

**Brand choice in
goal-derived categories:
What are the determinants?**

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AKADEMISK AVHANDLING

**Som för avläggande av ekonomie doktorsexamen vid
Handelshögskolan i Stockholm framläggs för offentlig
granskning onsdagen den 28 maj 2003, kl. 14.15**

**i sal Ruben Handelshögskolan,
Saltmätargatan 13-17**



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Dissertation for the Degree of Doctor of Philosophy, Ph.D.
Stockholm School of Economics 2003

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ISBN 91-7258-612-5

Keywords: Brands
Brand choice
Goal-derived categories
Constellations
Consumer behavior
Cover layout: Håkan Solberg, Mediaproduktion AB
Printed by: Elanders Gotab, Stockholm 2003
Distributed by: EFI, The Economic Research Institute
Stockholm School of Economics
P.O. Box 6501, SE 1-113 83 Stockholm, Sweden
www.hhs.se/efi

***In memory of my grandfather,
Walter Larsson***

Acknowledgements

In the movie *Animal Crackers*, there is a scene at a party (one of my absolute favorites) where one of the famous Marx' Brothers – Chico – is sitting by the piano and playing a tune. In the beginning, all the party guests listens to the tune with great delight. But, after a while, when Chico has been repeating the same tune over and over again, people squirm quite a bit. This, of course, makes Chico more and more anxious and uneasy, and he turns to one of the listeners, Captain Spaulding (played by Groucho Marx), and says somewhat hesitantly:

- I can't think of a finish.

Groucho's sharp reply:

- Funny, I can't think of anything else

I can certainly relate my writing of this dissertation to the scene in *Animal Crackers*, with myself in Chico's shoes and people around me wondering: Is the thesis ever going to be finished? Indeed, the thesis took little longer to complete than I first thought – seven years. I made an honest effort to spurt but my spurting power was clearly not equal to the best sprinters in the world. But thanks to former Swedish long-distance runner Johnny Danielsson, I am not alone. Johnny is known for his hardly recognizable "long spurt".

I have had help from many sources during my "long spurt". First, I would like to thank Kraft Freia Marabou for financing the first project that I was involved in. Looking back, a lot of the ideas in the thesis originate from the exploratory empirical studies I did in the Marabou project. Also, the financial support from Marknadstekniskt centrum (MTC) at two stages has been greatly appreciated.

Many people have also helped me along the way. First of all, I would like to thank my co-authors: Sara Selander, Catherine Åberg and Micael Dahlén. It has been great writing articles with you. Also, many thanks to language editor, Maria de Liseo, who helped me on parts of the thesis.

A central theme in my thesis is *constellations*. For me, the most important constellation has been my three academic supervisors. Claes-Robert Julander has a knack for discovering flaws and merits in research, which has helped a lot. Many wise suggestions, regarding research and sports, have come from Case during his customary walk around the offices. Moreover, he always showed great support and enthusiasm– even though he sometimes seemed to think that

* When three laps remained of a 5000-meter race, the hopeful Swedish commentators always forewarned the audience for "Johnnys långspurt"! It was barely noticeable.

my research were only about “meals”. Magnus Söderlund, my boss, is a true workhorse. He has been reading many of my manuscripts the last few years and every time been able to give invaluable advice that has developed my research ideas. His door is always closed but you still get the feeling that it is open for questions all of the time. On an important side note, I regret that I did not follow up on his “revenge” on one of our practical jokes; it would have been interesting to see his cunning plan develop. Richard Wahlund introduced me to consumer behavior research and worked closely together with me the first couple of years. He must have done many things right – even including mixing up confectionary with confetti - because he made me stay on the research track. In fact, he was the one who first brought up and made me interested in the subjects of goal-derived categories and brand constellations. Without him, this thesis might have looked very differently.

At CCM, I have had the opportunity to work with a group of people who create a great environment. Per Håkansson, a former colleague deserves mention for his social and professional input. Anna Broback, Karolina Brodin, Rebecca Gruvhammar, Hanna Hjalmarson, Jens Nordfält, Sara Rosengren, Henrik Sjödin, Fredrik Törn and Niclas Öhman are present colleagues who make it enjoyable to spend time at work. A special thanks goes to Jens: our short (to each others’ hallway or to coffee shops on Sveavägen) and long journeys (to Åre and other places) are legendary – at least for the two of us. I hope there is room for many more.

One person should deservedly be given the deluxe package - an entire paragraph. It is Micael Dahlén, or as I see it, the young Muhammed Ali of research. A verbal jabber, confident, and, yes, cocky at times. But genuinely, “You are the greatest”! Thanks for listening to all of my unproven research ideas. Thanks for helping me structure some of them into realistic research projects. Thanks for the cooperation on practical jokes and in teaching. Thanks for all the laughs.

My family has been very supportive in every possible way. You have believed in me, as well as lived with me, which has meant more to me than I can express. Mom, Johan, and Åsa, I love you very much!

Stockholm 10 April 2003

Fredrik Lange

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Brand choice in goal-derived categories: What are the determinants?

In marketing, there is a long research tradition of examining brand choice within a product category (i.e., why a consumer chooses one particular brand – e.g., of coffee – from a larger group of brands). It has been shown that factors such as the strongest brand attitude, the most easily accessible brand, the brand delivering superior value on the most important product attribute, or the brand that is the most typical brand in the category are among the central determinants of brand choice (Keller, 2002).

This thesis challenges the common view on brand choice and brand choice determinants on two accounts. First, it is argued here that consumers do not only consider brands from the same product category when making choices; in fact, in the decision-making process, they often consider brands from diverse product categories (see, e.g., Ratneshwar, Pechmann, and Shocker, 1996). For instance, a consumer may choose between brands of coffee, tea, and hot chocolate in a usage situation. Second, there is the question of complementarity. Are brands always chosen one by one? We argue in this thesis that consumers often choose brands that “go with” other brands from complementary product categories (e.g., hamburgers and soft drinks). The simultaneous choice of complementary brands is called brand constellation choice.

In the case of single-brand choice across product categories, consumers do not solely rely on brand associations to make brand choices. Each product category carries associations that are specific to that product category and these associations also play an important role in brand choice decisions (Johnson, 1984). One particular product category association, considered in this thesis, is that of how well a product category is perceived to fulfill specific consumption goals (Loken and Ward, 1990), for example, as a thirst-quencher, as a means of transportation to work, and as weekend family entertainment. Consumption goals are at hand in consumer decision-making and therefore brand choice is often determined by product category factors as well as brand factors (Nedungadi, 1990; Park and Smith, 1989). Very little is known about the relative importance of product-level determinants and brand-level determinants in brand choice across product categories.

Turning to brand constellation choice, there are natural brand constellations (e.g., different foods and beverages combined into meals) that consumers probably choose everyday (Solomon and Englis, 1995). Since brand constellation choice is the choice of at least two complementary brands, we argue that the value of a brand constellation must therefore be more than the average value of the individual brands. Degree of complementarity between brands (also known as perceived fit) should also be a significant determinant.

The focus in marketing theory and in marketing practice is on brand choice within product categories, and consequently, the types of brand choices discussed in this thesis are often neglected (Solomon and Englis, 1995). The research presented in this thesis, therefore, is needed to draw attention to brand choice across categories and brand constellation choice, and to extend the research on brand choice. We do not claim that the determinants of brand choice normally used in marketing research are of no relevance to the brand choices that we consider here. However, our view is that product-level determinants and complementarity can override the commonly used brand choice determinants when our suggestions for brand choice settings are applied.

To understand brand choice and brand constellation choice, we introduce the concept of goal-derived categories (Barsalou, 1983; 1985; Loken and Ward, 1990). Goal-derived categories spring from the activation of consumption goals. One main benefit of goal-derived categories is that they can, when necessary, incorporate brand choice considerations across product categories and brand constellation choice in goal-derived categories. Goal-derived categories have therefore been selected as the main categorization principle for the understanding of the brand choices investigated here.

The thesis has two main parts: one introductory part and one part consisting of four articles. In the first part, the subject of brand choice is conceptually introduced and elaborated upon. The central aspects of this conceptual discussion are goal-derived categories and the relative influence of product category and brand determinants in brand (constellation) choice. The subject matter is empirically investigated in the four articles that make up the second part of the thesis. These articles have different starting points and deal with single-brand choice across categories, brand constellation choice and the use of consumption goals by marketing practitioners in their marketing activities.

Introduction and overview of the empirical studies

In the introductory part of the thesis, central concepts related to the theme of the thesis are presented. Categorization and determinants of brand choice, for example, are examined closely and the goal-derived category concept is elaborated upon in detail. How are goal-derived categories structured and represented? How are goal-derived categories used in the decision-making process? The major determinants of brand choice in goal-derived categories that are considered are; typicality (i.e., closeness to an ideal, discussed in more detail later in the introduction), perceived fit (at product level and at brand level), and brand attitude. Furthermore, this introduction also presents the main findings of the four articles and outlines the contributions of the thesis to marketing theory and practice.

This introduction is structured in the following way. First, an essay by French philosopher Denis Diderot is used to further illustrate the major concepts of goal-derived categories, brand choice across product categories, and brand constellation choice. Second, the aim of the thesis is introduced, followed by a theoretical framework that relates decision making to categorization. Based on this framework, we present aspects of categorization to provide an understanding of how goal-derived categories influence how consumers make brand choices. We also discuss the decision-making process and the determinants of brand choice across product categories. The construct of brand constellations is then further developed and the decision-making process for brand constellation choice is discussed. Note that brand choice and brand constellation choice are separated in order to give the reader a clearer view of the different choice processes and also to enable a comparison of the two types of brand choice. Thereafter, the research design and the main findings of each article in the thesis are presented. Finally, the contributions of the thesis are discussed as well as limitations and suggestions for further research.

The Diderot effect

At the beginning of the essay “Regrets on parting with my old dressing gown”¹, the French eighteenth century philosopher Denis Diderot is sitting low-spirited and thoughtful in his study. The room had changed. It had once been full of old things, messy and welcoming. Now it is elegant, organized, well-planned, but no longer welcoming. Diderot is dissatisfied with his study and suspects that the reason for his dissatisfaction is the beautiful scarlet robe he received as a gift from a friend. After he received the robe he quickly discarded his old, comfortable, and well-worn dressing gown.

¹ This story is adapted from McCracken (1988) and Schor (1999)

Soon after he began wearing the scarlet robe, he sensed that his study appeared shabby and unworthy of the dignity and splendor of the new robe. The tapestries seemed threadbare, his desk, his chair, the carpet, and even the bookshelves were not up to standard. Diderot decided he had to do something about the room. The room did not change over night but little-by-little the old and worn-out furnishings were replaced with new tapestries, new chairs, a new bookshelf, a new clock, and new writing material. Every new purchase was in the same, exquisite style as the robe.

Pondering the changes in the room, Diderot regrettably drew the conclusion that the “imperious scarlet robe forced everything else to conform to its own elegant tone”. He now felt that his old and well-worn dressing gown had become a symbol of the harmonious design of the study that was so familiar to him and made it so easy to work. That special feeling was gone, and so was his inspiration to work and write.

Categorization, goals, situations, constellations and choice

The Diderot story has to do with categorization and choice and may illustrate several interesting aspects of contemporary consumer behavior. Consumers always categorize objects (e.g., brands) as instances² of a category in their environment. A category is a cohesive group of objects that people have decided belong to a certain class (Medin and Smith, 1984). Two central categorization principles in consumer behavior are *goal-derived categorization* and *nominal product categorization* (Barsalou, 1983; Holden and Lutz, 1992; Loken and Ward, 1990; Ratneshwar, Pechmann, and Shocker, 1996). A distinction between goal-derived categories and nominal product categories is that the former is mainly used for problem-solving purposes and the latter is mainly used for object identification purposes (Medin and Smith, 1984; Alba and Hutchinson, 1987).

The Diderot essay illustrates how consumers categorize products according to nominal category and goal-derived category principles. Firstly, the scarlet robe and the well-worn dressing gown may be categorized into the nominal product category “clothes”. The same procedure may be repeated for the desks, the chairs, and the bookshelves into the product category “furniture”. Aggregating instances into classes in this way is called nominal (or sometimes taxonomic) product categorization.

² In categorization research, one speaks of *instances* as members of *categories*. In this thesis, brands are instances in nominal product categories and, products are instances in goal-derived categories.

Secondly, we can categorize (just as Diderot also did) the elegant furniture and the elegant robe into one category and the well-worn and shabby furniture and well-worn and shabby clothes into another category. In this case, the categorization is not based on instances' physical similarity but on a more abstract feature that all category instances share (elegance or shabbiness). Aggregating instances into classes in this way is called goal-derived categorization. The goal-derived category in the Diderot example might be "things needed to create a stimulating atmosphere in the workplace".

Bagozzi and Dholakia (1999) suggest that the value of products and brands is always derived from consumption goals, and Belk (1975) argues that the value of products and brands is always affected by the usage situation in which they are to be consumed. Furthermore, previous research has demonstrated that a goal-derived category is constructed by situational goals, that is, important factors in a specific usage situation, and by individual goals, that is, personal preferences that are relatively stable across usage situations (Ratneshwar et al, 2001). Thus, goal-derived categories imply that products and brands are only means to an end (Ratneshwar and Shocker, 1991) and it is important to understand the goal-derived reasons why a certain brand or product in a nominal category is considered for purchase.

The Diderot essay tells us more about contemporary consumer behavior if we analyze the "competition" between the dressing gown and the scarlet robe in more detail. A comparison and evaluation of the garments without taking anything else into account (e.g., that it was a gift, the usage situation, or the consumption goal), would most likely come out in favor of the elegant robe. The elegant robe would probably be better liked than the well-worn dressing gown and also selected if a choice between them had to be made.

However, such a comparison does not take into account the situational goal in the specific goal-derived category. A "situational-free" evaluation of a brand or a product may therefore not explain how consumers make brand choices. As we saw in the essay, Diderot did in the end evaluate shabbiness and comfort as being more important than elegance and sophistication since the former attributes were more familiar and relevant in the situation. He preferred what we might call a "less preferred" option because it possessed the "right" attribute, that is, a goal-relevant attribute. Note that this example closely relates to the limitations of only using brand attitude and other brand-specific evaluations to explain goal-derived brand preferences.

Goals often lead to consumers evaluating and choosing between brands from different nominal product categories (Johnson, 1984; Ratneshwar, Pechmann and Shocker, 1996). For instance, a consumer may choose between an ice cream,

a soft drink and a chocolate bar on a hot summer's day or between going on a camping trip in the mountains or traveling to a Mediterranean resort on vacation. Some instances are more representative than others, or more *typical* of the category because they contain properties that are characteristic of the concept to a larger extent (Medin and Smith, 1984). For instance, ice cream and soft drinks are probably more typical on a hot summer's day than a chocolate bar. *Typical instances* are more likely to be evaluated positively and are also more likely to be chosen than atypical instances (Loken and Ward, 1990).

In the Diderot essay, the well-worn pieces of furniture and clothing were more typical instances of the goal-derived category "things needed to create a stimulating atmosphere in the workplace" than the elegant items. The latter are atypical instances, or instances that may not even belong to it.

Consumers may also desire a constellation of complementary brands or products in goal-derived categories (Barsalou, 1983; Ratneshwar, Pechmann, and Shocker, 1996). Consumers use *brand constellations* to attain consumption goals in different settings, as evidenced by previous research on consumption episodes (Dhar and Simonson, 1999), acquisition patterns (Kasulis, Lusch, and Stafford, 1979; McFall, 1969), lifestyle imagery (Englis and Solomon, 1995; McCracken, 1988), brand relationships (Fournier, 1998), and brand alliances (Park, Jun, and Shocker, 1996; Simonin and Ruth, 1998). The notion of constellations is also central in the Diderot essay and has been discussed by McCracken (1988).

McCracken (1988) defines a consumption constellation as highly consistent complements of consumer products. Objects in constellations are in harmony with each other and seem to go together naturally (McCracken). In the Diderot case, product categories were used. Today, consumers are also likely to use brands to distinguish between different complementary consumption items. In modern society, brands carry associations (Keller, 1993; Park, Jaworski and MacInnis, 1986) of, for instance, elegance, ruggedness, sophistication, and competence (Aaker, 1997). Consumers may thus perceive that there are brand constellations of highly consistent complementary brands that seem to go together naturally. In the literature, product and brand complementarity is often regarded and mentioned as *perceived fit* between the brands involved (e.g., Broniarczyk and Alba, 1994). Perceived fit might be established at brand level, as in coherent brand images, or at product-category level, as in complementary product categories (Simonin and Ruth, 1998).

To summarize, consumers are goal-oriented and use goal-derived categories in order to achieve consumption goals. Consumption goals may lead consumers to choose between single brands from distinct nominal product categories and/or a

constellation of brands that they perceive as fitting well together. Moreover, individual brands may be evaluated in terms of goal-relevance (i.e., how typical they are in a goal-derived category) and liking (i.e., favorable affective brand evaluations). This is an area within marketing where research is limited. Existing knowledge is particularly low with regard to what the determinants are of brand choice based on consumption goals.

Aim of the thesis

The aim of the thesis is to provide an understanding of the determinants of brand choice in goal-derived categories. Both single-brand choices and brand constellation choices are empirically investigated. Single-brand choices are examined across nominal product categories and the role of product-level evaluations and brand-level evaluations are compared. Brand constellation choices are examined through evaluations of the whole brand constellation and evaluations of the brand constellation ingredients, that is, the individual brands in a brand constellation.

We also set out to investigate to what extent marketers use goal-derived categorization to assist consumers in the pursuit of consumption goals. Since previous research strongly suggests that consumers are goal-oriented, it is important for marketers to understand how marketing tactics can be derived from goal-derived categorization and the consumer choice processes that follow from activation of consumption goals. A main delimitation is that all empirical studies are related to the product class of packaged goods, that is, foods and beverages.

The main issues addressed in the thesis are: How do consumers make choices in goal-derived categories when they have to evaluate brands across nominal product categories? Which determinant is more important: product-level or brand-level determinants? How do evaluative criteria such as typicality, perceived fit (for brand constellations) and brand attitude affect goal-derived choices? Do situational goals and goal-derived preferences lead to consumers choosing less-preferred brands over more preferred brands? Specifically, for brand constellations: What is the relative importance of constellation-related determinants and brand-related determinants?

Framework of the thesis

The starting point of the thesis is categorization and its influence on how consumers make brand choices. Both the thesis introduction and the articles investigate how brands, product categories and goal-derived categories interplay in consumer decision-making. Research suggests that consumers use

categorization in the decision-making process and also that the boundaries between them are fuzzy (Medin and Smith, 1984). In this section, we provide a framework for the thesis in two steps. First, we introduce two general models of consumer decision-making. Second, we demonstrate how categorization is applied and related to decision-making.

The most familiar model of consumer decision-making is probably the Engel model, described for instance in Engel, Blackwell, and Miniard (1995). The Engel model is a five-step model (see Figure 1) that is initiated with recognition of a need. The need activates a process of information search and pre-purchase alternative evaluation before a purchase is made and evaluated (e.g., through consumption experiences).

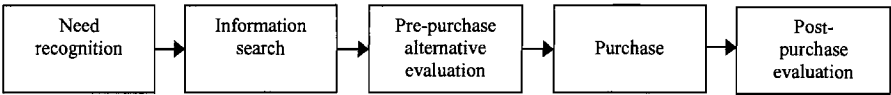


Figure 1: The Engel model

Recently, Bagozzi and Dholakia (1999) proposed another decision-making process model based on consumption goals instead of needs. According to Bagozzi and Dholakia (see Figure 2), primary processes in consumer behavior are goal setting and goal striving. Consumers are motivated by consumption goals and consumer behavior can be perceived as making efforts to attain/fulfill goals. The Bagozzi and Dholakia model is similar to the Engel model as seen below. Consumers set goals and then strive for goal attainment. The formation of a goal intention and action planning occurs before purchase and the action initiation and goal attainment steps are closely related to purchase and post-purchase evaluation.

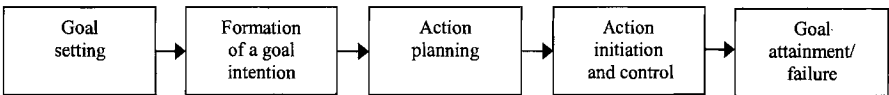


Figure 2: The Bagozzi and Dholakia model

A detailed comparison of the Engel model and the goal-setting model is beyond the scope of this thesis. These models are simply introduced so that the categorization issues that we focus on can be made clear. However, a comment on need recognition and goal setting is important for our purposes since the two concepts are closely related to which categories and brands that will be activated. Recognition of a need occurs before a goal is set. Thus, needs activate consumption goals and motivate a consumer to strive for this goal. The

consumption goal, in turn, affects other central parts of the goal attainment process such as attribute importance and which product categories and brands that are considered (Bagozzi and Dholakia, 1999; Ratneshwar and Shocker, 1991).

Turning to issues of categorization, one basic premise in consumer behavior theory is that categorization precedes evaluation and choice (Sujan, 1985). As we have previously noted, goal-derived categories are of importance in consumer decision-making. A goal-derived category is based on the alternatives that are accessed when a consumer activates a consumption goal. Thus, consumers also need to know what consumption goals that lemon/lime soft drinks may fulfill (e.g., quenching thirst and tasting good).

Categorization is most often thought of in marketing as nominal classifications where consumers group similar brands into nominal product categories. For example, 7-Up and Sprite are two well-known brands within the lemon/lime soft drink category. Consumers need to understand what a product (brand) is in terms of nominal product categories before it can be considered for purchase.

The focus in this thesis is on how categories are represented in consumer memory and how categories are used in consumer decision-making. Goal-derived categories, nominal product categories and brands are central to this research. When a consumption goal is activated, consumers evoke a set of product categories that are able to fulfill the consumption goal. Hence, a goal-derived category may consist of distinct product categories. Consumers then select a product category and thereafter evaluate and choose between brands within the product category. Goal-derived categorization sometimes leads to single-brand choices, as we shall investigate further in one of the articles (product categories and brands compete one by one). However, it sometimes also leads to the choice of a brand constellation (product categories and brands compete in pairs or in larger constellations). For instance, clothes are generally combined; food and beverages are often consumed together; pieces of furniture, interior design items, and home electronic equipment are generally acquired with previously owned products and brands in mind.

Categorization

Research in categorization has helped marketers understand how consumers mentally represent products and brands, how consumers retrieve alternatives from memory when consumption goals are activated, and how consumers evaluate alternatives and make choices (Ratneshwar, Pechmann and Shocker, 1996).

