxonomic and thematic brand extensions are readily identifiable in the marketplace. Taxonomic extensions share many of the brand's core features by extending into similar product categories (e.g., *Adidas* sandals, *BMW* motorcycles, *Ivory* shampoo), whereas thematic extensions break out of the brand's

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[1] Because this research concerns consumer evaluations rather than production constraints, we do not differentiate between brand extensions in which the brand manufactures the product and those in which it licenses the product to another manufacturer (e.g., *Adidas* deodorant, *Caterpillar* boots).

[2] Note also that thematic relations are not simply *ad hoc categories*, which are created spontaneously to achieve some goal (Barsalou, 1983). Examples include THINGS TO REMOVE FROM A BURNING HOUSE and THINGS NOT TO EAT ON A DIET. Although the goal around which an ad hoc category is based may resemble a theme (e.g., a burning house theme or a diet theme), such ad hoc categories differ importantly from themes (Estes et al., 2011; Lin & Murphy, 2001). Members of an ad hoc category go together as a result of some internal, goal-based property that they all possess (see Barsalou, 1983, p. 225). All members of THINGS TO REMOVE FROM A BURNING HOUSE have some property (i.e., value) that identifies them for salvaging. It could be monetary value (e.g., JEWELRY), sentimental value (e.g., PHOTOS), or some other value (e.g., PETS). Moreover, the members of such ad hoc categories do not take up different external roles. JEWELRY, PHOTOS, and PETS do not perform different roles in a common scenario like BOATS, SAILS, and ANCHORS do. Rather, they all serve the same goal of salvaging valuables from a burning house. Without the goal, those things no longer cohere or relate to one another in any obvious way. So whereas an ad hoc category is based around some *shared internal property* that serves the same goal among all its members, a thematic relation is based around *differing external roles* in some scenario.