Goal-derived categories are the focal category principle in this thesis. Examples of goal-derived categories in the context of marketing are shown in Table 1. Moreover, ad hoc categories are introduced in Table 1 as a special case of goal-derived categories not specifically established in memory (Barsalou, 1983). Nominal product categories are also considered as they function as members of goal-derived categories.

Type of category	Marketing context
Goal-derived category	Examples are “things to bring on a camping trip”, “food and drinks for dinner next Saturday” and “birthday presents to a good friend”.
Ad-hoc category	Similar to goal-derived categories but not stored in memory; “how to entertain oneself when the movie plans are cancelled due to a sell-out”, “snacks to eat when I do not have time for breakfast”.
Nominal product category	Product categories as chocolate, fruit, CD-records, books

Table 1: Three different types of categories and their marketing contexts.

Goal-derived categories and nominal product categories

“When people shop in a supermarket for a meal for that evening, they may not think in terms of product categories, but rather in terms of different meals that satisfy their needs such as variety, economy, preparation and “fit” with things already at home.”
(Holden and Lutz, 1992, p. 102)

This quote illustrates how goal-derived categories are formed and why goal-derived categories should be used in studies of brand choice instead of nominal product categories. A goal-derived category is based on a usage situation (e.g., a meal) but is also constrained by salient goals (e.g., economy or preparation) that make products more or less typical of the goal-derived category.

We propose that goal-derived categories are superordinate to nominal product categories, which in turn, are superordinate to brands. A large body of research in psychology and marketing supports this view (Mervis and Rosch, 1981; Meyers-Levy and Tybout, 1989; Nedungadi, 1990; Park and Smith, 1989). Our proposed framework suggests that consumers initiate a decision-making process when a consumption goal is salient. Next, product categories that are members of the goal-derived category are activated. The evoked product categories are then evaluated and decided upon. In the second phase, brands within the selected product category are activated and evaluated. This is more in accordance with

memory-based choice processes than stimulus-based choice processes (Nedungadi, 1990; Park and Smith, 1989).

The roles of goals and nominal products in decision making are different. Goal-derived categorization is important because it is the superior description of how consumers choose between brands (Day, Shocker, and Srivastava, 1979; Holden and Lutz, 1992; Ratneshwar and Shocker, 1991). Goal-derived categories are used in product category and brand instantiation and in problem solving. Nominal product categorization is important because it is the primary tool consumers have for brand classification and brand identification (Holden and Lutz, 1992).

Consumer needs (e.g., good physical condition) can be expressed as consumption goals (“My aim is to be in good shape all year round” and the corresponding goal-derived category is “clothes to wear while jogging in the winter”). Several nominal product categories come to mind as we think of clothes to wear when we go for a run. Consumers’ purchase processes are therefore better described as a goal pursuit (“I need to satisfy my thirst”) where several different products (e.g., mineral water, juice, soft drink, and milk) are considered, than a directed search and evaluation process only among alternative brands within one nominal product category.

Moreover, by taking the goal-derived approach to categorization, the same product can be categorized in more ways than one (Cohen and Basu, 1987; Smith and Samuelson, 1997). A bottle of wine could be a member in all of the three goal-derived categories exemplified in Table 1, as it may be consumed on a camping trip, served with dinner, and purchased as a gift for a good friend.

Thus, goal-derived categories rarely coincide with nominal product categories (Ratneshwar et al, 2001). This implies that brands from different product categories are included in the same goal-derived category and often compete against each other (Nedungadi, 1990; Ratneshwar, Pechmann, and Shocker, 1996). In other words, consumers often choose between brands from distinct product categories. There are exceptions to this rule as a single product category is sometimes strongly linked to a consumption goal and only brands from that product category are considered (e.g., detergent).

A goal-derived category is constrained by the consumer’s individual and situational goals (Ratneshwar et al, 2001). A health-oriented consumer may have a different goal-derived category structure in the usage situation of “snacks to eat in the afternoon” than a consumer who is less concerned with health and more concerned with hedonistic consumption. Goal-derived category representations may thus differ between consumers.

We have now introduced the concept of goal-derived categories. Next, fundamental aspects of categorization are discussed in order to provide a deeper understanding of how categorization is used in consumer decision-making. The following four sections on why people categorize, how categories are organized, typicality, and theory-based categorization present a wide-ranging view on category representation.

Why do people categorize?

“Coca-Cola is a...”

Categorizing instances is fundamental in human life. People categorize more or less automatically and without being aware of it. You have probably already completed the quote above with the words *soft drink*. People’s ability to group instances into categories is of significant importance in their everyday lives. If people treated every encountered instance as unique and new, it would be impossible to remember more than small fragments of the environment (Smith and Medin, 1981). People would have to spend considerable time and effort to evaluate everything around them. Thus, people treat the majority of instances they encounter as exemplars of categories of which they have previous knowledge.

Four-year-old children can meaningfully form nominal product categories (Rosch, 1978). Children’s ability to categorize holds both for products and brands (Roedder-John and Sujan, 1990). Thus, categorization starts at an early age and is then used throughout people’s lives. Roedder-John and Sujan demonstrate that children start early to group products by non-perceptual and more abstract attributes and not only perceptual and concrete attributes (e.g., color and shape). For example, children know that juice is sweet and is not carbonated whereas soda is both sweet and carbonated. Instance identification is merely one aspect of categorization. Over time, consumers also form associations to product categories and product category instances (i.e., brands). When we think of Coca-Cola, we are able to describe the brand’s packaging, we know how it tastes and we know if we like it or not.

Categorization is guided by two general principles: cognitive economy and perceived world structure (Rosch, 1978). People are “economic men” in the sense that they have limited cognitive resources and use them as effectively as possible. The principle of cognitive economy makes people categorize in order to produce maximum information with the least cognitive effort (Lange, 2000; Rosch, 1978). This approach to categorization is intuitive, as people would like

to have a great deal of information but at the same time conserve their limited resources.

A second basic principle is perceived world structure. Individuals categorize with how they perceive the world in mind (Rosch, 1978). There is a perceived world structure that is not an unstructured set of arbitrary and unpredictable attributes. Instances have a high correlational structure (Medin and Smith, 1984; Murphy and Medin, 1985), which simplifies categorization. Some attributes co-occur more often than others, thereby facilitating the categorization process. For instance, consumers know that in supermarkets, cans generally contain some kind of liquid (e.g., beverages and soups) and paper packages often contain dry food (e.g., coffee and cereal).

Categories are also used in consumer decision-making processes. It is virtually impossible to discuss and analyze consumer decision making without considering how consumers categorize products (Cohen and Basu, 1987). As mentioned above, categorization precedes evaluation (Sujan, 1985). In other words, when a consumer has initiated a purchase process the first phase is to link a product or a brand to the relevant category. In the second phase, each brand and product is evaluated favorably or unfavorably.

Thus, brand choice is highly dependent on how the consumer has categorized the alternative brands. If a brand, or its product category, is not accessible (i.e., available) in the categorization phase it has no chance of being chosen (Nedungadi, 1990). Nedungadi, Chattopadhyay, and Muthukrishnan (2001) showed that the provision of a category structure (i.e., the different products that may fulfill a consumption goal) in the pre-purchase alternative evaluation increased the number of subcategories accessed later when a purchase was to be made. A provision of a subcategory structure may also increase the probability of brand choice within minor subcategories (Nedungadi, 1990). The processes of categorization and decision making are likely to interact and be used iteratively in a purchase process.

How are categories organized?

Another basic issue in categorization theory is how categories are represented and organized in memory so as to permit classification (Alba and Hutchinson, 1987; Cohen and Basu, 1987). At least two ways in which categories can be represented have been identified (cf. Barsalou, 1985; Medin and Smith, 1984; Smith and Medin, 1981). Firstly, categories are represented through their category members. For instance, brands like Sony, Panasonic, and Pioneer are members of the stereo equipment category and products like chocolate bars, French fries, and Béarnaise sauce are members of the “foods not to eat while on

a diet” goal-derived category. Secondly, categories are represented through their attributes and dimensions. For instance, a shirt has buttons, a collar, sleeves and “made of cloth” as some of its attributes. Also, fat content and calories are attributes in the “foods not to eat while on a diet”-category

Moreover, categorization is made vertically and horizontally (Mervis and Rosch, 1981). Vertical categorization has to do with abstractions of instances (e.g., brands) into categories, whereas horizontal categorization is when examples at the same level of abstraction are distinguished from each other (e.g., Coca-Cola versus Pepsi Cola).

This way of categorizing results in several categorization levels: subordinate, intermediate and superordinate levels (Mervis and Rosch, 1981). Marketers may use the taxonomic structures to categorize nominal products and brands. These taxonomic structures are useful in deriving the basic need behind the purchase of a brand, and in mapping competitive structures within and across nominal product categories (Ratneshwar and Shocker, 1991). For instance, “The Phantom of the Opera” is a musical that belongs to the theater show category. Theater shows may, in turn, be aggregated into the superordinate category of entertainment. As musicals and other theater shows are not the only forms of entertainment available, we are able to identify a broad competitive market structure of “entertainment products”. Concerts, comedy clubs, sports events, night clubs all compete with theater shows at the same horizontal level, as consumers choose between different kinds of entertainment that may satisfy their needs.

Typicality

Category structures within specific categories have also been studied. Cognitive psychologists have contributed to a large extent by examining how instances within a category relate to each other (cf. Barsalou, 1985; Hahn and Chater, 1997; Medin and Smith, 1984; Murphy and Medin, 1985; Rosch, 1978).

Empirical investigations have demonstrated that categories do not possess defining features that all category members must possess (Cohen and Basu, 1987; Medin and Smith, 1984). A category is cohesive even though there are variations between members of the category. A stream of research has therefore suggested that concepts should be treated as “fuzzy sets” (Viswanathan and Childers, 1999). For instance, ice cream is a cohesive category despite the fact that for example the packaging, flavors, texture, and size differ between category members. Ice cream cones, cakes, and sticks are all instances of the ice cream category.

However, research has shown that all instances within a category are not equally good representatives of the category (Rosch, 1978). Some category instances are more typical (short for prototypical), or representative, of the category than others. Typical category instances possess all attributes of the category whereas less typical instances possess only a sub-set of the category features. Category membership can thus be seen as being on a continuum and members differ in how typical they are of the category (Murphy and Medin, 1985).

Typicality-based categorization proposes that all categories have a category prototype. The prototype is the ideal representation of the category. It possesses all attributes and is equipped with the central attribute levels. Instances are compared against the prototype on each attribute, and the closer to the ideal, the more typical is the category member. The prototype might be an ideal abstraction of the category or a physical, and existing, member of the category (Smith and Medin, 1981). A typical category member possesses more of the critical and central category features than a less typical member, and typical members are thus perceived as being more representative of the category than less typical members.

It should also be noted that category instances might be compared directly with each other in terms of similarity (Tversky, 1977; Tversky and Gati, 1978). Tversky (1977) argues that similarity is a function of both common and distinctive attributes or features. If common features dominate over distinctive features, two objects are highly similar and are likely to be included in the same category.

In typicality-based categorization, category members do not have to possess every attribute to be included in the category as long as they share some attributes with the prototype. Note that two less typical category members may not have any overlapping attributes, but still be perceived as category members if they resemble the category prototype in at least some attributes. For instance, if a category prototype consists of attributes “A, B, C, D, E, and F”; two category members may possess either “A, B, and C” or “D, E, and F” and still be in the category. In contrast, two perfectly prototypical members should, by definition, be similar.

Let us illustrate typicality-based categorization using a practical example from the shirt category. One shirt may be long-sleeved, striped, have buttons and be made of cotton and another shirt may be short-sleeved, checkered, have zippers and be made of silk. The two shirts in our example differ significantly in terms of their attributes but they are still members of the shirt category.

Typicality-based categorization delineates categories broadly and many instances may possess at least some of the attributes (Medin and Smith, 1984). Since typicality-based categories do not have limits with regard to the number of attributes, it is very difficult to draw an exact line between where one category ends and another one starts according to prototypical categorization (Mervis and Rosch, 1981). For instance, many elevators have buttons but should that make elevators atypical instances in the shirt category?

Theory-based categorization

The theories on categorization were further advanced by the theory-based view (Heit, 1997; Murphy and Medin, 1985), a view that resolves some of the issues of category cohesiveness and cognitive economy by also taking attributes and features of categories into account. Murphy and Medin (1985) proposed in an influential article that people instead use their knowledge about the world when categorizing objects.

Murphy and Medin (1985) propose, further, that two kinds of knowledge need to be specified – conceptual knowledge and theoretical knowledge – in order to understand how people categorize. Conceptual knowledge is the mental representation of the classes of objects (categories) that exist in the physical world. Murphy and Medin's idea of theoretical knowledge is the “glue” that holds concepts together. The theory-based view of categorization builds on two related ideas: intuitive theories and category essence.

People have *intuitive theories* that help them make sense of information. What, then, is an intuitive theory? Murphy and Medin (1985) refer to such theories as mental explanations rather than as complete, organized, and scientific accounts. Intuitive theories do not necessarily include true and correct descriptions of a concept. Instead, they are built on the attributes that the consumers think are important. People's intuitive theories about objects and events provide explanations for the concepts we can observe. As Smith and Samuelson (1997) put it, naïve theories are what people believe “really make something what it is”. Intuitive theories also suggest which attributes are central for the category and of importance for the understanding of the category, and which attributes that are peripheral and of less importance. These attributes will be the critical ones when defining a concept since they are more informative than others.

People also act as if categories have some essences or underlying principles making them what they are. The critical attributes have been called the *category essence* (Smith and Samuelson, 1997), and are represented in conceptual knowledge structures. Thus, each category has a category essence, a set of attributes that really define what the category is about (Heit, 1997; Murphy and

Medin, 1985). Category essences are different from attribute listing (used in typicality-based categorization) in the sense that they may also describe correlational structures between attributes and features (Smith and Samuelson, 1997).

Let us illustrate how conceptual and theoretical knowledge interact in theory-based categorization. For example, defining the essential physical and perceptual attributes of yogurt might be the yogurt texture, fruit/natural, price, packaging format, and size. Different packaging sizes often come in different packaging formats, such as plastic packaging for smaller sizes and Tetrapak packaging for larger sizes.

Category essence has another important function in product categorization. When essential attributes are present, non-essential attributes may be very different without loss of category cohesiveness (Lange, 2000; Smith and Samuelson, 1997). For instance, dictionaries are nowadays often stored on CD-ROM or on Internet sites. The essential function of a dictionary has easily been transferred into new packaging formats.

Summarizing typicality and theories in categorization, categories are based on typicality and on underlying intuitive theories. It is generally recognized that categories have a graded structure, that is, category members are more or less typical of the category. Moreover, typical category members possess more of the category-relevant attributes than do less typical members. The theory-based view also suggests that “categorizers” have to take attribute considerations (i.e., which attributes are essential and the correlation between attributes) into account when defining categories.

Typicality and essence in goal-derived categories

Our previous discussion of the internal structure of categories (e.g., typicality and category essence) was directly related to nominal product categories with brands as instances. It is also possible to describe goal-derived categories in the same way, with the distinction that products are instances (cf. Ratneshwar and Shocker, 1991). For instance, it is possible to identify goal-derived prototypes, and different products are more or less typical of the goal-derived category (Loken and Ward, 1990). However, the determinants of typicality in goal-derived categories are not the same as in nominal product categories (Barsalou, 1983; 1985; Loken and Ward, 1990). As we have seen in nominal product categories, perceptual and physical attributes determine the typicality structure. In goal-derived categories, however, physical attributes are not an indicator of typicality as different nominal product categories may be members.

Typicality is instead determined by how close a product is to the ideal of the goal-derived category and by the frequency of instantiation of a certain product in a goal-derived category (Barsalou, 1985). Goal-derived categories have a number of goal-related attributes and the typicality structure in a goal-derived category is determined by how well each member fits the goal-relevant criteria. For instance, important attributes that form the category ideal in the “snacks to eat at the movies”-category may be tasty, not sticky, carefully packaged, and not making a visit to the bathroom urgent.

Moreover, Ratneshwar et al (2001) argue that the category ideal of goal-derived categories is based on individual and situational goals. A personal goal might be to live a healthy life, whereas a situational goal might be consuming some tasty snacks while watching television. The category essence (e.g., healthy and tasty food) of goal-derived categories should be influenced by personal goals but also modified by salient situational goals.

In terms of frequency of instantiation, Lange and Wahlund (2001) examined which product categories consumers most frequently mentioned in different goal-derived usage contexts. For example, in the goal-derived category “snacks to consume while watching TV in the evening” the following products were perceived as typical: colas, potato chips, coffee, fruit, ice cream, sandwiches, chocolate bars, tea, cookies, and popcorn were the ten most frequently instantiated products. Among these, the first three products (colas, potato chips, and coffee) were the most typical.

We have already noted that goal-derived categories often incorporate across-category considerations. Another important distinction between goal-derived categories and nominal product categories is that the former is able to incorporate across-category complementarities within one category structure whereas nominal product categories are unable to do so by definition (Lange and Wahlund, 2001; Ratneshwar, Pechmann and Shocker, 1996). In some consumption situations, consumers may want to choose a constellation of complementary brands; we discuss this below in the section on brand constellations.

Categorization in marketing theory and practice

We have now presented the main theoretical aspects (e.g., cognitive economy, typicality, and category essence) of categorization and how they relate to goal-derived categories and to nominal categories. To what extent and in what ways is categorization theory used in marketing research and in marketing practice?

A large body of research in consumer behavior argues for the explicit use of categorization in marketing theory and marketing practice (e.g., Cohen and Basu, 1987; Day, Shocker and Srivastava, 1979; Moreau, Markman and Lehmann, 2001; Punj and Moon, 2002; Sujan and Bettman, 1989). In this thesis, we adhere to the notion that marketing practice and marketing theory might gain substantially from more extensive use of an explicit categorization perspective, especially goal-derived categories.

Typicality (i.e., representativeness of the category) has several implications for consumer behavior and has been thoroughly investigated in consumer behavior research. Typicality influences consumer decision making, brand choice, and brand competition in a number of ways (Alba and Hutchinson, 1987). Consumers are more familiar with a typical brand; they recognize and recall it more easily (Loken and Ward, 1990; Nedungadi and Hutchinson, 1985). They also experience lower perceived risk, lower information costs, and higher perceived quality for typical brands (cf. Erdem and Swait, 1998). All these aspects facilitate brand choice for consumers and explain why studies suggest a positive relationship between typicality and preference (Loken and Ward, 1990).

Moreover, the notion of situational influence on evaluations and choice (Belk, 1975; Ratneshwar and Shocker, 1991) has also been investigated to a large extent. Findings from these studies suggest that marketing gimmicks based on consumption goals are advantageous and that goal-derived categorization is useful in competitor identification.

How do marketing practitioners and researchers approach goal-derived categorization? There is a general understanding of the importance of goal-derived categorization, and marketing textbooks even warn practitioners against being myopic and only looking within narrowly defined markets (Kotler, 1997). One might therefore think that goal-derived categorization should have made an impact both on marketing practice and marketing theory. However, it has been evidenced that practitioners still mainly use industry boundaries (i.e., nominal categorization) when identifying competitors (Clark and Montgomery, 1999; Geroski, 1998; Porac and Thomas, 1990). When marketers develop strategies based on within-category considerations, they may be myopic and miss competitive activities of brands from other product categories (Solomon and Englis, 1994). In research, product category delineation is clearly a dominant theme in broad areas within marketing such as advertising effectiveness and customer satisfaction but there is a growing body of research which focuses on goal-derived categorization.

Research has shown that the link from a brand to a goal-derived category goes through product categories (Johnson, 1984; Johnson and Lehmann, 1997;

Meyers-Levy and Tybout, 1989; Park and Smith, 1989). Therefore, marketing practitioners need to establish strong associative links from product categories to consumption situations and usage contexts in order to be accessible members of goal-derived categories. Moreover, marketers need to establish strong associative links between the brand and the product category that it belongs to (Nedungadi, 1990; Punj and Moon, 2002).

The argument in this thesis is not that marketing practitioners and researchers should replace nominal product categorization with goal-derived categorization. However, consumers use both goal-derived categories and nominal product categories when making brand choices, and marketers should therefore also try to understand consumers' use of goal-derived categories. As noted earlier, goal-derived categories are mainly used for instantiation and across-product category evaluation and nominal categories are primarily used for brand identification and brand classification (Barsalou, 1983; Holden and Lutz, 1992). Goal-derived categorization is more relevant at early stages of the decision-making process whereas nominal product categorization plays an important role closer to brand selection and purchase (when the product category has been selected and the next choice is brand selection).

Choice processes

Consumer choice processes have been extensively studied in the last few decades (Bettman, Luce, and Payne, 1998). This is not strange considering the impact that brand and product choice has on consumers and, of course, on marketers. Recent advances in consumer behavior suggest that choice is a constructive process (Bagozzi and Dholakia, 1999; Bettman, Luce, and Payne; 1998; Bettman and Sujan, 1987). The basic notion is that consumers often do not have well-defined preferences; instead they construct them when needed, such as when they have to make a choice (Bettman, Luce, and Payne, 1998).

Bettman, Luce, and Payne (1998, p 188) also map out the major advances in consumer research with regard to choice and choice processes. Their five major conclusions are as follows:

- 1) Choice among options depends critically on the goals of the decision maker; for example, minimizing cognitive effort, maximizing accuracy, or minimizing negative emotion during decision making.
- 2) Choice among options depends on the complexity of the choice task. The use of simple decision processes increases with task complexity making prominent attributes important in complex tasks.

- 3) Choice among options is context dependent. The value of an option depends not only on its own characteristics but also on the characteristics of other options in the choice set.
- 4) Choice among options depends on how one is asked: methods for eliciting preferences can lead to systematically different decisions.
- 5) Choice among options depends on how the choice set is framed or displayed, for instance as gains or losses.

Not every choice process is constructive. An exception is, for example, when a goal-derived category activates only one product category and/or one brand. In Sweden, there is a special soft drink called “julmust” that almost every family drinks at Christmas time. The choice of “julmust” is not a constructive choice. However, many choice processes are constructed ad-hoc and are contingent on several aspects as seen in the list above. For our purposes, goal dependency (conclusion 1) and context dependency (conclusion 3) seem most important as these aspects are evidence of the use of consumption goals in decision making and of the notion that one specific product may be evaluated differently in different situations.

Next, we describe choice processes and evaluative criteria for single-brand choices. We contrast brand choices made between brands within a nominal product category with brand choices made across nominal product categories (cf. Johnson, 1984; Ratneshwar, Pechmann, and Shocker, 1996).

Brand choice within a nominal product category

Bettman, Luce, and Payne (1998) state that consumer choice researchers have traditionally focused on choice processes in choice sets where the alternatives were from the same product category, such as selecting among brands of microwave ovens or ice cream. In these cases, consumers make comparisons between alternatives by evaluating concrete product attributes and features (Engel, Blackwell, and Miniard, 1995). Brands within a nominal product category in general share common features and therefore consumers are able to compare and evaluate them on an attribute-by-attribute basis.

General models of pre-purchase alternative evaluation focus on (1) the importance of attributes, and (2) beliefs about each brand’s performance on each attribute, and are called multiattribute models (Ajzen and Fishbein, 1980; Ginter, 1974). Other models of single-brand choice are less complex and employ the use of simple heuristics (Hoyer, 1984). A heuristic may be “choose the same brand as last week”, “choose the brand that is on sale” or “choose the brand that the children like the most”.

Brand choice across nominal product categories

Pioneering work by Johnson (1984) highlighted that consumers also choose between brands from distinct nominal product categories. Johnson referred to these choice sets as “non-comparable” alternatives. For example, consumers may want to decide whether to spend money on a movie, a concert, or a nice dinner as Saturday night entertainment. Ratneshwar, Pechmann, and Shocker (1996) examined a number of conditions that might lead to non-comparable choice sets. Goal conflict (where no single product category could satisfy all salient goals) and goal ambiguity (where no clear goal was present) were two main conditions that induce choice among brands from distinct categories. Ratneshwar, Pechmann, and Shocker suggest furthermore that a single consumption goal can also produce across-category considerations (e.g., entertainment or taste) when it refers to an overall consumption goal rather than a specific product benefit. Moreover, research has shown that as experience grows in certain goal-derived categories, consumers consider alternatives from a larger number of product categories (Johnson and Lehmann, 1997).

In these cases, comparisons and evaluations are different from within-category comparisons since the brands are from different nominal product categories. Such options are called non-comparable because the attributes that describe them differ across the options (Bettman, Luce, and Payne, 1998). A fundamental difference between comparable and non-comparable choice situations is that evaluative criteria are more readily available for comparable choice (Bettman and Sujon, 1987). Moreover, it is not possible to use multiattribute models in non-comparable choice since non-comparable alternatives have many distinctive features and few common features.

Drawing on cognitive categorization, where a contrast is made between holistic and component processing (e.g., Medin and Smith, 1984), adds to the understanding of how non-comparable alternatives are evaluated. Both types of processing models assume that consumers make similarity judgments between options but differ in the way similarity is used (Cohen and Basu, 1987). Holistic processing is an overall similarity judgment (e.g., how similar are product A and product B), whereas component processing is a more analytic accumulation of matches and mismatches of attributes (Medin and Smith, 1984). Analytic processing by components is mainly used in comparable choice and holistic processing is more prevalent in non-comparable choice (Johnson, 1984; Cohen and Basu, 1987).

Moreover, the comparisons and evaluations are more abstract in non-comparable choice than in comparable choice, since brands from distinct product categories cannot readily be compared at the component level. Still, non-comparable

alternatives have to be compared and evaluated at some level, and this issue trickles down to what comprises a holistic evaluation. Research in the field of non-comparable product evaluations shows that different alternatives are evaluated in terms of their relevance for goal fulfillment, and that goal fulfillment functions as a “glue” that directs brand comparisons (Bettman and Sujan, 1987; Park and Smith, 1989). In fact, alternatives from distinct nominal product categories are comparable on, for example, taste or performance.

Products might also be evaluated in terms of their relevance for goal fulfillment instead of directly against each other (Bettman and Sujan, 1987; Park and Smith, 1989). Here, typicality (i.e. closeness to ideal) plays an important role in how alternatives are evaluated against the consumption goal. Products and brands will primarily be evaluated according to how well they can satisfy the consumption goal (Ratneshwar and Shocker, 1991). When a consumption goal is present, it is easier for consumers to make comparisons between brands from distinct nominal product categories. For instance, how well a Chiquita banana or a Snickers bar can satisfy the consumption goal of a tasty and filling afternoon snack, is certainly a comparison that every consumer could naturally make.

Determinants of brand choice

We have established that consumers use goal-derived criteria when choosing brands in goal-derived categories. However, goal-derived choice processes imply that they must make decisions on two levels: (1) which product will best satisfy their needs, and (2) which brand to choose within that product category. Thus, another important consideration is how the product-level decision and the brand-level decision are made. An additional issue is which essential determinants consumers use at each level.

There are two different ways in which consumers process information about product categories and brands: bottom-up and top-down processing (Samu, Krishnan, and Smith, 1999). Bottom-up processing starts at the brand, continues with product category and finishes at the goal-derived category level. This processing is important when consumers learn about brands and brand associations (Holden and Lutz, 1992). Top-down processing starts at the goal-derived category and trickles down by way of product category to the brand level. Top-down processing is the central process in decision making (Holden and Lutz, 1992). Thus, top-down processing is used rather than bottom-up processing in goal-derived choice (Johnson and Lehmann, 1997; Meyers-Levy and Tybout, 1989; Nedungadi, 1990; Park and Smith, 1989), strongly suggesting that the product-level decision precedes the brand-level decision.

Typicality

As we saw in the section on categorization, typicality is a main determinant of preference in goal-derived categories (Loken and Ward, 1990). We reiterate that typicality is based on closeness to ideal goals and on frequency of instantiation in goal-derived categories. Thus, product categories that consumers perceive as potential goal fulfillers are considered further, while other, less typical products are excluded. One of the product categories is then selected. The actual selection may be influenced by factors such as need for variety (Menon and Kahn, 1995) and product category availability at point of choice (Nedungadi, Chattopadhyay, and Muthukrishnan, 2001).

What are the positioning consequences of product-level decisions for marketers? It is important to ensure that the product category that the brand belongs to is perceived as typical in attractive goal-derived categories. An attractive goal-derived category should be based on enduring consumer needs and/or on often recurring consumer needs (Ratneshwar and Shocker, 1991). Note that goal-derived categories can, at least theoretically, be described in the same way as nominal product categories. For instance, market shares, market growth, and market size can be calculated in goal-derived categories. Another key aspect in positioning is to enhance the *versatility* of the product category, i.e., making it more typical in several different goal-derived categories (Ratneshwar and Shocker, 1991).

Brand attitude

When the product category has been selected, the brand selection process is initiated. Brands are more or less typical members of product categories (cf. Nedungadi, 1990). We reiterate that brand typicality in product categories is based on the essential attributes of the category. Typicality may also be important at brand level as it indicates a preference for a brand (Nedungadi and Hutchinson, 1985).

However, there is a growing body of branding research emphasizing that brands within a product category do not differ much with regard to attributes (e.g., Ehrenberg, Barnard, and Scriven, 1997; Shankar, Carpenter, and Krishnamurthi, 1998; Carpenter, Glazer, and Nakamoto, 1994). Some short-term variations may exist but different brands tend to copy each other's successful attributes very quickly (Ehrenberg, Barnard and Scriven). Instead, as Keller (1993) notes in an influential article on brands, at brand level there are differences between brands that are strictly communicated differences (i.e., brand images and brand attitudes). For example, Nokia, Sony Ericsson and Siemens mobile phones share

the majority of manifest product attributes but are still perceived very differently from each other through communicated images (cf. Dahlén and Lange, 2003).

Since the majority of brands within nominal categories are not highly differentiated with regard to manifest attributes (they often share the same attributes), most brands are perceived as very similar (cf. Ehrenberg, Barnard, and Scriven, 1997). Thus, as similarity and typicality are related (see Categorization above), there is reason to believe that brand attitude is a stronger predictor of brand choice than typicality.

What does this mean for brand positioning? We suggest that specific brands are preferred not because they perform much better on certain goal-related attributes or product-related attributes but because they have built brand equity through marketing communications and linked stronger associations with consumers than competing brands (cf. Erdem and Swait, 1998; Keller, 1993). The main objective for a brand manager is to secure that the brand has the most favorable brand attitude within the product category.

Summarizing the consumer choice process for non-comparable choice, the main issue is that consumers evaluate options based on goal fulfillment potential. Then, product categories are compared against the relevant goal(s) and there is reason to believe that more typical product categories are selected. Next, the brand selection process is activated where a salient evaluative criterion is brand attitude. Product-level typicality ranges from typical to atypical member of a goal-derived category and brand attitude ranges from favorable to unfavorable member of a product category.

Brand constellations

We have earlier briefly discussed the notion of brand constellations. This is a central theme in the thesis (two articles deal with brand constellations) as it is a natural extension of goal-derived categorization (Ratneshwar, Pechmann and Shocker, 1996). Consumers often want to consume more than one brand simultaneously (Samu, Krishnan, and Smith, 1999). In these cases, a constellation of complementary brands is needed for goal fulfillment (McCracken, 1988; Englis and Solomon, 1995). Moreover, consumers often make single-brand purchases with regard to previously acquired products and brands. For instance, empirical studies have shown that consumers have certain acquisition patterns for durable goods (e.g., Kasulis, Lusch, and Stafford, 1979; McFall, 1969). These studies investigated how different consumers purchased items for the home and the similarities in the sequential pattern of purchases were striking.

Consumers also make several purchases in consumption episodes (Dhar and Simonson, 1999), for example “dinner and a movie”, “a beer at a hockey game”, and “food choice after a work-out”. In empirical research, consumer choices in consumption episodes were found to be goal-derived, either by balancing different goals (making one healthy choice and one tasty choice) or by highlighting (making either two healthy choices or two tasty choices). Only a small minority of respondents argued that the choices were made independently (Dhar and Simonson, 1999). Some researchers have also studied brand constellations more symbolically through advertising alliances (Samu, Krishnan, and Smith 1999) or related to lifestyle imagery or reference groups (Englis and Solomon, 1995; Solomon and Buchanan, 1991).

In this thesis, we focus mainly on brand constellations where consumers simultaneously consume two or more brands in specific goal-derived usage contexts. Examples in marketing are marketer-induced brand constellations as “Big Mac and Coca-Cola” at McDonald’s and short-term cross-merchandising activities in retail stores. However, brand constellations are often consumer-induced and comprise idiosyncratic combinations of consumers’ favorite brands (cf. Fournier, 1998).

How prevalent is brand constellation consumption? It probably depends on the specific product class. In some goal-derived categories the consumption frequency of brand constellations is presumably very high. Since packaged goods are empirically investigated in this thesis, it might be most relevant to investigate previous studies in that product class. One study by Lange and Wahlund (2000) found that consumers often choose more than one product in the same goal-derived category. Consumption of constellations (i.e., a consumer chose two products or more) varied from 85 to 98 percent in the investigated goal-derived categories.

The conceptual basis for a brand constellation is the notion that some consumer products are naturally linked to each other and therefore are perceived to “go very well together” (McCracken, 1988). Solomon and Englis (1994) identify three ways in which brands may complement each other: functional complementarity (grounded in needs for proper operation), aesthetic complementarity (grounded in needs for sensory gratification and emotional appeals), and cultural complementarity (grounded in needs for social identities and in reference group aspirations for consumers). Culturally-based constellations can consist of brands from very different product categories.

Complementarity is also often a topic in the branding literature (e.g., in literature on brand extensions and brand alliances). A large body of research is concerned with how perceived fit between a brand and its brand extensions affects

evaluation (e.g., Bridges, Keller, and Sood, 1999; Broniarczyk and Alba, 1994; Lane, 2000; Park, Milberg, and Lawson, 1991). Moreover, perceived fit is also an evaluative criterion in brand alliances, for example, in co-branding and advertising alliances (Park, Jun, and Shocker, 1996; Samu, Krishnan, and Smith, 1999; Simonin and Ruth, 1998). Perceived fit is relevant at both the product level and the brand level. Research shows unequivocally (Broniarczyk and Alba, 1994) that it is important that consumers can make sense of a brand extension or a brand alliance either through a high product fit (product-specific associations) or a high brand fit (brand-specific associations).

Consumers perceive a level of fit between brands based on the associations they hold to individual brands and product categories. Brand associations are a fundamental building block for individual brands (Keller, 1993) and consumers utilize brand associations to understand what a brand can deliver. Park, Jaworski, and MacInnis (1986) argue that brand associations should be based on functional, symbolic and experiential needs. Functional needs concern solving problems, preventing potential problems or resolving conflict; symbolic needs are defined as “desires for products that fulfill internally generated needs for self-enhancement, role position, group membership or ego-identification” (Park, Jaworski, and MacInnis, p 136) Experiential needs are defined as products that provide sensory pleasure, variety and/or cognitive stimulation. Functional, symbolic and experiential needs closely resemble functional, aesthetic and cultural complementarity in Solomon and Englis’s (1994) framework presented above.

We may also distinguish between how product fit and brand fit should relate to different aspects of complementarity and needs. Product fit is similar to functional and aesthetic complementarity and should be derived from functional and experiential needs, whereas perceived brand fit carries more sociocultural meaning and thus is more similar to cultural complementarity and symbolic needs.

Thus, the basis for perceived fit and complementarity between brands and product categories is the associations that are linked to individual brands. If two brands from different product categories share the same symbolic meaning (e.g., both are youthful and trendy), their communication may make consumers associate the brands to the same consumption goal. Consequently, perceived brand fit is strong. If, on the other hand, consumers perceive the communicated brand images between two brands very differently, brand fit is weak.

Choice processes for brand constellations

In this section we discuss the brand constellation choice process, and what makes a consumer prefer a specific constellation of brands to others. Previous research suggests that brand constellations might (1) be established in memory with strong links between the complementary brands (Barsalou, 1983; Fournier, 1998), and (2) be established ad-hoc depending on the context (Barsalou, 1983; Lange and Wahlund, 2000; Menon and Kahn, 1995). The strength of a memory link for a certain brand constellation is likely to be moderated by goal-derived category familiarity (Barsalou, 1983). In familiar goal-derived categories, consumers might have constructed and memorized several brand constellations from a large set of product categories. These brand constellations compete with each other when the goal-derived category has been activated. Thus, simple heuristics may be used also in brand constellation choice.

Next, we briefly contrast single-brand choice and brand constellation choice. Thereafter, we draw upon (1) the discussion on complementarity and perceived fit from the brand constellation section, and (2) the previous discussions on goal-derived categories and non-comparable choice in order to develop a conceptual understanding of why consumers choose certain brand constellations.

Brand constellation choice defined

Brand choice has been defined as “a customer’s selection of a particular alternative from a set of alternatives from a given product-market domain within a given choice situation” (Thelen and Woodside; 1997, p. 126). This view is similar to decision processes of brand choice within nominal product categories. As previously noted, two frequently mentioned models of alternative evaluation are multi-attribute consideration for high-involvement purchases and the use of heuristics for low-involvement purchases. In addition, goal relevance is salient and holistic evaluations are prevalent in brand choice across nominal categories.

Since brand constellations normally consist of brands from different product categories, goal-derived categories are useful in brand constellation choice. Brand constellation choice refers therefore to “a customer’s selection of a particular brand constellation from a set of alternatives from a given goal-derived market domain within a given choice situation”. A brand constellation may comprise two or more complementary brands (Englis and Solomon, 1994)

Compared to choice of one brand, consumers need to make at least two additional considerations when choosing brand constellations, that is, how well the brands fit with each other at brand level and at product level. Alternative brand constellations are, like non-comparable choice, relatively effortful to

compare and evaluate since they may originate from several different product categories and do not share many manifest attributes (Bettman, Luce, and Payne, 1998). Consumers need to use goal-related criteria since non-comparable alternatives (brands from different product categories) are involved in the process of making brand constellation choices (cf. Bettman and Sujaan, 1987; Johnson, 1984; Park and Smith, 1989). Thus, brand constellations are likely to be compared holistically and evaluated in terms of goal-fulfillment potential.

Determinants of brand constellation choice

What factors determine the value of a certain brand constellation? Previous research has demonstrated that constellation-related variables (e.g., perceived fit) and brand-related variables (e.g., brand attitude) are important in evaluations of brand constellations (Simonin and Ruth, 1998). Constellation-related variables assess how consumers perceive a brand constellation as a whole entity and brand-related variables assess how consumers perceive individual brands within a brand constellation.

A second way of partitioning the influences of brand constellations might be to investigate determinants at the product level and at the brand level respectively (cf. Englis and Solomon, 1994; Nedungadi, 1990). At the product category level, product fit and product-level typicality might influence evaluations and choice of brand constellations. At the brand level, brand fit and brand attitude might influence evaluations and choice of brand constellations.

Product fit

We argue that a high degree of product fit should be important in brand constellation choice, as consumers would not like to consume two or more brands that are not functionally or aesthetically compatible. Therefore, we consider product fit as a primary evaluation of a brand constellation. Brand constellations with poor fit (such as a combined package of Ice Tea and mayonnaise found by the author in a Portuguese grocery store) should most likely be rejected automatically. Note that idiosyncratic differences exist and that perceived product fit may vary between consumers.

Brand fit

Moreover, previous studies suggest that brand fit also influences evaluations of brand constellations (Park, Jun, and Shocker, 1996; Simonin and Ruth, 1998). In research on brand alliances, it has been argued that two brands that do not share similar brand associations may trigger undesirable and unwanted beliefs (Simonin and Ruth, 1998). In an alliance context, consumers might wonder why

some brands co-operate (e.g., a familiar brand such as Lipton and an unfamiliar brand like Calvé; note that Calvé mayonnaise could be familiar to Portuguese consumers and unfamiliar to Scandinavian tourists). In a brand constellation context, we argue that brands with poor fit do not “enter” into the consideration set at all.

Cohesive brand images are fundamental for a high degree of brand fit (Park, Milberg, and Lawson, 1991), and may influence consumers to choose brands from distinct nominal product categories that share these images. For instance, consumers may have preferences for environmentally friendly brands that cut across several product categories or for brands with strongly communicated brand images that also cut across several product categories. Brand fit should thus be a relevant criterion since consumers can be expected to look for similar brand associations across nominal product categories.

Thus, previous research indicates that it is important for consumers that the brand constellation is compatible both in terms of the different product categories (i.e., product fit) and in terms of the brand associations (i.e., brand fit). However, perceived fit does not convey all information about how consumers evaluate and choose brand constellations. We also need to examine brand-related variables.

Product-level typicality and brand attitude

The discussion on decision-making processes regarding choice of single brands contained in the previous section will not be repeated here. Product-level typicality and brand attitude are often used as primary brand-related variables (Simonin and Ruth, 1998). Let us only briefly demonstrate that the same evaluative criteria as in single-brand choice are probably central in brand constellation choice as well. Thus, we claim that typicality at product level and attitude at brand level are also important when consumers choose brand constellations.

We argue that consumers do not want to choose brand constellations that include brands they do not like. Positive effects of product typicality and brand attitude on brand choice are an established phenomenon in consumer behavior research (Eagly and Chaiken, 1993; Engel, Blackwell, and Miniard, 1995; Nedungadi, 1990). Thus, as a basic proposition, brand constellations should be more positively evaluated if they consist of brands that come from more typical product categories than brands that come from less typical product categories. Similarly, brand constellations should be more positively evaluated if the consumer likes the brands in a brand constellation more than the brands in competing brand constellations.

The basic proposition of brand constellation choice is intuitively appealing; the more favorable an individual brand is (i.e., in terms of brand attitude and product-level typicality), the more favorable a brand constellation is. However, this view needs to be modified by two major influences of brand constellation choice: different types of decision-making processes and how the constellation-related variables (perceived product and brand fit) impact the brand-related variables.

Decision-making sequences

Let us first investigate how brand constellations may be chosen. Previous research on consumption episodes, where consumption choices are made sequentially, suggests that the first choice affects later choices (cf. Dhar and Simonson, 1999). Although we primarily investigate brand constellations that are consumed simultaneously, they may be selected sequentially.

A sequential process is probably present when the product-level typicality structure reveals strong typicality differences between product categories. One product may dominate over others and be more strongly linked to a specific goal-derived category (cf. Farquhar and Herr, 1993), whereas complementary brands may be altered from one occasion to the other (Lange and Wahlund, 2001).

A sequential process starts with a selection of a highly typical product category, and perhaps also the selection of a favorable brand within that category. Consumers then select the complementary brand from another product category. The complementary choice is assumed to be relatively less important and is selected from a large number of different - and also less typical - product categories. For example, a consumer may be very interested in having a chocolate bar in the afternoon but any kind of complement (e.g., soft drinks, coffee, tea, and mineral water) would be satisfactory as long as (1) the product fits with a chocolate bar and, (2) a favorable brand in the complementary product category is available.

Another decision-making process is when all brands are selected simultaneously. In this case, consumers think of entire brand constellations, and therefore consider a set of competing constellations. Thus, brand constellations are viewed as more or less typical; a brand constellation of highly favorable brands from very typical product categories is probably selected. Over time, simultaneous processing should make the link between a brand constellation and the consumption goal stronger, which suggests that all products in the constellation should be equally typical of the goal-derived category. Consider a consumer

who strongly prefers vodka and cranberry juice to other drink constellations (e.g., gin and tonic). Vodka and cranberry juice would both be highly typical members of the goal-derived category and gin and tonic would both be perceived as less typical members.

Relative effects in brand constellation choice

Considering the four determinants of brand constellation choice together demonstrates some interdependencies between (1) brand-related and constellation-related determinants, and (2) product-level and brand-level determinants. For instance, brand-related evaluations are influenced by constellation-related evaluations. A poor fit between product categories and/or brands can “undermine” a brand constellation even if the consumer likes the brands separately (Simonin and Ruth, 1998). Poor fit may also lead to undesirable associations for the brands (Aaker and Keller, 1990).

Another central aspect is how strongly related the brand-related variables and the constellation-related variables are to brand constellation choice. Park, Jun, and Shocker (1996) found that complementarity was more important than attitude in evaluations of brand alliances. Applying this perspective to brand constellation choice, we suggest that perceived fit may be more important than brand attitude in brand constellation choice.

Research has also shown that consumers feel that choosing the right product is more important than choosing the right brand in goal-derived choice situations (Park and Smith, 1989; Alba, Hutchinson, and Lynch, 1991). Consumers may also perceive greater differences between product categories than between brands within product categories, thereby making the product-level decision more crucial for goal fulfillment. The concept of the basic level in cognitive categorization supports this notion (Medin and Smith, 1984; Mervis and Rosch, 1981).

To summarize, consumers evaluate a brand constellation both in terms of the whole constellation and in terms of individual brands. Main determinants of brand constellation choice are product fit, brand fit, product typicality, and brand attitude. The choice process is either sequential or simultaneous. Based on this, what are the consequences of brand constellation choices for brand positioning? The notion of brand constellation choice highlights the importance of creating, and strengthening, associative links to other brands and other product categories (cf. Holden and Lutz, 1992; Nedungadi, 1990). By doing this, the brand enhances the possibility of being evaluated positively in both constellation-related variables and brand-related variables, and thus an increased likelihood of being included in selected brand constellations should follow.

Next, we present the main findings of the articles that comprise the second part of the thesis. Thereafter, we present the overall contributions of the thesis and discuss limitations (of each article and of the thesis as a whole) and suggestions for further research. The four articles cover central aspects of goal-derived categorization and brand (constellation) choice. The first article deals with determinants of single-brand choice across nominal product categories. The second and third articles focus on determinants of brand constellation choice. The fourth article investigates to what extent retailers adapt their marketing activities to incorporate goal-derived categorization.

The articles

Article 1 – When weaker brands prevail.

The first article, “When weaker brands prevail,” investigates single-brand choice across nominal product categories. The main objective was to test the relative importance of product category typicality and brand typicality in goal-derived categories. Which level of typicality is more diagnostic of brand choice? Cognitive differences associated with brand choice were also examined (see below).

In the study, a choice task was designed with four different goal-derived categories related to snack consumption. Two brands from different nominal product categories competed against each other. For instance, potato chips and a bag of candy were alternatives in the category “snacks to eat at the movies”. The product categories were selected based on product-level typicality in goal-derived categories (one typical and one atypical). One brand (typical or atypical) from each product category was also selected to represent *a typical brand in an atypical product category* and *an atypical brand in a typical product category*. This study may also be perceived as a test of whether typical products or typical brands are more strongly related to choice in goal-derived categories.

The 307 respondents (recruited at a train station and interviewed while waiting for a train) made brand choices in four goal-derived categories. The empirical results show that consumers are more likely to choose an atypical (and less favorable) brand from a typical product category than a typical (and more favorable) brand from a less typical product category in goal-derived categories. Approximately 70 percent chose the typical product over the typical brand. Thus, strong brands lose against weak brands if the weaker brand is ‘compensated’ by a better nominal product category position in the goal-derived category. Also, when the differences in product-level typicality were small, more consumers

chose the strong brand than when typicality differences were large. Summarizing, product typicality was more important than brand typicality.

Cognitive differences between respondents based on the choice of typical product or typical brand were also examined in this article. The results showed that the brand attitude towards typical brands was high regardless of whether or not the respondents chose them, whereas the brand attitude towards the atypical brand was higher when it was chosen than when it was not chosen. Overall, the typical brand was more liked by respondents – even by those who chose the atypical brand. Moreover, respondents who chose atypical (typical) brands perceived larger (smaller) typicality differences between the product categories and smaller (larger) attitudinal differences between the brands.

The study shows that, in general, consumers perceive the product-level decision as being more important than the brand-level decision in goal-derived choice. As a consequence, an important finding is that strong brands may not be able to offset the value of “strong products”. Finally, it renders support to the notion of theory-based categorization as consumers who chose differently also demonstrated different typicality structures in the goal-derived categories.

Article 2 - Everything but the brand? Examining the influence of brand-related and constellation-related evaluations on brand constellation choice.

Sometimes, goal-derived category consideration makes consumers choose a brand constellation. In these cases, constellations of brands from two or more product categories compete against each other. Two of the articles investigate the notion of brand constellations. The second article in this thesis, “Everything but the brand? Examining the influence of brand-related and constellation-related evaluations on brand constellation choice,” covers aspects of how evaluations of individual brands in the constellation (brand attitude and product-level typicality) and evaluations of the combination of brands (product fit and brand fit) are related to brand constellation choice.

One hundred and forty-two respondents (students at a Swedish university) made brand constellation choices in four goal-derived categories. The respondents chose from a set of three different brand constellations in each goal-derived category. In two of the goal-derived categories, each brand constellation consisted of two brands. The other two goal-derived categories investigated brand constellations comprising three brands.

The brand constellations were subject to pre-tests where appropriate product categories were defined and combined into constellations. For instance, the three brand constellations in the goal-derived category, “snacks to eat while studying

for an exam,” were (at the product level) orange juice/chocolate candy; coffee/chocolate bar; soft drink/cookies. Furthermore, only existing and relatively familiar brands from the selected nominal product categories were used.

Brand attitude and product-level typicality (brand-related variables) were averaged across brands in the brand constellation to obtain a measure of individual brand evaluations that could be related to the brand constellations. Brand constellation choice was measured dichotomously.

All the brand-related and constellation-related variables were positively related to brand constellation choice. However, brand attitude had a relatively weaker relationship than perceived fit and product-level typicality. This study shows that brand constellation choice is determined by several different factors. Marketers can use each of these criteria to enhance the attractiveness of the brand, and can aim at increased goal-derived typicality for the product category in which the brand belongs. The brand should also benefit from an enhanced level of complementarity (or fit) with brands in other nominal product categories. Perceived fit can be increased both functionally (product-level fit) and symbolically (brand-level fit). Increasing the brand attitude is also a consideration, although of relatively less importance for brand constellation choice than the other investigated determinants.

Article 3 - Do brands of a feather flock together? Some exploratory findings on the role of individual brands in brand constellation choice.

The third article in the thesis, “Do brands of a feather flock together? Some exploratory findings on the role of individual brands in brand constellation choice,” also deals with the notion of brand constellation choice. Building on previous research on brand constellations and on article 2, in which a central issue was the effect of combined brands, we focus our attention solely on evaluations of individual brands within brand constellations. The starting point in this article is the need to also go beyond perceived fit to understand how brand constellations are evaluated and chosen.

By investigating brands that are included in consumers’ choices of brand constellations separately, we examine if both brands have to come from typical product categories and if both brands have to be strongly evaluated in terms of brand attitude. In this study, 142 respondents (students at a Swedish university) participated and made brand constellation choices in two goal-derived categories. Consumers had three different options to choose from in both goal-derived categories (two brands in each brand constellation were to be selected).

Individual brand evaluations were grouped into three different levels of typicality (typical, moderately typical, and less typical) and three different levels of brand attitude (favorable, moderately favorable, and unfavorable). Brands were also put into two groups based on evaluation equality at product level and brand level respectively (equally evaluated brands and unequally evaluated brands). Equally evaluated brands might be two typical product categories, two moderately typical product categories or two less typical product categories. Unequally evaluated brands might be one typical product category combined with one less typical product category.

The results show that brand constellation choice is most likely when both products are typical or when both brands are liked. However, the results also show that less typical (favorable) brands might be included in brand constellations. For instance, brand constellations with one typical/atypical product category were chosen more often than two moderately typical product categories. Similar results were found for brand attitude. Two reasons for these results are discussed in the article. First, the atypical (less favorable) brand may be chosen as a complement to a more typical (favorable) brand in low-involvement situations. Secondly, a class of products (e.g., snacks) may be perceived as less typical in a specific goal-derived category than another goal-derived category (e.g., beverages) but still be chosen in situations where consumers want to consume a constellation of brands.

These findings suggest that the relationship between typicality and choice and brand attitude and choice might not be as straightforward as generally thought. Brands that are not among the most favorable in their product category and brands that come from less typical product categories may still be chosen in goal-derived categories when brand constellations are desired. Some brands appear to be conditionally activated, that is, only considered when specific other brands have been selected and then function as complements in consumption experiences. There are possibilities for joint in-store presentation and joint advertising as well as indirect comparative advertising that brand managers can use to place their brand in the right context.

Article 4 - Real marketing in the virtual store

The fourth article, "Real marketing in the virtual store," examines to what extent consumers use goal-derived categories in service encounters, for instance, at grocery retailers. There are immense opportunities for marketers to use goal-derived categories in the presentation of merchandise and thus induce consumers to make purchases with specific goal-derived categories in mind. We assume that if consumers are reminded of everyday consumption goals at point-of-purchase, increased sales for retailers will follow.

Consumer perceptions of traditional grocery stores and Web site grocery stores are compared in terms of planning and goal-derived purchases. This comparison is of interest since Web grocery stores do not have any logistic obstacles to overcome to present its merchandise by goal-derived categories. Or, Web grocery stores may at least feature some promotional campaigns inspired by goal-derived categorization (e.g., timely cross-promotion activities such as “special picnic baskets” in the summer).

Internet and traditional shopping were compared in a study involving 368 respondents who had experience of both types of grocery stores. The respondents were recruited from a membership register at one Web grocery retailer. In general, consumers were expected to make more goal-derived purchases in a store environment based on goal-derived categorization. However, the findings in the article showed that consumers rarely make (i.e., are induced by the marketer to make) purchases related to specific consumption goals in grocery retailing. The effect was consistent across grocery store format but goal-derived shopping was especially rare in Internet shopping.

The fourth article also investigated purchase planning. If the store atmosphere provided inspiration for goal-derived purchases, we argue that consumers would make more single-item purchases and more unplanned purchases. Our results indicate that consumers made single-item purchases in traditional grocery stores but not in Web stores. Stockpiling was more prevalent in Web stores. Moreover, the virtual interface did not provide an atmosphere where additional purchases were made. Thus, grocery retailers, both in Web and traditional environments, may miss out on increased sales opportunities by not aiding consumers to make goal-derived purchases. This article suggests several ways to improve the virtual store environment, and indirectly also traditional stores, in terms of more effective display and promotion.

Contributions

This thesis challenges the common view on brand choice and brand choice determinants by investigating choice across nominal product categories. We have shown in the empirical studies that consumers do not solely rely on brand associations when they make brand choices and brand constellation choices.

One major contribution is that product-level considerations are an important determinant of brand choice. The first three articles all indicate that product-level considerations affect consumers' brand preferences to a larger extent than brand-level considerations do. Moreover, in the articles on brand constellation choice, we identify that perceived fit is more important than brand attitude for

the individual brand. As a consequence, the articles on non-comparable choice and on brand constellation choice show that it is possible for weaker brands to beat stronger brands if

- (1) the weaker brand comes from a more typical product category; and
- (2) the weaker brand is in a brand constellation with a strong brand.

Another main contribution of the thesis is the importance of situations and situational goals (cf. Belk, 1975; Ratneshwar et al, 2001). Research on cognitive categorization suggests that typicality is not a global construct but rather a construct that is highly dependent on situational influences. Different goal-derived categories may conjure different typicality judgments for a specific product or brand (cf. Ratneshwar and Shocker, 1991). The findings of the two articles on brand constellation choice suggest that typicality judgments of a brand are also influenced by the “partner(s)” in a brand constellation. A cookie might be more typical as an “after-dinner snack” along with a cup of coffee than by itself.

Moreover, the majority of research in consumer behavior persists in using individual differences and individual goals as main explanations of behavior. However, we have shown in this research how the aspect of situational goals can be added to research on brand choice. Throughout the four articles, we have used usage situations and consumption goals to better understand aspects of brand and product category choice. It has indeed been fruitful to use situations to gain a deeper understanding of how consumers perceive product categories and brands as members of goal-derived categories, and how those perceptions are related to brand choice.

However, the studies show that consumers use the same determinants of choice across usage situations/goal-derived categories. The effects of product-level typicality, perceived product fit, perceived brand fit, and brand attitude on choice were relatively stable across the usage situations. Therefore, one main conclusion is that different usage situations have a strong impact on which brands are considered, but do not affect the determinants of brand choice.

Another main contribution is the use of choice variables in several of the articles. Brand choice is a behavior, and thus different from the affective (e.g., brand attitude) and cognitive (e.g., perceived fit) evaluations and intentions that are often used in research. Of course, the body of research on stated and revealed choice preferences is large (cf. Carson et al, 1994). However, in this thesis, brand choice has been integrated with affective and cognitive evaluations of brands. This has lead to new findings concerning the relationship between affective/cognitive and behavioral aspects of consumer decision-making

processes, for example, complementarity and product-level evaluations – and not only individual brand evaluations – are important determinants of brand choice.

This thesis can also contribute to marketing practice, having made considerable use of goal-derived categories to explain consumers' choice processes. We argue that goal-derived categorization is better suited than nominal product categories as a general categorization tool to guide researchers and practitioners who want to investigate brand choice and brand constellation choice. Note that it is probably more demanding for marketing practitioners to use goal-derived categories since they may conclude that their brands are present in several different goal-derived categories. Every goal-derived category may have different goal-relevant attributes that the brand and its associations have to be able to hold.

In what ways can brand management practices be enhanced by systematically allowing goal-derived categorization? Consumers may also be open to goal-derived “suggestions” from single brands and product categories in many usage situations. Remember that consumer choice processes are often constructive (see Bettman, Luce, and Payne, 1998). In situations where choice processes are constructive, consumers should be more easily influenced by marketing activities. Our empirical studies indicate that (1) consumers have heterogeneous preferences in goal-derived categories, and (2) marketers can do more in terms of communication to present stronger links between certain brands and goal-derived categories. By establishing stronger links, marketers may be able to “de-construct” the ad-hoc like, constructive choice processes that consumers often seem to use. The following are suggestions that brand managers may employ to increase typicality in goal-derived categories:

- Packaging modifications (e.g., size, type of container, and design) may allow the brand to “extend” into new goal-derived categories.
- Line extensions of the brand may associate the brand with more consumption goals, for instance by introducing an environmentally friendly, diet, and “weekend” version of the brand.
- Advertising may demonstrate appropriate new usage situations for brand consumption.
- Advertising may be used to associate the brand with symbolic consumption goals.

The thesis also highlights how important it is for brand managers not to define their competitive environment only within their nominal product category. For instance, we have shown that being the “right” product is more important for a brand than being the “right brand”. This finding is consistent across brand

choice and brand constellation choice. Therefore, it should also be fruitful for brand managers to put marketing resources into positioning the nominal product category to which the brand belongs so that the typicality level of the product increases in relevant goal-derived categories. In the case of brand constellations, we have also identified that perceived fit with other brands is more strongly related to choice than individual brand evaluations. Therefore, brand managers should aim to directly or indirectly associate their brand with complementary brands and nominal product categories.

How should the notion of brand constellations influence how brand positioning is manifested? Thinking in terms of brand constellations is most relevant in joint presentation at point-of-purchase and in joint communication through alliances in advertising. Recent research in the literature on brand extensions has shown that marketers can increase the degree of perceived fit by establishing explanatory links between the original brand and its extension (Bridges, Keller, and Sood, 2000). Moreover, consumers are likely to make a cognitive effort to understand why two brands are presented jointly if needed (Meyers-Levy and Tybout, 1989; Lane, 2000). Using explanatory links between brands in marketer-induced brand constellations may also be beneficial; explanatory links established in advertising can communicate appropriate usage situations or consumption goals (cf. Wansink and Ray, 1996).

Finally, we have argued that brands that belong to attractive (e.g., popular, typical, or versatile) nominal product categories are in a strong position as are brands that fit well with many other brands. It is important for brand managers to be able to measure the effects of these kinds of brand investments. To relate our suggestions for marketing practice (increased typicality in goal-derived categories and increased perceived fit with other brands) to measurement of (single) brand equity (cf. Keller, 1993), we argue that *product category equity* (i.e., typicality within relevant goal-derived categories and typicality across relevant goal-derived categories) and *brand fit equity* (i.e., the number of complementary brands and nominal product categories that strongly fit with the brand) can be measured.

Limitations and further research

As in all research, this thesis also suffers from some limitations. It is important to consider limitations within the conducted studies and limitations in terms of critical aspects not covered in the present research. Below, we discuss the main limitations and provide suggestions for further research, both in general and article by article. Note that each article also contains a section on limitations and further research suggestions.

General limitations and further research suggestions

All four empirical studies were related to choice and consumption of food and beverage. This is an empirical field that is characterized by relatively high consumer familiarity due to short purchase cycles (cf. Magi, 1999). It would be of great interest to investigate the notion of brand constellation choice and single-brand choice across categories in empirical fields with other characteristics. Also, studies concerned with brand constellations with perceived product fit at a more abstract level (e.g., a magazine, a cup of coffee and classical music) may also produce findings of substantial interest. For instance, is brand fit more or less important when the product fit is not at an obvious and concrete level?

This thesis attempted to allow for preference heterogeneity through the use of many different product categories in the goal-derived choice situations. Forthcoming studies should reduce the number of product categories used in order to experimentally test effects of single brand strength and brand complementarity in controlled settings. We also call for stronger tests of relative importance between (1) brand-level and product-level determinants and (2) brand-related and constellation-related determinants.

Moreover, the present research does not address effects of marketing communication and brand management practices on goal-derived category structures and brand choice. We discuss some general aspects that marketers are well advised to consider, but there is a clear need for advertising and in-store experiments that employ (joint) brand presentation in relation to goal-derived categories. What are the advertising and sales effects of joint marketing activities and how are they moderated and mediated by factors such as perceived fit, brand typicality, brand attitude, and product-level typicality? Is joint presentation of complementary brands an effective marketing strategy for introducing a new brand on the market?

As regards joint presentation, we did not manipulate the order of brand presentation in the brand choice and brand constellation choice studies. Previous findings on context effects, such as the attraction effect (e.g., Heath and Chatterjee, 1995; Hsee and Leclerc, 1998; Huber, Payne, and Puto, 1982) and assimilation and contrast effects (e.g., Buchanan, Simmons and Bickart, 1999; Simonson and Tversky, 1992) show that mode of presentation strongly influences how brand perceptions are formed. The attraction effect refers to a brand being perceived more strongly if a relatively weaker, but similar, brand is introduced on the market. Assimilation and contrast effects suggest that brands may use similarities and differences to other brands to enhance its own position.

It could be useful to consider context effects in future studies on brand choice across nominal product categories and brand constellation choice.

Lastly, the following determinants of choice were employed in the present research: brand typicality and product typicality for single-brand choice and product typicality, product fit, brand attitude and brand fit for brand constellation choice. Future studies may use these determinants again but also consider other determinants (e.g., brand familiarity, product attitude, and involvement). Effects other than choice on one particular occasion should also be investigated, such as repeated brand choice and the existence of brand (constellation) loyalty in goal-derived categories. Research on sequential and simultaneous decision-making processes may also shed light on how consumers choose brand constellations.

We now turn to the specific limitations of each article and related suggestions for further research. This final part of the thesis introduction is to be regarded as an extension of the limitations and further research suggestions contained in each article.

Article 1 – When weaker brands prevail

The first article does not examine typical brands from typical product categories. The omission of a truly strong alternative from the choice task is a threat to the external validity of the results. Research designs that incorporate typical brands from typical product categories in the choice set should provide further and stronger tests of the relative importance of product-level and brand-level variables.

Article 2 - Everything but the brand? Examining the influence of brand-related and constellation-related evaluations on brand constellation choice.

A limitation of this article might be the statistical analyses used. The hypothesized effects were subject to relatively simple mean comparison analyses between chosen and non-chosen brand constellations. Alternative statistical tools include logistic regression, discrete choice models (logit and probit) on the discrete choice variable and linear regression on the brand constellation liking variable. A positive aspect of the analyses used is that they enable a clear comparison between chosen and non-chosen brand constellations.

Additional analyses by way of linear regression on brand constellation liking (for information about measurement, see methodology in article 2) showed similar results as in the article. Product-level typicality, perceived fit and brand attitude were strongly related to brand constellation liking for the chosen brand

constellation. Product fit was only marginally significant when measured simultaneously with brand fit (indicating some collinearity between the fit measures).³

Article 3 - Do brands of a feather flock together? Some exploratory findings on the role of individual brands in brand constellation choice.

This exploratory research design did not allow for any contingencies between product-level and brand-level evaluations. It is likely that the brand evaluation process is contingent on the selection of product categories, and on whether the product-level decision process is sequential or simultaneous. Moreover, the notions of sequential and simultaneous processes were not checked empirically; thus, the processes are only derived from theory on typicality. Future studies investigating the interaction between product-level issues and brand-level issues would be of interest.

Article 4 – Real consumers in the virtual store

The fourth article builds on sound theoretical bases but may suffer from limitations in terms of the measures used. Self-reported measures of planning were compared with observed measures of planning from previous studies. Moreover, anchoring effects are likely to have occurred because respondents answered questions on planning and goal-oriented purchases for both traditional grocery stores and virtual grocery stores.

Moreover, the article deals only with one specific form of marketing. This limits the generalizability of the proposed implications of poor use of goal-derived categorization in marketing practice. It is possible that goal-derived categorization is more prevalent in other forms of marketing practice.

³ $R^2 = 0.33$; Standardized beta-values: Product-level typicality (0.293, $p < 0.001$), Brand fit (0.248, $p < 0.001$), Brand attitude (0.194, $p < 0.001$) and Product fit (0.067, $p = 0.089$).

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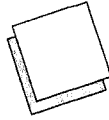
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An executive summary for managers and executive readers can be found at the end of this article



When weaker brands prevail

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Keywords Brand awareness, Consumer behaviour, Product differentiation

Abstract When consumers fulfill consumption goals they make decisions on first, from which product category to buy, and second, which brand to purchase within the product category. In this article, the relative effects of product-level typicality and brand-level typicality on goal-driven consumer choice are examined. Which level of typicality is more diagnostic of choice? Empirical results show that consumers are, in goal-derived usage contexts, more likely to choose a less typical and less favored brand from a typical product category than a typical and more favored brand from a less typical product category. Consequently, brands that consumers perceive as inferior may be chosen over superior brands because of the link between product categories and usage contexts. Our results indicate that it may be fruitful for marketers to associate brands and product categories with usage contexts, and that they need to consider brand competitors from other product categories.

Introduction

Different products may fulfill the same consumption goal, e.g. cars, bicycles and public transportation as ways to get to work, or chocolate bars, cookies and fruit to satisfy the snack-craving consumer. In many cases, consumers will consider brands from different nominal product categories when deciding on the best alternative – e.g. “It is really hot today. Shall I choose an ice-cream or a soft drink?”. For consumers, this implies that they must make decisions on two levels:

- (1) which product will best satisfy their needs; and
- (2) which brand to choose within that product category.

For marketers, this implies that they need to know not only how their brand is perceived, but also how consumers perceive the product category to which the brand belongs.

In marketing, a vast number of studies focus on issues within the confines of single product categories. Relatively few studies, however, concern across-product-category issues, e.g. choice between alternatives from different product categories (Johnson and Lehmann, 1997). This is rather surprising considering that many marketers recommend that markets should be defined from a customer perspective, e.g. consumption goals or needs (cf. Bettman *et al.*, 1998; Lawson, 1997; Ratneshwar and Shocker, 1991).

The empirical work that has taken consumption goals and across-category consideration into account has presented interesting findings on consumers' choice processes, e.g. the use of abstract (non-product) attributes when discriminating between and evaluating alternatives from different nominal product categories (Johnson, 1984), and has found that products are evaluated in terms of their relevance for goal achievement instead of directly against one another (Bettman and Sujan, 1987; Park and Smith, 1989). Moreover, as experience grows with certain consumption goals, consumers

Few studies concern across-product-category issues



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**Typicality and preference
are highly associated**

consider alternatives from a larger number of product categories (Johnson and Lehmann, 1997).

Other research has focused on how different nominal product categories are perceived in consumption goal frameworks, e.g. "snacks to eat when I do not have the time to eat breakfast" or "snacks to serve at a Friday night party" (cf. Ratneshwar and Shocker, 1991). A central finding here is that different nominal product categories are perceived as more or less typical goal achievers (see also Barsalou, 1985), e.g. potato chips may be more (less) typical than granola bars as a snack at a Friday night party (when consumers do not have the time to eat breakfast). Previous research has also found that typicality and preference are highly associated (cf. Loken and Ward, 1990; Ratneshwar and Shocker, 1991).

One important aspect, however, that has yet to be investigated concerns how consumers make brand choices in consumption goal frameworks. We expect to find typicality effects on goal-driven choice both at product category level and at brand level. Typical products will most likely be preferred over less typical products (see above). Also, brands that consumers perceive as typical in their nominal product category will probably have an advantage over less typical brands (cf. Carpenter and Nakamoto, 1989; Kapferer, 1997). In this article, we thus address the effects of brand typicality and product typicality on goal-driven choice.

We argue that consumers will favor typical brands from typical product categories. However, it is vital for marketers to investigate the relative importance that consumers attach to these two decisions in order to gain an insight into whether less typical brands can compete with more typical brands if the former are "compensated" by belonging to a more typical nominal product category. In contrast, typical brands in less typical nominal categories may instead offset the typicality effects at the product-level for relatively less typical brands.

As typicality is a central theme in cognitive categorization theory (cf. Barsalou, 1985; Medin, 1989; Ratneshwar and Shocker, 1991), we begin the article by looking at cognitive categorization and how it may influence consumer choice. Based on the theoretical framework on categorization we develop and test empirically a number of hypotheses regarding predictions of brand choice, brand attitudes, and product category perceptions. The article concludes with a discussion of the theoretical and managerial implications of our results and suggestions for further research.

**Categorization is corner-
stone of all human thinking**

Theoretical framework: categorization

Cognitive categorization is the corner-stone of all human thinking (Smith and Medin, 1981). It is also fundamental for brand identification and brand evaluation (Moreau *et al.*, 2001; Sujan and Bettman, 1989). If consumers were not able to categorize objects they encounter, they would treat everything as if it were entirely new. Products and brands are stored in memory in a schema-like manner with associative links from the objects to appropriate usage contexts (UC), affective and cognitive mind-states, etc. (cf. Cohen and Basu, 1987).

For our purposes, three advances in cognitive categorization are important:

- (1) consumers use different types of categorization for *identification of objects*, e.g. brands, and problem solving, e.g. fulfillment of consumption goals;

- (2) category structures are probabilistic, i.e. different category members (brands) are better (more typical) or worse (less typical) examples of the category;
- (3) consumers use naïve theories when they categorize objects, i.e. they include their beliefs of the world in their inferences.

Let us now take a closer look at each of these three advances.

Two ways of categorizing products

Consumers have two ways of categorizing products, namely nominal (or taxonomic) categorization and goal-derived categorization (cf. Cohen and Basu, 1987; Loken and Ward, 1990). These alternative ways are used for different purposes and are represented in memory in different ways (Felcher *et al.*, 2001). Nominal categorization is primarily helpful for identification of instances (brands) within the product category (Loken and Ward, 1990), while goal-derived categorization is activated mainly when consumers engage in problem solving and achievement of consumption goals (cf. Barsalou, 1983; Bettman *et al.*, 1998; Ratneshwar and Shocker, 1991).

Development of choice heuristics

In familiar UC, consumers can be expected to have developed choice heuristics (c.f. Hoyer, 1984). Products and brands that consumers have successfully tried on previous occasions may be tightly associated with the consumption goal in memory. Furthermore, Barsalou (1985) finds that, when people become more familiar with a goal-derived category (i.e. think regularly of a specific usage context), it can be established in memory to the same extent as nominal categories.

Goal-derived categories consist of products that are cued by consumers when they process alternatives that may satisfy a particular consumption goal (see Introduction). This will in many cases lead consumers to consider products across nominal product categories (Ratneshwar *et al.*, 1996). Park and Smith (1989) demonstrate that when consumers need to evaluate alternatives from distinct nominal product categories they do so by looking at how well products fit consumption goals. The authors also find that alternatives across nominal categories are mainly compared on an overall level with regard to how well they serve needs.

Typicality effects are central theme

Categorization is probabilistic. Both goal-derived and nominal categories have been shown to have a graded structure, i.e. some examples are more typical, characteristic and representative category members than others (cf. Loken and Ward, 1990; Medin and Smith, 1984). Typicality effects are thus a central theme for both categorization types.

Regarding the graded structure of categories, we know from psychology that typicality is established differently in goal-derived categories from in nominal categories (Barsalou, 1985). Similarity to other category members based on physical and visual features determines typicality levels in nominal categorization, but these kinds of features are not good determinants of typicality in goal-derived categorization, since members of goal-derived categories may be markedly different physically (cf. Barsalou, 1983; Murphy and Medin, 1985).

The graded structure of goal-derived categories is instead dependent on ideal attributes, e.g. "low fat" when the consumer is on a diet, and on frequency of instantiation, i.e. products that have more often been associated with the consumption occasion are perceived as more typical (Barsalou, 1985). Closeness to an ideal as a predictor of typicality is an important distinction between goal-derived categorization and nominal categorization, since an

Primary role of brands

ideal alternative would presumably also very likely be a preferred alternative. Typicality in goal-derived categories may be more diagnostic than typicality in nominal categories of across-category choice (cf. Loken and Ward, 1990).

In general, goal-derived categories consist of a number of nominal products. Regarding typicality in goal-derived categories, nominal product categories differ greatly with respect to how close they are perceived to ideals (Ratneswhar and Shocker, 1991) and with regard to frequency of instantiation (Lange and Wahlund, 2001). Brands are primarily identified as members within nominal categories and consumers will recall them after the product-level consideration has been made in goal-derived UC (cf. Nedungadi, 1990). We assume that the primary role of brands in goal-derived decision making is to be the "best" brand alternative in their nominal product category.

Categories are shaped by consumers' beliefs and knowledge of the world, i.e. naïve theories (cf. Hahn and Chater, 1997; Medin, 1989; Murphy and Medin, 1985). Theory-based categorization suggests that categories are organized according to underlying dimensions that reflect people's goals and activities (Murphy and Medin, 1985). These "theories" are not theories in the scientific sense but mental explanations of category structures, e.g. why some products and brands are perceived as more appropriate than others in certain UC.

Different typicality structures for different consumers

Category structures develop over time with increased knowledge (Medin, 1989; Smith and Samuelson, 1997). Consumer perception of which products and brands are typical in goal-derived categories will therefore depend on the product- and brand-related experience in UC, which will naturally differ among consumers. Experience may thus influence goal-derived categorization and typicality, suggesting that variation in choice histories may lead to different typicality structures for different consumers. Previous research supports heterogeneity in consumers' perception of product-level typicality in goal-derived categories (Lange and Wahlund, 2001).

Development of hypotheses

We expect typicality effects at product level as well as at brand level when consumers make choices in UC. In this study, we omit typical brands in typical product categories, as they would most likely be dominant (this is recommended in the literature on choice modeling (cf. Carson *et al.*, 1994)). To examine the relative effects of brand- and product-level typicality, we compare typical brands in less typical product categories with less typical brands in typical product categories in UC.

Less favorable products will be excluded

Choice

A reasonable assumption is that consumers will initially compare alternatives at the product-level, since goal-derived consideration normally starts at product level rather than at brand level (Johnson and Lehmann, 1997; Park and Smith, 1989). Products that consumers associate with goal fulfillment will be considered for further evaluation, while less favorable products will be excluded. We assume, also, that brands come into consideration in subsequent decision-making phases. As members of nominal product categories, brands are not considered until the product-level has been scanned for appropriate alternatives.

Since the majority of brands within nominal categories are not highly differentiated with regard to manifest attributes (they often share the same

Brand-level typicality may have stronger influence on choice

attributes), most brands are perceived as very similar (cf. Ehrenberg *et al.*, 1997). However, consumers' brand preferences and how well-liked brands are will differ (Ehrenberg *et al.*, 1997; Keller, 1993), suggesting that specific brands are chosen not because they perform much better on certain goal-related attributes but because they have built consumer-based brand equity through various marketing gimmicks and linked stronger associations with consumer needs and goals than competing brands (cf. Erdem and Swait, 1998; Keller, 1993).

We hypothesize that less typical brands in typical product categories will be chosen by a larger number of consumers than typical brands in less typical categories. Based on previous findings on determinants of typicality for goal-derived categories (closeness to ideal and frequency of instantiation), we believe that consumers will perceive that nominal product categories will be better linked than brands to ideal attributes of goal-derived categories. Moreover, consumers' usage experience at product-level will obviously exceed brand usage experience. However, when product-level typicality is less discriminating, brand-level typicality may have a stronger influence on choice. Relatively, a larger number of consumers will choose typical brands in less typical product categories when the differences in typicality at the product level decrease. This leads to *H1a* and *H1b*.

H1a: A larger number of consumers will choose less typical brands in typical product categories over typical brands in less typical product categories.

H1b: The dominance of less typical brands in typical categories over typical brands in less typical product categories will be smaller when the differences in typicality at the product level decrease.

Atypical brands

Brand evaluations

How do consumers perceive brands in goal-derived choice? Typicality is strongly related to preference and liking, and therefore we expect that consumers will perceive the typical brands favorably regardless of whether or not they choose them. The attitude towards a typical brand in a less typical product category may thus not influence choice in UC. Consumers who choose atypical brands may perceive them, on the contrary, more favorably for two reasons. First, some consumers may in fact have a strong positive attitude towards an atypical brand, and therefore perceive it as the perfect match in this usage context. Second, other consumers may choose the typical brand over the atypical brand for avoidance reasons, i.e. a strong negative attitude towards the atypical brand.

H2a: Consumers who choose the atypical brand will have a more favorable brand attitude than those who do not choose the atypical brand.

H2b: Consumers who choose the typical brand will not have a more favorable brand attitude than those who do not choose the typical brand.

Cognitive differences

Research in psychology has acknowledged that consumers have subjective conceptions about the world, often called naïve theories, when they categorize objects and make inferences about them (cf. Murphy and Medin, 1985). These naïve theories are thus used in decision-making and suggest that different consumers may perceive nominal product categories and brands differently. This may manifest itself, for example, in how different

Tendency for strong, well-known brands

consumer segments evaluate product-level typicality in UC and how they evaluate different brands (Johnson and Lehmann, 1997).

For instance, consumers who choose typical brands over typical products will probably have a tendency for strong, well-known brands. For them, the brand-level decision is probably more important. On the other hand, consumers who choose atypical brands over typical brands presumably perceive larger differentiation between product categories than between brands. For these consumers, thus, the product-level decision is crucial for goal fulfillment.

We hypothesize that consumers who choose atypical brands in typical nominal product categories will perceive:

- (1) smaller differences in brand attitude between typical and atypical brands than consumers who choose typical brands; and
- (2) larger differences in product-level typicality between nominal product categories.

Our third hypotheses (*H3a* and *H3b*) are:

H3a: Consumers who choose atypical brands will exhibit smaller differences in brand attitude than those who choose typical brands.

H3b: Consumers who choose atypical brands will perceive larger differences in product-level typicality between nominal product categories than consumers who choose typical brands.

Design and procedure

Our objective is to empirically examine the effect of brand- and product-level typicality on goal-derived choices. To test our hypotheses, we need data on how individual consumers choose between brands from distinct nominal product categories with different typicality levels. Furthermore, varying degrees of typicality are required of:

- (1) the product level in goal-derived categories; and
- (2) brand members within the nominal product categories.

Consumer survey needed

Choice data (e.g. scanner data from retail stores) are not readily available across nominal categories. Therefore, we need to conduct a consumer survey asking consumers to state their preferences between brands from distinct nominal product categories in goal-derived UC. In order to map across-category consideration, we employ everyday UC to represent enduring consumption goals and let consumers choose between a typical brand in an atypical product category and an atypical brand in a typical product category. Furthermore, since we were interested in cognitive explanations of the choices, data were also collected on aspects related to brands, product categories and UC.

Limited number of goal-derived categories

Studies on choice generally recommend using approximately four to five choice tasks in one overall context. Subjects may be aided by one test scenario to understand the choice task at hand, and after five scenarios respondent fatigue may start to set in. Thus, in order to test our hypotheses we needed a limited number of goal-derived categories. Equally important was to identify representative nominal product categories and brands of different levels of typicality for these goal-derived categories.

As the overall context, we used snacks to elicit goal-derived categories, nominal product categories and brands. This is a product class that has been

Different levels of typicality

used before in similar studies (cf. Lange and Wahlund, 2001; Ratneshwar and Shocker, 1991). Snacks are suitable for our purposes since consumers consume snacks in many UC and because snacks are associated with many different nominal product categories (Ratneshwar and Shocker, 1991).

We employed four UC (see Table I) based on enduring and familiar consumption goals. These UC (and others that did not qualify for the main study) were presented to eight subjects in a focus group discussion and assessed for their ability to represent everyday and familiar consumption occasions.

In the next step we defined typical and atypical products and brands for each usage context. The products and brands should represent different levels of typicality (from high to moderate) in order to avoid alternatives that were too atypical and that respondents would regard as unrealistic. Initially, we looked at previous research on snack consumption (cf. Ratneshwar and Shocker, 1991) to generate candidates at the product level. These candidates were also discussed by the focus group and only product categories that were unequivocally defined by group members as either typical or less typical in each usage context were used.

The final selections are presented in Table I. Note that there may indeed be other categories that consumers perceive as most typical (e.g. coffee, beer, ice-cream) in a certain usage context. The selected product categories are intended to be representative for one typical product category and one atypical product category in the UC to enable comparisons between product categories and brands. In the results section, manipulation checks of product and brand typicality are presented.

The typical and atypical brands were chosen using a two-step selection process. First, we used data from A.C. Nielsen on market shares, and the typical brand was either the market leader or the second largest brand. For more atypical brands we selected smaller brands. Next, we used a commercial database (SIFO SESAME) containing data on brand evaluations to validate our selections.

Data for the main study were collected during two summer weeks from 307 respondents (54 percent women and 46 percent men) who completed questionnaires while waiting for a train at the central train station in a large city. To reduce random error, we collected data on ten different days (both weekdays and weekends) and during different times each day. About two-thirds of the respondents (65.7 percent) were between 15 and 29 years old, 25.8 percent were between 30 and 44 years old and the remaining 8.5 percent 45 to 59 years old.

Four brand choices

Respondents were approached by a researcher and asked if they would participate in an academic study. They were informed that they would receive a small gift (a soft drink) after finalizing the study if they agreed to participate.

	Typical product category	Atypical product category
<i>Usage context</i>		
Snacks you might choose when you are at the movies	Bag of candy	Potato chips
Snacks you might choose when you are having a TV night at home	Potato chips	Ice-cream bar
Snacks you might choose during a break at work	Soft drink	Bag of candy
Snacks you might choose on a longer car trip	Soft drink	Potato chips

Table I. Usage contexts and selected product categories

**Two measures in each
usage context**

Brand-context fit measured

**Consumption frequency
measured**

After answering a filter question regarding whether they consumed snacks or not, the respondents answered questions related to the four UC plus one initial UC that was used to familiarize subjects with the choice task ("A snack you might choose on a warm summer's day"). The respondents first made the four brand choices, and then answered a few questions about the specific goal-derived UC. Finally, they reported global evaluations of the nominal product categories and brands used in the study.

Measures

We used two measures in each usage context to represent the subjects' preferences. Respondents were first introduced to the usage context and encouraged to state their preference for one of the brands. This resulted in a dichotomous choice variable, and corresponds to measures of dependent variables in choice modeling (cf. Simonson and Tversky, 1992). The nominal product category to which brands belong was also given to assist subjects to evaluate alternatives, since category cues have been suggested to produce more consistency between reported choice and actual preferences.

The second preference-related variable was brand-context fit and was measured on a seven-point Likert scale for each usage context (1 = not at all well, 7 = very well). The items were worded "How well does brand x fit in usage context y?" All the subjects rated brand-context fit for the chosen brand higher than or equal to the rejected brand.

Product-level typicality was measured for each usage context. Typicality in goal-derived categories is based on ideals (Barsalou, 1985) and relevant attributes for goal fulfilment (Loken and Ward, 1990). In this study, we used a summarizing measure for typicality in goal-derived categories. Two semantic differential seven-point items were employed: "When you usage context y, then product x has/is ..." ranging from "bad fit"/"unsatisfactory" (1) to "good fit"/"satisfactory" (7). Cronbach's alpha was very high and ranged from 0.86 to 0.92.

Brand-level typicality was measured based on operationalizations in previous research (cf. Loken and Ward, 1990). Responses to items "Brand x is a typical product y" could range from "very atypical" (1) to "very typical" (7). Note that we measured brand typicality for nominal product categories and not for goal-derived categories.

We measured brand attitude using a three-item semantic differential (good/bad, appealing/unappealing, like/do not like, range 1-7) in accordance with previous studies (cf. Loken and Ward, 1990; Simonin and Ruth, 1998). Cronbach's alpha was very high for all brands and ranged from 0.95 to 0.98. Brand attitude and brand-level typicality were positively correlated (from $r = 0.37$ to $r = 0.55$). However, the correlations were slightly lower than in Loken and Ward's study, where the average correlation between brand attitude and typicality was $r = 0.58$.

Results

In order to validate our usage context selections, we asked the respondents for their consumption frequency using this seven-point item ("never" (1) and "always" (7)): "How often do you consume a snack in usage context y?" As can be seen in Table II, consumers were familiar with the UC. We did also test our manipulations of product typicality and brand typicality to ensure that we had identified typical and less typical alternatives. All our manipulations for typicality at product-level and brand-level were highly

Usage context	Consumption frequency	Product typicality		Brand typicality	
		Typical	Atypical	Typical	Atypical
1. At the movies	5.14	5.43***	3.70	5.90***	2.92
2. TV night	4.94	5.78***	3.06	4.61***	2.75
3. At work	4.61	4.85***	3.87	4.99***	3.08
4. On a car trip	4.86	5.77***	3.08	5.90***	3.08

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table II. Consumption frequency and manipulation checks of product typicality and brand typicality

significant and mean differences in the expected direction ($p < 0.001$ for all eight paired samples t -test).

Analysis of the hypotheses

More consumers chose atypical brand

H1a stated that more consumers would choose the atypical brand. This was found to be the case, as 71.8 percent of the respondents chose the atypical brand and 25.9 percent chose the typical brand ($p < 0.01$ in the t -test for population proportions) and two percent did not state their preference. Brand context fit showed that 18.5 percent preferred the typical brand, 18.8 percent were indifferent and 62.7 percent preferred the atypical brand. *H1a* is thus supported.

Effect on consumer choice

H1b was used to investigate whether the difference in product-level typicality had an effect on consumer choice. UC2 and UC4 had a significantly greater difference on product-level typicality than UC1 and UC3 (see Table II). This difference had an effect on choice, since atypical brands dominated more strongly when differences in product-level typicality were larger. More than 90 percent (90.5) chose the atypical brand (8.5 percent chose the typical brand) in UC2 and 82.4 percent (15.0 percent) in UC4. The corresponding choices for the UC with smaller difference in product-level typicality for atypical (typical) brands were 58.0 percent (39.1 percent) in UC1 and 56.0 percent (41.0 percent) in UC3. The chi-square test of the association between UC and consumer choice was significant ($p < 0.001$), showing that typical brands are chosen relatively more (less) often when the product-level typicality difference is smaller (higher). Brand context fit demonstrated similar results. *H1b* is supported.

Attitude towards atypical brand more positive

The second hypothesis stated that consumers who choose atypical brands would perceive them more favorably than those who did not choose them (*H2a*). For typical brands, we did not expect to see any differences between the two groups (*H2b*). The results presented in Table III show that the attitude towards the atypical brand was more positive among those who

Usage context	Attitude atypical brand		Attitude typical brand	
	Choice of atypical brand	Choice of typical brand	Choice of atypical brand	Choice of typical brand
1. At the movies	4.86***	3.96	5.26	5.87***
2. TV night	4.17***	2.92	5.10	5.63
3. At work	4.51***	3.17	5.04	5.80***
4. On a car trip	4.16***	2.54	5.37	5.76
Across contexts	4.37***	3.35	5.20	5.81***

Note: see Table I

Table III. Brand attitude – atypical and typical brands: choice of atypical brand or choice of typical brand

Consumers sometimes
chose inferior brands

Role of brand attitude
investigated

chose it than among those who chose the typical brand. The independent samples *t*-tests were significant in all four contexts ($p < 0.001$). Thus, *H2a* is supported.

Regarding *H2b*, we did not expect to find any differences between the two groups. However, in two of the UCs, consumers who chose the typical brand also had a more favorable attitude towards it ($p < 0.001$). The absolute differences between choice segments in brand attitude for typical brands are indeed smaller than for atypical brands. As the data in Table III show, the attitude scores differ much less in absolute numbers for the typical brands (ranging from 0.39 to 0.76 for the four UCs) than for the atypical brands (ranging from 0.90 to 1.62). Thus, we conclude that the results for the typical brands are mixed and that *H2b* is only moderately supported.

The third hypothesis explored differences in consumer perception of brands and nominal product categories based on stated preferences. We hypothesized that consumers who chose atypical brands would perceive larger differences between the alternatives at product level than at brand level. Table III shows the results at brand level for brand attitude (*H3a*). One interesting observation is that consumers who chose the atypical brand rated it lower than the typical brand (mean value: 4.37 compared with 5.20 across contexts). Hence, consumers sometimes chose inferior brands over superior ones. The difference scores for brand attitude for atypical and typical brands are lower for consumers who chose atypical brands than for consumers who chose typical brands (mean value 0.83 compared with 2.45 across contexts; $p < 0.001$) as the independent samples *t*-test demonstrates. Comparisons for each UC were also highly significant. Thus, *H3a* is supported.

Differences in perceptions of product-level typicality were also tested (*H3b*) using independent samples *t*-tests. The typicality ratings for typical products and atypical products for the choice segments are presented in Table IV. As expected, the difference scores on product-level typicality are much higher for consumers who chose atypical brands than for consumers who chose typical brands (mean value 2.83 compared with 0.10 across contexts; $p < 0.001$). Comparisons for each UC were also highly significant, and therefore *H3b* is also supported.

Discussion

The main objective of this research was to examine the effects of product-level and brand-level typicality on goal-derived choice. We also investigated the role of brand attitude in these choices, and we expected that consumers might not always choose the “best” brands in goal-derived contexts. Using theory-based categorization, we also tested how the perceptions of nominal product categories and brands differed between choice segments.

Usage context	Choice of atypical brand		Choice of typical brand	
	Typicality, typical product	Typicality, atypical product	Typicality, typical product	Typicality, atypical product
1. At the movies	5.70	2.78	5.10	5.18
2. TV night	6.03	3.00	3.48	3.92
3. At work	5.43	3.57	4.16	4.37
4. On a car trip	5.86	2.65	5.29	4.89
Across contexts	5.80	2.97	4.62	4.72

Table IV. Product-level typicality ratings for the two choice segments

Choice of brands may be more difficult to explain

Our results indicate that product-level typicality is more important than brand-level typicality in goal-driven choice. We identified that the majority of consumers (about 70 percent) chose atypical brands from typical nominal product categories over typical brands from less typical product categories. However, typical brands fared somewhat better when they belonged to moderately typical product categories than in less typical product categories. Further evidence of the importance of product-level typicality is demonstrated by the indication that consumers chose brands from nominal product categories that they perceived as more, or equally, typical than the "competing" nominal product category.

With regard to brands, this was not the case, since consumers chose the atypical brand even when they perceived it to be less favorable than the typical brand in our study. Typical brands were well liked by all consumers as evidenced by high mean scores for both choice segments (see Table III; the right-hand columns), and a relatively small increase for consumers who chose the typical brand. Choice of brands in goal-derived categories may thus be more difficult to explain by looking at absolute levels of brand attitude.

Our results demonstrate that consumers are more likely to choose from product categories they evaluate more favorably, and that favorable brand attitudes may be relatively less important. Only when nominal product categories do not discriminate between alternatives in goal-driven choice, may brand attitude or brand salience become a more important antecedent of choice.

Furthermore, we show that brands do compete across nominal product categories. Previous research on goal-derived categorization is thereby strengthened (cf. Park and Smith, 1989; Rameshwar *et al.*, 1996). One interesting finding in this study is that atypical brands with lower levels of brand attitude can dominate over a typical and more favored brand because of differences in product-level associations. When consumers had to decide between a less typical product and a less typical brand, the majority of them chose the less typical brand. Consumers may feel that it is more essential to choose one brand from the right product category than to choose the "right brand". Clearly, this finding has theoretical as well as managerial implications.

Different usage-related perceptions

Moreover, consumers were found to have different usage-related perceptions of products and brands. Product and brand typicality are potentially highly dynamic issues that marketers can influence by using marketing communications, product design and distribution. Marketers may be able to alter the perceptions not only of their brands but also of the product category as a whole. Brand positioning is often talked about among practitioners and academics. Why not focus some attention to the positioning of product categories?

Let us do just that for a moment. It is important for managers to acknowledge the product category-specific associations consumers make, and how well the product category fits with various goal-derived categories. This may be particularly important when consumers make choices of low involvement products because of the prevalent use of heuristics. These heuristics may be initially activated on the product-level and second on the brand-level.

Linking nominal product categories more closely to UC and consumption goals may be useful for marketers in a number of ways. For instance, by showing consumers that other product categories than potato chips may be

**Results should not be
interpreted as discouraging**

the "right" product at a Friday night party may increase consumption of moderately typical product categories in this UC. Marketers may also associate their products with "new" UC, e.g. potato chips instead of bread before dinner, with the purpose of generating more sales within the product category to the detriment of competing product categories.

What about brand management? Our results should not be interpreted as discouraging for brand management. About one quarter of the consumers in our study chose typical brands even if these brands did not belong to a more typical product category. In our opinion, this may be evidence of customer-based brand equity. Strong brands may be used by marketers to offset some of the "product-level equity" and may encourage consumers from other appropriate product categories. Typical brands may also carry a halo effect, and thereby increase goal-derived typicality levels for less typical products. Since these brand-related issues have not in any way been resolved by this study, it would be interesting to see further research in this direction.

Another issue for further research relates to the choice of typical and atypical brands. In our study, consumers who chose typical brands perceived larger differences between the brands, and their choice of the typical brand may have been the result of their avoidance of the atypical brand. It would be worthwhile investigating consumers' reasons for brand choices, i.e. consumers' approach or avoidance reasons for different types of brands in a choice situation.

Limitation of the study

One limitation of our study is that it does not examine typical brands from typical product categories. Many consumers will, of course, choose typical brands from typical product categories in goal-derived usage context. Future research may be able to use the between-subject variation on typicality and brand attitudes that may be caused by consumers' naïve theories. Research designs that incorporate really strong alternatives (i.e. typicality on both product and brand level) in the choice set may provide another interesting test of the relative importance of product-level and brand-level variables.

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Further reading

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This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present

Executive summary and implications for managers and executives

Brands and product category promotion can mix

Marketers have always tried to avoid the situation where they find themselves promoting a product category rather than the particular brand for which they are responsible. The reason for this preference seems, at face value, common sense – by promoting a category we give more equal weight to competing brands within that category. Lange et al. present research that suggests certain circumstances where such an approach may be mistaken – promotion of a category could be more beneficial to our brand than simple brand promotion alone.

This circumstance arises because of the situation where consumers select “weaker” brands because they coincide with the solution to the goal that the consumer has in mind, whereas the big market-leading brands do not satisfy such a goal.

We buy things that satisfy our goals

In many circumstances consumers do not buy brands and in making their decision will consider different nominal product categories in deciding on the best brand alternative. As Lange et al. point out, the desire for something cooling and refreshing on a hot day may lead a consumer to choose either an ice-cream or a cold drink. What Lange et al. want to know is whether the selection of product category overrides the choice of brand.

The product categories available to satisfy a particular goal need to be assessed ahead of making a selection of brand. What Lange et al. ask is whether the presence of strong brands within one or other of the product category options is a sufficient pull to attract consumers even where that product category is not an ideal fit to the consumer's goal.

Lange et al. use the idea of typicality as the basis for their study – a given brand is more or less typical of the product category in which it sits (or in which the consumer places it). Similarly a product category can be “typical” in that it is closer to satisfying the consumer's goal. By asking whether the effect of product category is greater than the effect of brand (in some circumstances) we enter the area of product category and brand promotion. Put simply, where consumers are making a purchase decision on the basis of their current needs or wants (goal-driven), marketers need to know whether product category is more or less important than brand.

Consumers do not always choose the “typical” brand

What emerges is that the consumer will select the product category and then a brand from within that category. As Lange et al. put it, “the majority of consumers (about 70 percent) chose atypical brands from typical nominal product categories over typical brands from less typical product categories”. The degree of typicality (how closely it matches what the consumer wants) affects the degree to which the typical brand within a category is favoured by the consumer.

More important still, the consumer is willing to sacrifice quality (or at least perceived quality) where the “better” brand was in an insufficiently typical product category. This finding challenges some of the strongly held views about consumer behaviour in respect of brands. As Lange et al. explain, the choice of “brands in goal-driven categories may thus be more difficult to explain by looking at absolute levels of brand attitude”.

The effect of product category typicality takes us back to the question posed above – what are the circumstances where a brand marketer can justify promoting a product category? Where the category sits in a definable set of categories that address a specific (and anticipated) consumer goal, then marketing smaller product categories containing less strong brands makes sense if it can shift consumer preferences towards that category. There are risks involved since promoting that category must benefit all the brands within that category but the end result – a larger total market – may well prove sufficient to satisfy the requirements of the brand marketer. After all 10 percent of a \$2 million market is better than 15 percent of a \$1 million market.

The approach suggested by Lange et al. is to link product categories more closely to “usage contexts and consumption goals”. There are clear advantages to a brand in extending its range of “usage contexts” – promoting cornflakes as a late night snack, for example, suggests a use not usually considered and brings the possibility of consumers accepting it as a “solution” to the late night snack problem.

It is not all bad news for brands

All this seems a bit of a problem for brands in atypical product categories but Lange et al. point out that, despite the understandable preference that consumers show for products that satisfy their goal more precisely, about a quarter of the consumers they studied opted for typical brands “... even if those brands did not belong to a more typical product category”. This suggests that the influence and power of a strong brand extend into areas where buying that brand barely satisfies the consumer’s goals.

It is also clear that stronger brands have greater scope to influence the consumer’s view of product categories. The power of the brand can shift the consumer’s product category choice as well as provide circumstances where the consumer selects the strong brand even where its objective satisfaction of the consumer’s goal is poor.

The dynamics of a product and brand management are retained in this model. The strong brand retains all the advantages but weaker brands are given some hope through the closer fit of their category to the consumer’s goal.

Finally, it is worth noting that the categorisation of brands is often arbitrary and, just as we have seen with service marketing, more attention needs to be given to how consumers define brand or product categories. There is no doubt that the consumer’s category map may differ significantly from the map that the marketer is using. In such cases the promotional activity used to drive the brand may be misdirected – serving the core of the brand’s market but ignoring the opportunity to extend the brand’s boundaries.

(A précis of the article “When weaker brands prevail”. Supplied by Marketing Consultants for Emerald.)

Everything but the brand: Examining the influence of brand-related and constellation-related evaluations on brand constellation choice

Abstract

Marketing has been mostly interested in explaining choice of single brands. However, many times consumers satisfy goals by consuming brands from complementary product categories simultaneously, that is, they choose a brand constellation. We demonstrate empirically that both constellation-related variables (perceived product and brand fit) and brand-related (product-level typicality and brand attitude) variables are positively related to choice of brand constellations. Interestingly, brand attitude is not as important as perceived fit and typicality, suggesting that marketers may leverage their brands by linking product categories closer to consumption goals and by linking the brand closer to complementary brands. Theoretical implications are also discussed.

1. Introduction

A focal topic in marketing is brand choice. An extensive number of studies in marketing have investigated how individual brands are evaluated and why certain brands are chosen over others (e.g., Ajzen and Fishbein, 1980; Kamakura and Russell, 1993; Heath and Chatterjee, 1995). These studies demonstrate effects for *single brands within nominal product categories*. However, consumers are often consuming more than one brand simultaneously. For example, consumers daily decide on combinations of clothes to wear. Also, food and beverages are consumed together at various meals during the day. Thus, consumers may in many cases fulfill needs by choosing a constellation of complementary brands rather than only one brand (cf. Fournier, 1998; Ratneshwar, Pechmann and Shocker, 1996; Samu, Krishnan and Smith, 1999; Solomon and Englis, 1994). Consequently, consumers often need to consider how well different brands fit. This is an aspect that research on brand choice only rarely covers.

How common are brand constellation choices as opposed to single brand choices? Lange and Wahlund (2001) empirically investigated the prevalence of brand constellation choices for packaged goods in a number of goal-derived categories (e.g., “snacks to consume in front of the TV”, “snacks to serve guests at home”). The authors found that consumers very often choose a brand constellation over a single brand, 85 to 98 percent of the choices were of

constellations in the goal-derived categories that were investigated. Moreover, Lange and Wahlund (2001) found that brand constellations normally comprised two or three brands, and that consumers choose the brands from a large number of different nominal product categories.

Knowledge of how brand constellations, that is, *two or more brands from distinct, but complementary, product categories*, are chosen is limited. In this article, we therefore investigate choice of brand constellations of packaged goods (food and beverages). We use a broad goal-derived category "snacks you might consume between meals". A number of subordinate goal-derived choice situations will be developed where brands from appropriate nominal product categories will be presented to consumers. For instance, 'a Mars chocolate bar and a cup of Maxwell House coffee' and 'a bag of Pringle's potato chips and a bottle of Carlsberg beer' are examples of brand constellations for a hungry spectator at a sports event.

Our main focus is to empirically examine a number of factors that may influence choice of brand constellations. More specifically, attitudes towards brands in the constellation, perceived brand and product fit between the brands in a constellation, and product-level typicality (i.e., how typical the product is in the goal-derived category) are investigated. We will also examine the relative importance of these factors. What is the main determinant of brand constellation choice – brand attitude or brand fit? Are product category-level constructs such as product fit and product typicality more related to brand constellation choice than brand-level constructs? Since very little is known about what factors are important when consumers are consuming several brands at the same time, we argue that research is needed to draw attention to this neglected aspect of consumer behavior.

Investigating choice of brand constellations may in many respects be different from studying choice of single brands, for example, with regard to salient evaluative criteria and categorization (cf. Ratneshwar et al, 1996; Simonin and Ruth, 1998). Therefore, single brand choice and brand constellation choice processes will be contrasted in our conceptual framework. We will also discuss the brand constellation concept itself and under what conditions consumers might be prone to consume brand constellations. Thereafter, we develop a number of hypotheses regarding brand constellation choice and elaborate on the methodological aspects of the study. The empirical results are then presented and analyzed and, lastly, theoretical and marketing implications are discussed.

2. Conceptual framework

The notion of brand constellations has received relatively little attention in consumer research (Solomon and Buchanan, 1991; Chintagunta and Haldar, 1998). Instead, it has been paramount in research to be able to predict choice of single brands. Complementarities are often left out of the investigated choice processes. There are some areas, however, (see list below) where constellations of brands (or products) have been taken into account.

- brand alliances (e.g., Simonin and Ruth, 1998; Washburn et al, 2000; Samu et al, 1999),
- lifestyle imagery (e.g., McCracken, 1988; Solomon and Englis, 1994)
- goal-derived categorization and goal-derived choice (e.g., Barsalou, 1983; 1985; Lange and Wahlund, 2000)
- consumption episodes (e.g., Dhar and Simonson, 1999)
- acquisition patterns (e.g., McFall, 1969; Kasulis, Lusch and Stafford, 1979)
- bundling (e.g., Walters, 1991; Mulhern and Leone, 1991)
- basket analysis of scanner data (e.g., Julander, 1992; Lange and Wahlund, 2001)

Brand choice has been defined as “a customer’s selection of a particular alternative from a set of alternatives from a given product-market domain within a given choice situation” (Thelen and Woodside; 1997, p. 126). Explanations of brand choice are numerous (for an overview, see Engel, Blackwell and Miniard, 1995; Bettman, Johnson and Payne, 1991). Two frequently mentioned explanations are the use of multi-attribute consideration for high-involvement purchases and the use of simple heuristics for low-involvement purchases

Brand constellations are chosen when consumers perceive that complementary products are a necessity for performance or use (Samu et al, 1999), or for fulfillment of certain consumption goals (Ratneshwar et al, 1996). Traditional product-market domains are not good indicators of pre-purchase alternative evaluation when constellations are chosen (Day, Shocker and Srivastava, 1979). Instead, consumers use goal-derived categories to retrieve alternative constellations. Brand constellation choice refers therefore in this study to a customer’s selection of a particular brand constellation from a set of alternatives from a given goal-derived market domain within a given choice situation.

Compared to choice of one brand, consumers need to make at least one additional consideration when choosing brand constellations, that is, how well the brands fit. Moreover, brand choice is normally between alternatives from the same product category. The brands will therefore share the majority of attributes and are relatively easy to compare and evaluate. Alternative brand constellations

are more effortful to compare since they originate from many different product categories and do not share many manifest attributes (Cohen and Basu, 1987; Johnson, 1984). Consumers need therefore to use goal-related criteria since non-comparable alternatives (brands from different product categories) are involved in the process of making brand constellation choices (cf. Johnson, 1984; Bettman and Suja, 1987; Park and Smith, 1989).

Previous research on brand choice has demonstrated that consumers use particular attributes to evaluate alternatives in a nominal product category (Engel et al, 1995). Attributes come in many forms and are both rational (e.g., price) and hedonic (e.g., brand associations) (cf. Keller, 1993; Rossiter, Percy and Donovan, 1991). Pre-purchase alternative evaluation models measure the importance of attributes and also consumer beliefs about specific brands' performance on each attribute (Ajzen and Fishbein, 1980; Ginter, 1974). Other models of brand choice are less complex and may employ the use of simple heuristics (Hoyer, 1984)

These models are well suited for evaluations of single brands but are not equally appropriate for evaluations of brand constellations. For instance, the issue of brand and product category complementarity makes it more difficult for consumers to only compare alternatives analytically (i.e., by product attributes). Previous research on non-comparable alternatives also suggests that consumers will use more abstract evaluative criteria than in intra-category alternative evaluation, and that comparisons between across-category alternatives will be made by holistic judgments (Johnson, 1984; Cohen and Basu, 1987). Comparisons can be more easily made related to goal fulfillment, for example, how well can a Chiquita banana or a Snickers bar satisfy the consumption goal of a tasty and filling afternoon snack? Consumption goal relevance guides consumer evaluation of non-comparable alternatives. Products and brands will primarily be evaluated according to how well they can satisfy the consumption goal (Ratneshwar and Shocker, 1991). This line of reasoning should be applicable to brand constellations as well with the addition that constellation-related issues such as perceived fit will also be evaluated (Solomon and Englis, 1994).

Different brand constellations compete against each other (Lange and Wahlund, 2001; Solomon and Englis, 1994). Consumers may value combinations of products so that all the "pieces" in the constellation loses value if one of them is not available at point-of-purchase (or consumption). In these cases, the consumer may want to replace a whole constellation with a new constellation of brands that may even come from entirely different product categories. Consumers' choice processes may thus include evaluations of alternative brand constellations, for example, considering and choosing between constellations

“coffee and ice cream” and “Coca-Cola and potato chips” as snacks to eat in front of the TV.

It is likely that consumers will develop preferences for certain brand constellations over time from usage experience in familiar goal-derived categories. In these cases, specific combinations of brands may be used as heuristics in choice processes. Fournier (1998) shows empirically that consumers may form strong ties with constellations of brands from consumption experiences, for instance, in cooking recipes. On the other hand, consumers may also form brand constellations ad-hoc in new choice situations or for the sake of variety (cf. Barsalou, 1983; Menon and Kahn, 1995) suggesting that brand constellations may also be loosely tied together in memory.

In order to develop the brand constellation construct we draw upon previous literature on brand alliances. Co-operations between brands have been carried out frequently in marketing (e.g., co-branding, composite brand extensions, cross-promotion, joint advertising) and a common marketing practice is to build alliances with a partner brand (Simonin and Ruth, 1998, Washburn et al, 2000). A brand alliance is some kind of association or combination of two or more individual brands and may be represented physically (e.g., a new product by combining two or more brands) or symbolically (e.g., an advertisement with two or more sponsors). Three aspects - attitude towards brands, perceived fit between brands and perceived fit between product categories – are important in evaluations of brand alliances (Park, Jun and Shocker, 1996; Samu et al, 1999; Simonin and Ruth, 1998). These factors should presumably be related to choice of brand constellations as well. Additionally, given that many different product categories may be considered in brand constellation choice consumers may also evaluate the goal fulfillment potential of different product categories.

3. Hypotheses development

Evaluations of brand constellations should differ from evaluations of single brands (cf. Simonin and Ruth, 1998) as we have discussed in our conceptual framework. One obvious aspect is perceived fit, a non-relevant consideration in situations when consumers choose single brands. It is therefore important to investigate concepts related to the whole brand constellation in addition to concepts related to individual brands in the constellation. Concepts related to single brands are brand attitude (e.g., attitude towards Snickers and Coke respectively) and product-level typicality (e.g., how appropriate chocolate bars and colas respectively are perceived as an afternoon snack) and concepts related to brand constellations are brand fit (e.g., fit between Snickers and Coke) and product category fit (e.g., fit between chocolate bars and colas). We hypothesize

that brand fit and product category fit, product-level typicality and brand attitudes all are positively related to brand constellation choice.

Let us start with the constellation-related concepts, that is, perceived fit. Previous studies on brand alliances and brand extensions have demonstrated strong effects of product and brand fit (cf. Aaker and Keller, 1990; Simonin and Ruth, 1998). It may be important that consumers feel that the constellation is compatible both in terms of the different product categories and in terms of the brand associations. Product fit and brand fit are conceptually different because products are associated with functional characteristics but images of brands carry more emotional and sociocultural associations (cf. Broniarczyk and Alba, 1994; Simonin and Ruth, 1998; Solomon and Englis, 1994). It is therefore possible for constellations to be high (low) on product fit and low (high) on brand fit (Samu et al, 1999).

Since brand constellations are related to brand alliances and brand extensions as they also include combinations of product categories and brands, we expect perceived product and brand fit both to be positively related to choice of brand constellations. Furthermore, a poor fit between product categories and/or brands can “undermine” a brand constellation even if the consumer likes the brands separately. Poor fit may also lead to undesirable associations for the brands (Aaker and Keller, 1990). This leads us to our first hypotheses (1a and 1b):

H1a: Perceived product fit is related positively to choice of brand constellations.

H1b: Perceived brand fit is related positively to choice of brand constellations.

Let us now turn to the brand-related determinants of choice of brand constellations. Another relevant issue in brand constellation choice is typicality, that is, how typical or representative an object is for a given category. Typicality is based on the strength of the link between a brand node and a category node in consumers’ memory (Nedungadi, 1990), or between a product and a goal-derived category (Meyers-Levy and Tybout, 1989; Ratneshwar and Shocker, 1991). Previous research has established that typicality is highly associated with preference for individual brands as well as for product categories (Loken and Ward, 1990; Ratneshwar and Shocker, 1991).

Brand-level typicality is strongly linked to nominal product categories (e.g., “Nokia is a typical mobile telephone”) but have relatively weaker associations with consumption goals. Nominal product category typicality, on the other hand, is more directly related to goal-derived categories (for a related discussion, see Meyers-Levy and Tybout, 1989). Consumers activate the product category node

when a consumption goal is primed and the most typical product is retrieved first.

Ratneshwar and Shocker (1991) show that product-level typicality structures exist in goal-derived categories. Nominal product categories were judged more or less typical in goal-derived choice situations. We claim that typicality is important also when consumers choose brand constellations in these choice situations. Brand constellations from more typical product categories will be preferred over less typical ones. Based on this, we believe that product-level typicality will be positively related to choice of brand constellations (H2a).

H2a: Product-level typicality is positively related to choice of brand constellations

Furthermore, consumers may not want to choose brand constellations that include brands they do not like. Positive effects of brand attitude on brand choice are an established phenomenon in consumer behavior research (Engel et al, 1995; Eagly and Chaiken, 1993). Is there a similar role for brand attitudes in brand constellation choices? Consumers are expected to select a brand constellation with brands that are regarded favorably and consumers may avoid brands that they have unfavorable attitude towards. In brand constellation choices, the evaluation of one constellation should be negative if one or more of the included brands is not liked. Thus, we hypothesize in H2b that brand attitude towards individual brands in constellations is positively related to brand constellation choice.

H2b: Brand attitude is positively related to choice of brand constellations.

However, Park et al (1996) found that complementarity was more important than attitude in evaluations for brand alliances. Perceived brand fit should therefore differ more between selected and non-selected brand constellations than brand attitude. As support for this line of argument, literature on consideration sets shows that consumers usually consider several brands within a nominal product category (cf. Menon and Kahn, 1995; Ratner, Kahn and Kahneman, 1999). There is also empirical support for the notion that consumers may choose less preferred brands for the sake of variety (Ratner et al). Choosing favored brands may not always be important. Therefore, we argue that the impact of brand fit is more strongly related to choice of brand constellations than brand attitude (H3a).

Research has also shown that consumers feel that it is more important to choose the right product than to choose the right brand in goal-derived choice situations (Lange et al, 2003; Park and Smith, 1989). Consumers may perceive greater

differences between product categories than between brands within product categories, thereby making the product-level decision more crucial for goal fulfillment. Research on basic level categorization supports this notion (Medin and Smith, 1984; Mervis and Rosch, 1981). We compare product-level typicality with brand attitude in H3b, which hypothesize that product-level typicality is more strongly related to brand constellation choice than brand attitude.

H3a: Perceived brand fit is more strongly related to brand constellation choice than brand attitude

H3b: Product-level typicality is more strongly related to brand constellation choice than brand attitude

4. Methodology

Subjects in the main study were 142 undergraduate students at a Swedish university. A student sample was deemed appropriate for the study since the main purpose was theory application (see Calder, Philips and Tybout, 1981). It was judged to be beneficial to have a homogenous sample so that the brands and product categories had a greater chance of sharing similar meaning to respondents. A student sample provides some level of homogeneity and enables testing of the proposed theoretical relations. The subjects were recruited from two courses.

4.1. Design and procedure

To test our hypotheses, it was important to have data on brand constellation choice, and on the hypothesized variables influencing choice. A choice task was designed where consumers selected the most preferred brand constellation from a number of alternative constellations. First, specific choice situations were presented to respondents, who were then asked to choose between three different brand constellations. As previously noted, the choice situations regarded choices of packaged goods. This type of products has been used in similar research (cf. Menon and Kahn, 1995; Ratneshwar and Shocker, 1991). Data on product-level typicality, perceived product and brand fit and brand attitudes were also collected.

In brand choice tasks, consumers choose between a number of brand alternatives with specified product attributes and attribute levels (e.g., Simonson and Tversky, 1992). They may also evaluate certain attribute combinations more or less favorably (Heath and Chatterjee, 1995). In this study, we use brands and product categories as attributes in brand constellation choices. Brand attitude

and product-level typicality are attribute levels. Attribute combinations are the perceived fit between brands and product categories.

It was necessary to develop and assess four stimuli in the choice task; 1) goal-derived choice situations within the overall context, “food and beverages to consume between meals” 2) members (nominal product categories) of the goal-derived categories, 3) members (brands) of the nominal product categories that were appropriate in stimuli 2, and 4) perceived fit between product categories. The stimuli were developed through two pre-tests.

4.1.1. Pre-tests

A pre-test with 47 undergraduate students (a different set of respondents than in the main study) was conducted to select appropriate goal-derived choice situations, nominal product categories, and brands. Firstly, goal-derived categories where consumers were highly likely to eat and drink snacks were developed. We measured the consumption frequency in seven candidates by a 9-point item (1 = Not at all likely, 9 = Very likely) to select goal-derived categories. The items was worded “How likely are you to consume snacks in...*goal-derived choice situation*”. We looked for choice situations where the mean was significantly higher than five (middle point of the scale), indicating a high consumption frequency.

We decided on four goal-derived choice situations in accordance with recommendations in choice task modeling (Carson et al, 1994). Four to six choice scenarios are appropriate for validation and to avoid respondent fatigue. The goal-derived categories were “when you are at home studying for an exam”, “while having friends over on a Friday night”, “while spending an evening at home with your girlfriend/boyfriend” and “when you are alone at home and watching TV”. Consumption frequency was significantly ($p < 0,001$) higher than our criterion in each of these four categories. Each choice situation was presented with a context vignette based on established methodology (cf. Barsalou, 1983; Ratneshwar and Shocker, 1991; Dhar and Simonson, 1999) in the main study. See Table 1 for mean consumption frequency and context vignettes in each choice situation. The choice situations are numbered in the order they were presented for respondents in the main study.

Table 1:
Context vignettes and brand constellations in the main study

Context vignettes and brand constellations 1-3			Consumption frequency
1. Imagine that you are at home and are studying for an exam. You have had a meal earlier but feel you are in the mood for some snacks. Which of the following combinations of products are you most likely to choose?			6.79***, n =47
Brand Constellation 1 <i>Orange juice</i> <i>Bag of candy</i>	Brand Constellation 2 <i>Coffee</i> <i>Chocolate bar</i>	Brand Constellation 3 <i>Soft drink</i> <i>Cookies</i>	
2. You have invited some friends over on a Friday night. You have decided against alcoholic beverages but feel like some snacks. Which of the following combinations of products are you most likely to serve to your friends? You serve only these three products and all at the same time.			8.21***, n = 47
Brand Constellation 1 <i>Coffee</i> <i>Ice Cream</i> <i>Cookies</i>	Brand Constellation 2 <i>Soft drink</i> <i>Potato chips</i> <i>Bag of candy</i>	Brand Constellation 3 <i>Tea</i> <i>Cookies</i> <i>Chocolate bar</i>	
3. You have entertained your partner for dinner a Saturday night. You were at a party the night before so you felt that a bottle of wine for dinner was sufficient. You want some snacks some time after dinner. Which of the following combinations of products are you most likely to choose?			6.36***, n = 47
Brand Constellation 1 <i>Chocolate bar</i> <i>Bag of candy</i> <i>Orange juice</i>	Brand Constellation 2 <i>Ice Cream</i> <i>Potato chips</i> <i>Soft drink</i>	Brand Constellation 3 <i>Mineral water</i> <i>Cookies</i> <i>Bag of candy</i>	
4. You are home alone one night watching TV. While sitting in front of the TV you get in the mood for some snacks. Which of the following combinations of products are you most likely to choose?			6.29***, n = 45
Brand Constellation 1 <i>Tea</i> <i>Ice Cream</i>	Brand Constellation 2 <i>Soft drink</i> <i>Bag of candy</i>	Brand Constellation 3 <i>Coffee</i> <i>Cookies</i>	

*** - $p < 0.001$

Nominal product categories and brands were obtained in the same pre-test. In a previous study on food and beverage consumption, Lange and Wahlund (2000) found that consumers associate many different product categories and brands to goal-derived choice situations. Therefore, subjects judged the appropriateness of thirteen nominal product categories⁴ for usage contexts on a 7-point item (1 = Not at all appropriate, 7 = Very appropriate). The wording of the question was based on previous research on goal-derived categorization (cf. Ratneshwar and Shocker, 1991). Respondents were asked, "How appropriate are the following products in...*the choice situation*".

The nominal product categories were split in three groups; appropriate (lower level of confidence interval above the middle point = 4), moderately appropriate (confidence interval included the middle point) and inappropriate (higher level of confidence interval below 4). In all four situations the majority of product categories were either appropriate or moderately appropriate, only two to three categories were perceived as inappropriate. A selection of appropriate and moderately appropriate nominal product categories were used in the choice situations (see Table 1).

Brands were selected by a brand attitude measure. Respondents were asked questions for fifty-two brands (four in each nominal product category), and because of the large number of brands, a single-item measure was used (1 = bad, 7 = good). The wording was, "I think that *brand x* is..." and was inspired from previous measures of brand attitude (Loken and Ward, 1990; Simonin and Ruth, 1998). Brands were divided into favorable/moderately favorable brands, by way of paired samples t-tests, in relation to other brands in the same nominal product category.

The number of competing brand constellations and the number of brands in each constellation was also decided upon. From previous research on foods and beverages, we know that two to three brands are most common for this type of brand constellation choices (Lange and Wahlund, 2001). Since at least ten different product categories were perceived as appropriate in the pre-test, all four choice situations had three brand constellations in order to cover as many different products as possible without making the choice task too complex. We used two brands in choice situations 1 and 4 and three brands in choice situations 2 and 3. In choice situation 2 and choice situation 3, more than one consumer is present (see Table 1), making it more likely that more products could be chosen.

⁴ The products were sodas, coffee, orange juice, tea, potato chips, yoghurt, corn flakes, fruit-flavored bags of candy, chocolate-flavored bags of candy, chocolate bars, ice cream, mineral water, cookies.

When constructing the choice set for each choice situation, we wanted to avoid dominant brand constellations that all respondents would select. In order to get alternative brand constellations of reasonably similar attractiveness, we constructed brand constellations with 1) moderately favorable brands from highly appropriate nominal product categories, and 2) favorable brands from moderately appropriate nominal product categories.

The second pre-study measured perceived fit between the product categories within a brand constellation. Even if the product categories themselves were appropriate in the choice situations, poor fit between products could make the constellation highly unattractive. The potential problem with poor fit was taken into consideration when constructing the brand constellations. Pre-test 2 consisted of three judges' ratings of how well they thought the product categories (e.g., tea/ice cream) complemented each other in the choice situation (e.g., while watching television) on a 5-point item (1= Very poor fit; 5= Very strong fit). All combinations were rated three or higher.

4.2 Procedure

The subjects in the main study were recruited from two different marketing courses and were told that they would be participating in a study of consumer habits of food consumption. They were asked to come to a specified room at lunchtime the following week and that the study would take approximately forty-five minutes to complete. They were also told that they would receive a free lunch at some time during the forty-five minutes. The subjects were split into three different groups and the study was run on three consecutive days in the same week.

Each subject was given three booklets. The first booklet contained five choice situations (the first one was only used so that subjects could familiarize themselves with the choice task) and the sets of brand constellations for each choice situation. A supervisor read the context vignettes and the alternative brand constellations aloud. The subjects then made a brand constellation choice and answered some more questions about the brand constellations. This procedure was repeated for all choice situations. Next, lunch was distributed (cold pasta salad) before the second and third booklet was handed out. The second booklet contained questions on product-level typicality, product fit and brand fit. The third booklet measured brand-related variables such as brand attitude. Subjects completed the second and third booklet at their own pace.

4.3 Measures

Choice of brand constellations: Subjects were asked to mark the brand constellations they preferred resulting in a discrete brand constellation choice variable. For validation purposes we also measured an overall liking of the brand constellations in the specific choice situation. The item was based on the context vignette in Table 1 and was measured with a 7-point item (1= Does not like it at all, 7= Like it very much).

Constellation-related variables: *Perceived product fit* was measured with a 7-point item (1 = Strongly disagree, 7 = Strongly agree). The wording was as follows: "Consuming Product X and Product Y together suits me fine". *Perceived brand fit* was also measured with a 7-point item (1 = Fit each other poorly, 7 = Fit each other well). The items were worded "Brand A and Brand B...". The fit measures were based on Simonin and Ruth (1998). The different item wording was related to product fit being more functional (related to consumption) and brand fit being relatively more symbolic. Pearson's correlation coefficient between product and brand fit was on average (across all brand constellations) 0.59, and was significantly different from one ($p < 0.01$). This indicates that brand fit and product fit are correlated, but still distinct from one another.

In choice situations 2 and 3, three brands were included in the brand constellations. The fit measures were in these two situations created by way of a mean index of the three pair wise fit measures (x-y, x-z, y-z). This measure was also validated with a three-way fit measure (x-y-z). Pearson's correlations coefficient varied from $r = 0.71$ to $r = 0.80$, suggesting a strong positive correlation between pair wise and three-way measures of perceived fit. The two measures had similar means and were similarly related to brand constellation choice.

Brand-related variables: *Brand attitude* was measured with a three-item 7-point semantic differential (1 = bad/low quality/unsatisfactory, 7 = good/high quality/satisfactory), as recommended by Loken and Ward (1990). The inter-item reliability was high: Cronbach's alpha ranged from 0.84 to 0.94 for the twenty brands in the study (a few brands were used in more than one choice situation). *Product-level typicality* was measured by asking how good an example each nominal product category was in the choice situations. The typicality measure used two 9-point items; "How well does Product X fit in... the choice situation?" (1 = Fits very poorly/, 9 = Fits very well) and "How often do you consume Product X in...the choice situation (1=Not often at all, 9=Very often). The questions were based on typicality measures for goal-derived

categories (cf. Barsalou, 1983; Loken and Ward, 1990). Pearson's correlation coefficient varied from $r=0.71$ to $r=0.93$ between the two typicality items.

5. Results

The choice shares of the different brand constellations are not subject to any hypothesis testing. However, we present the choice shares results as a confounding check. We expected that the brand constellations would not differ much in overall attractiveness when analyzing between consumers. The choice shares are presented in Table 2 and demonstrate that the choice shares are indeed evenly spread between the alternatives.

Two choice situations (2 and 4) have choice shares that are almost equally distributed among the brand constellations. However, two brand constellations stand out and are highlighted by italics in Table 2. The fit between orange juice and bags of candy (choice situation 1) was probably too weak (mean score = 2.39) resulting in a small choice share. Moreover, the second brand constellation in choice situation 3 had a relatively high product fit compared with its competitors (mean scores = 2.56 (BC1); 3.82 (BC2) and 2.80 (BC3); paired samples T-test showed that $BC2 > BC1$ and $BC3$, $p < 0.001$) resulting in a high choice share.

Table 2

Choice shares (number of consumers who preferred a brand constellation is in parentheses)

<i>Choice situation</i>	Brand Constellation 1	Brand Constellation 2	Brand Constellation 3
1. Studying for exams	<i>12.0 % (17)</i>	39.4 % (56)	48.6 % (69)
2. Friday night with friends	33.1 % (47)	33.1 % (47)	33.8 % (48)
3. Saturday night with partner	23.9 % (34)	<i>48.6 % (69)</i>	27.5 % (39)
4. TV-night	33.1 % (47)	32.4 % (46)	34.5 % (49)

5.1. Hypotheses testing

Since no brand constellation dominated in any of the choice situations, we conclude that consumer preferences are heterogeneous. Several different types of brand constellations may be preferred in these types of choice situations. The goal-derived category structure may therefore vary considerably between consumers. Based on this result, we reorganized the data so that the most preferred brand constellation (regardless of which it was) was compared with the other two constellations in the hypotheses testing (for a similar procedure, see Nedungadi, 1990).

We validated our choice data through the brand constellation liking measure. The chosen alternative had throughout higher brand constellation liking than the “competing” brand constellations. The other brand constellations were also grouped into second most preferred and least preferred based on their liking of the brand constellations. When there was a tie (nine percent of the cases), the constellations were randomly assigned to second or third “place”.

The hypotheses were tested by paired samples t-tests between the chosen constellation and the second place-constellation. Hypothesis 1a stated that perceived product fit is related positively to brand constellation choice. As shown in Table 3, product fit was significantly higher ($\text{mean}_{\text{chosen}} = 4.68$ vs. $\text{mean}_{\text{second}} = 3.54$; $t=11.55$, $p<0.001$) for the chosen constellation. The least preferred constellation had a significantly lower mean score ($\text{mean}_{\text{third}} = 3.02$) than the other two brand constellations. Hypothesis 1b investigated if perceived fit had an impact on the brand level. As predicted, perceived brand fit was also related positively to brand constellation choice (see Table 3). The mean value for the chosen constellation was much higher than the second-place brand constellation ($\text{mean}_{\text{chosen}} = 4.46$ vs. $\text{mean}_{\text{second}} = 3.51$; $t=11.09$, $p<0.001$; $\text{mean}_{\text{third}} = 3.02$). Analyses across choice situations showed similar results, as both perceived product fit and perceived brand fit were positively related to choice in all four situations. Hypotheses 1a and 1b are thus strongly supported.

Hypotheses 2a and 2b stated that product-level typicality and brand attitude are positively related to brand constellation choice. These two hypotheses were subject to a similar test as the constellation-related variables above. Product-level typicality and brand attitude scores for each constellation were computed through averaging typicality and attitude for the two or three members of each brand constellation. The results for product-level typicality and brand attitude are summarized in Table 3.

Product-level typicality was strongly and positively related to brand constellation choice ($\text{mean}_{\text{chosen}} = 6.23$ vs. $\text{mean}_{\text{second}} = 5.24$; $t=11.71$, $p<0.001$; $\text{mean}_{\text{third}} = 4.59$), supporting hypothesis 2a. As expected, brand attitude was also related positively to brand constellation choice ($\text{mean}_{\text{chosen}} = 5.11$ vs. $\text{mean}_{\text{second}} = 4.76$; $t=5.99$, $p<0.001$; $\text{mean}_{\text{third}} = 4.39$) in support of hypothesis 2b. Between-situation analyses revealed a somewhat weaker relationship between brand attitude and brand constellation choice. In CS3, brand attitude for the chosen and the “second place”-constellation did not significantly differ from each other and the significance levels was overall a little higher. The positive relationship between product-level typicality and brand constellation choice was strong across choice situations.

Table 3

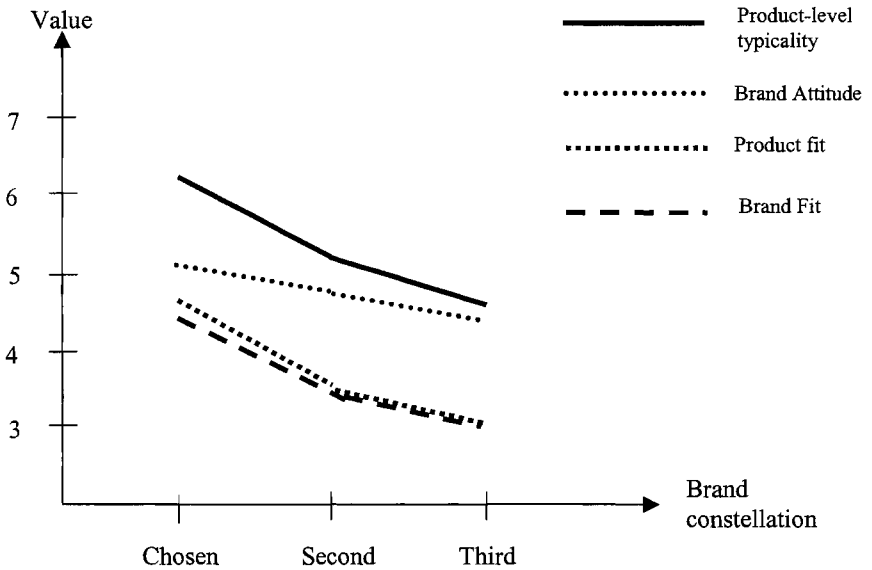
Differences between chosen constellations and non-chosen constellations for the hypothesized variables (in total and across choice situations). CS = Choice situation

	Chosen constellation	"Second place" constellation	"Third place" constellation	N
<i>Product Fit</i>				
Total	4.68***	3.54	3.02	568
CS1	5.00***	3.44	2.71	142
CS2	4.56**	4.06	3.46	142
CS3	3.71***	3.06	2.63	142
CS4	5.45***	3.59	3.28	142
<i>Brand Fit</i>				
Total	4.46***	3.51	3.02	568
CS1	4.78***	3.34	2.73	142
CS2	4.64**	4.19	3.25	142
CS3	3.18***	2.64	2.33	142
CS4	5.23***	3.88	3.78	142
<i>Product Typicality</i>				
Total	6.23***	5.24	4.59	567
CS1	6.44***	5.54	4.76	142
CS2	6.35***	5.62	5.15	142
CS3	5.40***	4.64	4.17	141
CS4	6.73***	5.15	4.28	142
<i>Brand Attitude</i>				
Total	5.11***	4.76	4.39	560
CS1	5.28***	4.67	3.93	140
CS2	5.04**	4.64	4.47	140
CS3	5.04	4.98	4.77	140
CS4	5.10**	4.76	4.38	140

* - $p < 0.05$ ** - $p < 0.01$ *** - $p < 0.001$

In hypotheses 3a and 3b, we investigate whether, (1) brand fit or brand attitude, and (2) product-level typicality or brand attitude, are more strongly related to brand constellation choice. Difference scores between the chosen constellations and second-place constellations were calculated and tested with paired samples t-tests. Brand fit had a higher mean difference than brand attitude (mean = 0.94 vs mean = 0.35; $t=6.61$, $p<0.001$) in support of hypothesis 3a. Similarly, product-level typicality had a higher mean difference than brand attitude (mean = 1.00 vs mean = 0.35; $t=5.72$, $p<0.001$) in support of hypothesis 3b.

Figure 1:
Graphical summary of the results.



6. Discussion

6.1 Summary of main findings

We summarize our findings graphically in Figure 1. All four hypothesized variables were positively related to brand constellation choice. No significant differences with regard to the hypothesized effects were found between the brand constellations with two brands and the constellations with three brands. Our results suggest that constellation-related and brand-related constructs both have an impact on brand constellation choice. We have also empirically demonstrated that brand constellation choice is to a higher degree related to how well the brands fit together than to brand attitudes towards individual brands. This is similar to previous research on brand alliances (cf. Park et al, 1996).

Moreover, our results indicate that consumers discriminate more between alternatives at the product level than at the brand level. Brand attitude differed to a lesser extent between chosen constellations and non-chosen constellations than did product-level typicality, whereas product fit and brand fit differed to a similar degree. Our results confirm previous findings from studies of non-comparable choice (Park and Smith, 1989; Lange et al, 2003).

6.2 Theoretical implications

We have investigated how consumers make choices in situations where more than one brand is needed for goal fulfilment. We argue that consumers make brand constellation choices in many everyday consumption contexts. Our results indicate that in these choice situations 1) constellation-related (perceived fit) variables may be more important than brand-related (attitude) variables and 2) product-level variables may be more important than brand-level variables.

This has important implications for our understanding of brand choice. Taking the perspective of the individual brand, we realize that there are many factors outside the brand itself that affect how appropriate the brand is (consumption goals, choice situations, complementarities between the brand and other brands, product-level typicality and competing brand constellations). In marketing, brand image constructs (e.g., brand attitude) is often used as indicators of brand equity and as predictors of brand choice. Our results suggest that when consumers fulfil their consumption goals by a brand constellation, they choose the combination of brands that they perceive superior but not necessarily the individual brands they like the most. Positive evaluations of individual brands are neither the only nor the best indicator of brand constellation choice.

Goal-derived categorization has emerged as a useful categorization tool in marketing. It is theoretically appealing and give important insights into how competition works on consumer markets. We have extended goal-derived categorization research by investigating choice of brand constellations in goal-derived choice situations. It is important to note that defining categories in accordance with consumption goals does not mean that consumers always will consider alternatives from distinct product categories or that they will always purchase a constellation of brands. Sometimes, one product category may be perceived as ideal and the consumer may thus only consider brands within that product category. But when consumers find brand constellations necessary for goal fulfillment, brand constellations should be able to modify typicality structures in goal-derived categories. Brands that may be regarded as less typical when judged separately may be regarded as a very typical brand constellation.

6.3 Marketing Implications

Brands are one of the most valuable resources for marketers. Building brand associations and enhancing consumers' attitudes towards brands, and thereby leveraging brand equity, are generally accepted as the main issues facing marketing practitioners today (cf. Dacin and Smith, 1994; Keller, 1993). Brands are also important for consumers since brand perceptions help consumers make brand choices, for example, by affecting perceived quality, perceived risk and

information costs (Erdem and Swait, 1998). As a result, researchers in marketing have had a great interest in brands and branding research covers aspects such as brand extensions, brand positioning and comparative advertising.

How consumers choose brand constellations and why certain combinations of brands are attractive should thus be of great importance for marketing practice. As our results indicate, it is very important for marketers to make their brand, *and the product category* in which the brand belongs, more appropriate in relevant choice situations. Since brand attitude was in our study relatively less important for brand constellation choice, it is important for marketers to realize that building a positive brand image may not be sufficient. The brand does not only compete with other brands within the same product category but with brands in other categories. Moreover, brands compete also as parts of brand constellations.

Marketers should therefore also work on the brand's versatility and salience (cf Ratneshwar and Shocker, 1991; Holden and Lutz, 1992), that is, linking the brand to complementary brands and as many different goal-derived categories as plausible. Moreover, demonstrating a good fit between the brand and other brands/other product categories through advertising and sales promotion may increase the likelihood for the brand of being included in the brand constellations that consumers choose. Joint advertising and joint sales promotion activities with brand partners may influence the perceived fit between brands and also demonstrate for consumers that these two product categories go well together.

Another tactic may be to increase the typicality of the brand (and the product category in which the brand belongs) in lucrative goal-derived categories, that is, frequently instantiated choice situations. It is very important to understand the goal-specific associations that consumers have and build the marketing communication in accordance with the associations. For instance, when and where do they make purchases? This tactic may include advertising that shows how appropriate the brand or the product is in a certain situation. Other tactical considerations may be adjustments of the brand's packaging (e.g., size, container) and where in the stores the brand is displayed.

Our results show that consumers associate a large number of different product categories to consumption goals. The choice shares were evenly spread between the alternative brand constellations within each goal-derived choice situation. This implies that marketers can do more in terms of linking product categories and brands to goal-derived choice situations. There may be "top-of-mind"-positions available in many goal-derived categories.

6.4 Limitations and further research

The generalizability of our results is limited through the specifications in the choice task. A number of fixed brand constellations were presented to subjects, who may choose other brand constellations than the ones that were provided in the empirical study. Related to this, we did not investigate decision-making process issues, such as anchoring effects from one brand to others. Moreover, subject characteristics, such as gender or familiarity with the choice situations, may have effect on responses, but they were not examined in this research.

Moreover, there are different kinds of brand constellations (in high/low involvement choice processes; over time/in the same consumption episode etc). We have only studied one particular type of brand constellations, that is, simultaneous consumption of packaged goods brands. We believe that brand attitudes, perceived fit and typicality may be important in other contexts as well but the relative importance may be different. Moreover, other concepts may be important in other choice settings. Further empirical work on brand constellation evaluation and choice should test fit, attitude and typicality and other concepts in other choice settings.

Research looking into conceptual issues would also be of great interest. For instance, we have not investigated differences between brand constellations that are strongly or weakly tied together in consumer memory in this article. Moreover, it is still unclear to what extent brand constellations are strongly tied together and linked to specific choice situations. Are consumers really aware of the brand constellations they purchase and consume? If so, are there favored brand constellations that are “immune” against marketing activities from competing brands and/or product categories?

Under what conditions is a brand included in a brand constellation? This study did not address the issue of brand inclusion specifically. Consumers may have two decision processes, either by considering brands in the constellation sequentially or by considering whole constellations simultaneously. Sequential processing is likely to occur when consumers have one product that they really like or feel is really necessary for goal fulfillment (“I must have coffee on my way to work to wake up in the morning”) and perceive the other products as complementary (“It is nice to have a bagel or a cookie with my coffee on my way to work”). Simultaneous processing is likely in choice situations where consumers automatically feel a need for two or more brands. In this case, a set of brand constellations is considered and competes directly against each other. Typical constellations may probably be selected over less typical constellations, making constellation-related variables very important in pre-purchase alternative evaluation. Future research should look into how common these alternative

choice processes are and investigate what conditions may make either one more or less probable.

Marketers should also be interested in using brand constellations in their marketing activities. What can be done in terms of advertising and promotion to build brand constellation equity? Joint advertising and joint in-store presentation are two areas where future research efforts should be made. One specific issue to examine is the relative effectiveness of brand alliances (e.g., co-brand or ingredient brand) and brand constellations. For instance, an ad could either feature “Haägen-Dazs with Bailey’s flavor – the perfect Saturday dinner dessert” or “Haägen-Dazs and Bailey’s Irish Cream – the perfect Saturday dinner dessert”. Further research should also examine when it is more effective to use co-branding or ingredient branding strategies and when brand constellations may be more effective.

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Do brands of a feather flock together? Some exploratory findings on the role of individual brands in brand constellation choice

Abstract

In this article, we investigate consumers' choice of brand constellations (e.g., Big Mac and Coke at McDonald's) by examining the roles of individual brands. We propose that marketers need to look beyond perceived fit between brands within a brand constellation. Therefore, we empirically explore how individual brand evaluations at product level and at brand level affect brand constellation choice. We show that brands do not have to be equally attractive in order to be included in brand constellations. For instance, a weak brand may complement a strong brand. Theoretical and marketing implications are discussed.

Introduction

The predominant view in marketing with regard to consumer choice is that consumers select one brand that best fulfills a specific consumption goal. But are brands always chosen one by one? We argue that they are not. There are situations when consumers feel that more than one brand is necessary for goal fulfilment (Samu, Krishnan and Smith, 1999). Thus, we claim that single brands are often chosen together with other brands from complementary product categories. A choice of at least two complementary brands is in this article called brand constellation choice. Consumers may want to consume brand constellations in various goal-derived categories⁵, for example when having breakfast in the morning or when mixing drinks at a party. In these instances, individual brands are parts of a consumption experience that consists of two or more complementary brands.

⁵ Nominal product categories are unable to incorporate brand complementarity. Moreover, competition between different brand constellations may span over a large number product categories. Therefore, another categorization principle is needed for evaluation and choice of brand constellations. Goal-derived categorization is generally regarded as highly useful for understanding how brands from different product categories compete with each other in usage contexts (Barsalou, 1983; Day, Shocker and Srivastava, 1979; Ratneshwar and Shocker, 1991). Goal-derived categories are also better suited than nominal product categories when studying brand constellations (Ratneshwar, Pechmann and Shocker, 1996).

There are examples in marketing practice of marketer-induced brand constellations, such as Big Mac and Coca-Cola at McDonald's and short-term cross-merchandising activities in retail stores (cf. Drèze and Hoch, 1997). In addition, brand constellations are often induced by consumers themselves, and comprise idiosyncratic combinations of consumers' favorite brands (cf. Fournier, 1998).

Previous research has demonstrated that consumers choose brand constellations depending on the perceived fit, or complementarity, between the brands (Solomon and Englis, 1994). Perceived fit is relevant both at product level and at brand level (Simonin and Ruth, 1998). The impact of perceived brand and product fit is well understood because of research on brand extensions (e.g., Aaker and Keller, 1990; Broniarczyk and Alba, 1994; Bridges, Keller and Sood, 1999), brand alliances (e.g., Park, Jun and Shocker, 1994; Simonin and Ruth, 1998; Samu, Krishnan and Smith, 1999), and brand constellations (e.g., Solomon and Englis, 1994; Solomon and Buchanan, 1991).

However, perceived fit does not convey all information about how consumers evaluate and choose brand constellations. For example, it is not possible to use the perceived fit construct to determine whether one brand within the constellation is selected first or if all brands are selected simultaneously. One particular brand may be highly prototypical of the goal-derived category and perceived as necessary for goal fulfilment, whereas complementary brands may be altered from one occasion to another (Lange and Wahlund, 2001). Moreover, perceived fit does not reveal the attitude towards the individual brands in a chosen constellation. We propose that the brands in brand constellations may not be equally important and that particular brands may dominate other brands. To understand more about how brand constellations are chosen we need also to investigate the role of individual brands.

In this article, we will empirically examine how evaluations of individual brands influence choice of brand constellations for packaged goods. Specifically, we will look beyond perceived fit and examine evaluations both at product level (product typicality in goal-derived categories) and at brand level (brand attitude) for individual brands in a constellation. The rationale of using product typicality and brand attitude will be elaborated on in the conceptual framework. A main purpose of the article is to explore whether all brands in a chosen brand constellation have to be equally strong (e.g., two equally favourable brands or two typical product categories), or if brand constellations may consist of brands that are evaluated differently (e.g., one from a highly typical product category and another one from a less typical product category).

We focus both conceptually and empirically on constellations comprising two brands. Obviously, brand constellations may consist of more than two brands (e.g., skiing equipment, lunch buffets) but for clarity and simplicity we only discuss the two-brand case. Moreover, we use the term brand constellation throughout the article in favour of product constellation even though we discuss issues at both brand level and product level. Product category membership is one of the primary associations of a brand (Keller, 1993; Holden and Lutz, 1992), making it reasonable to include product-level considerations as part of brand constellation construct.

Conceptual framework

As previously noted, brand constellation choices are made in goal-derived categories (cf. Ratneshwar, Pechmann and Shocker, 1996). In many goal-derived categories, consumers have a plethora of brands from many different product categories to choose from (cf. Loken and Ward, 1990; Ratneshwar and Shocker, 1991). Returning to the examples in the introduction, product categories as vodka, gin, rum, orange juice, tonic water, and colas are merely a selection of product categories that are members of a 'mixing a drink' goal-derived category. Cereal, yoghurt, orange juice, tea, coffee, and bread are among the product categories in the breakfast category.

When a consumer has recognized a need for a brand constellation, s/he initiates a decision-making process to find a brand constellation that may fulfil the consumption goal. An overall characteristic of this process is that consumers need to make decisions at two levels, at the product level and at the brand level (Nedungadi, 1990; Lange, Selander and Aberg, 2003). Therefore, evaluative criteria at both levels are employed and direct the consumer towards; (1) which product categories the constellation should consist of and, (2) which brands in these product categories should be selected.

It is well documented in previous research on goal-derived choice (e.g., brands across product categories are considered) that consumers initiate the decision process at the product level (e.g., Park and Smith, 1989). Evaluation of alternatives from different product categories is normally a top-down process that starts at product level rather than a bottom-up process that starts at brand level (Johnson and Lehmann, 1997; Meyers-Levy and Tybout, 1989; Nedungadi, 1990).

Evaluative criteria

An important issue is which evaluative criteria are salient at product level and brand level. Even though perceived fit is not central to our research, it is

important to initially note that perceived fit strongly affects choice of brand constellations (cf. Walters, 1991; Chintagunta and Haldar, 1998). An adequate degree of perceived fit between the brands is necessary for brand constellation choice. As previously noted, perceived fit may be important at two different levels, brand fit and product fit (Simonin and Ruth, 1998), and previous research has shown that perceived fit positively affects evaluations of brand extensions and brand alliances (Broniarczyk and Alba, 1994; Park, Jun and Shocker, 1996).

We argue that evaluations of brand constellations are somewhat different from evaluations of brand extensions and brand alliances. Consumers may evaluate an extension favourably with a low product fit as long as the brand fit is high (Broniarczyk and Alba, 1994). Similar results have been found for advertising brand alliances (Samu, Krishnan, and Smith, 1999). However, brand constellations are simultaneous consumption of two brands, and consumers would most likely reject a brand constellation consisting of product categories with poor fit. We claim that brand constellations should, in contrast to brand extensions, require a high level of product fit.

Turning to evaluative criteria for individual brands in brand constellation choice. In categorization research, it has been demonstrated that all instances within a category are not equally good representatives of the category (Barsalou, 1985; Mervis and Rosch, 1981; Rosch, 1978). Some category instances are more *typical* (short for prototypical), or representative, of the category than others. Category membership is on a continuum and instances differ in how typical they are of the category (Murphy and Medin, 1985). Typicality is strongly related to a number of aspects in the consumer decision-making process. Typical products/brands are retrieved faster by consumers, are more liked by consumers and more often chosen than less typical products (Loken and Ward, 1990; Nedungadi and Hutchinson, 1985).

Typicality structures have been found in goal-derived categories, with product categories as members, and in product categories – with brands as members (Lange, Selander, and Åberg, 2003, Meyers-Levy and Tybout, 1989; Nedungadi, 1990; Ratneshwar and Shocker, 1991). However, previous research has demonstrated that typicality is determined differently in goal-derived categories than in product categories (Loken and Ward, 1990).

In goal-derived categories, typicality is based on closeness to the ideal and on frequency of instantiation (Barsalou, 1983; 1985; Loken and Ward, 1990; Ratneshwar and Shocker, 1991). Closeness to the ideal is based on salient consumption goals in the goal-derived category, and frequency of instantiation is related to how often a consumer has encountered the product in the goal-derived category (Barsalou, 1985). For example, ice cream may be an ideal

product to eat on a hot summer's day (goal-derived category) because ice cream fulfils the salient consumption goals of eating something cold and refreshing. Therefore, consumers may perceive that ice cream is a typical product to eat on a hot summer's day, whereas fresh fruit may be somewhat less typical and a chocolate bar may be very atypical.

Typicality in product categories is based on physical product attributes (Loken and Ward, 1990; Sujan and Bettman, 1989; Mervis and Rosch, 1981). For example, consumers categorize ice cream according to a number of physical attributes. The more of the attributes that a brand possesses, the more typical is the brand (Loken and Ward, 1990). However, typicality often do not vary much between brands in a product category because of the tendency of brands within a product category to copy each other (cf. Ehrenberg, Barnard and Scriven, 1997). Thus, brands often share a large part of the product category attributes for category identification and category association, and add a small number of unique tags to the brand for differentiation purposes (Sujan and Bettman, 1989; Punj and Moon, 2002).

Moreover, brands within one product category often share goal-relevant attributes (e.g., all soft drinks are refreshing). In goal-derived categories, then, consumers perceive greater differences between distinct product categories than between brands within a product category (Loken and Ward, 1990; Park and Smith, 1989). Thus, an important difference between product category and brand evaluation is that goal fulfilment potential is primarily evaluated at product level.

At brand level, a main question remains. What makes one brand from each product category 'qualify' to be included in a brand constellation? Consumers discriminate between brands in a product category mainly through communicated brand images (Keller, 1993). Effective marketing communication builds a strong and favourable brand attitude, which is a main determinant of brand choice (Rossiter and Percy, 1997). Thus, the main role for a brand is to be among the most favourable brands within its product category (Ehrenberg, Barnard, and Scriven 1997). We propose that one main evaluative criterion for brands is a favourable brand attitude, i.e., how well a brand is liked compared to other brands in the same product category.

To summarize, we propose that consumers use a different evaluative criteria at product level (typicality) and at brand level (attitude). Therefore, product-level typicality and brand attitude are salient evaluative criteria in brand constellation choice. At product level, where the choice process is initiated, consumers have been found to evaluate alternatives based on how typical they think products are. The brand-level decision consists mainly of retrieving and selecting favourable

brands within the product categories that have been selected in a previous step. The primary reason for using brand attitude and not brand typicality is that consumers perceive small manifest differences between brands within a product category.

Choice process and brand position

We have proposed product-level typicality and brand attitude as two evaluative criteria for individual brands in goal-derived categories. How might consumers use these evaluative criteria when making brand constellation choices? What effect do the evaluative criteria have on brands with different positions in the goal-derived category?

Consumers may have different goal-derived typicality structures (Lange, Selander and Aberg, 2003; Lange and Wahlund, 2001). Some consumers may have one favourite product that is superior to all other products and must be included in the constellation (e.g., "I absolutely want a chocolate bar as an afternoon snack"). Another plausible typicality structure is when consumers perceive one class of product categories as more important than its complement but has no absolute favourite (e.g., food choice is more important than, and influences the choice of, wine). A third typicality structure results when consumers perceive constellations as typical (e.g., dinner combinations such as spaghetti and meat sauce) and different constellations compete against each other (Lange and Wahlund, 2001).

Consumers who have one favourite product, or perceive a product class as more important than its complement, are likely to choose brand constellations sequentially. A favourable brand from a highly typical product is initially selected. Consumers then select the complementary brand from another product category. The complementary choice is relatively less important and may be selected from a large number of different - and also less typical - product categories. For example, a consumer may be very interested in having a chocolate bar in the afternoon but any kind of complement (e.g., soft drinks, coffee, tea, and mineral water) would be satisfactory as long as (1) the product fits with a chocolate bar and, (2) a suitable brand is available.

Consumers may also engage in simultaneous processing. Previous research has shown that consumers may perceive constellations per se as typical in familiar goal-derived categories (Barsalou, 1985; Fournier, 1998). In this case, consumers come to think of entire brand constellations directly, and consider a set of competing constellations. The brand constellation with the most favourable brands (if available) from the most typical product categories is potentially selected. Over time, simultaneous processing should make the links

between both products and the consumption goal stronger (Solomon and Englis, 1994), suggesting that both products should be equally typical of the goal-derived category. Consider a consumer who strongly prefers vodka and cranberry juice to other drink constellations (e.g., gin and tonic). Vodka and cranberry juice would both be highly typical members of the goal-derived category and gin and tonic would both be perceived as (relatively) less typical members.

Individual product categories and brands are positioned in the minds of consumers (Nedungadi, 1990; Sujan and Bettman, 1989). There are associative nodes of different degree of typicality and favourability in consumer memory linking product categories and brands to relevant goal-derived categories, and to other product categories and brands that are either substitutes or complements (Holden and Lutz, 1992, Keller, 1993). In this article on brand constellation choice, we focus on the position of individual brands along two dimensions, product-level typicality and brand attitude. Product-level typicality may range from typical to atypical member of a goal-derived category and brand attitude from favourable to unfavourable member of a product category.

As a basic proposition, we argue that typical product categories and favourable brands have the best chances to be included in brand constellations. Consumers can add up the product-level typicality (brand attitude) level for each individual product category (brand) into an overall evaluation of the brand constellation. Therefore, the brands with the highest combined product typicality or strongest combined brand attitude among alternative brand constellations should likely be selected. Thus, we expect that brand constellations more often consist of brands from typical product categories and brands with a favourable brand attitude than less typical product categories and less favourable brands (H1a-H1b).

H1a: Chosen brand constellations more often consist of brands from typical product categories than of brands from less typical product categories

H1b: Chosen brand constellations more often consist of brands with favourable brand attitude than of brands with less favourable brand attitude.

However, all brands in a constellation may not have to be highly typical or favourable. For instance, a single typical product category may stand out from the rest of the goal-derived category members. In this case, a less typical product category may be selected as a complement when a constellation is desired. Thus, for less typical products, we propose that their inclusion in brand constellation choice is dependent on high product-level typicality of the other included brand. A combination of two less typical products should be regarded as undesirable, and have a very small possibility to be included in a brand constellation. We

expect the opposite effect for typical products, as two typical products should be perceived as highly desirable. Therefore, typical products should have a relatively larger (smaller) possibility of being chosen in a brand constellation when being associated with other typical (less typical) products.

Less favourable brands are probably in the most difficult position and may have difficulty in being selected at all as less favourable brands may prime a more favourable brand within its category that share the same goal-relevant attributes (cf. Nedungadi, 1990). However, some research findings indicate that consumers may choose a less favourable brand for the sake of variety (Ratner, Kahn and Kahneman, 1999; Menon and Kahn, 1995). Moreover, a less favourable brand might have some possibility to be chosen when it is included in a constellation with another brand that the consumer likes (i.e., a favourable brand) compared to when the unfavourable brand is linked to another unfavourable brand. In contrast, favourable brands should be chosen relatively more (less) often in a brand constellation when they are included together with a favourable (unfavourable) brand.

To summarize, we hypothesize these effects in terms of equal (e.g., both brands are favourable) or unequal (e.g., one brand is favourable and one brand is less favourable) evaluations of brand constellation members (for a similar approach, see, Buchanan, Simmons, and Bickart, 1999; Hsee and Leclerc, 1998). Brands that are above average in terms of product-level typicality and brand attitude is chosen relatively more often when evaluations of the individual brands are equal, whereas brands that are below average in terms of product-level typicality and brand attitude are chosen more often when evaluations of individual brands are unequal. Thus, H2a and H2b are:

H2a: Equally evaluated brands are more likely to be included in chosen brand constellations than unequally evaluated brands when the combined product-level typicality (brand attitude) is above average.

H2b: Unequally evaluated brands are more likely to be included in chosen brand constellations than equally evaluated brands when the combined product-level typicality (brand attitude) is below average.

Methodology

Subjects in the main study were 142 students that were recruited from two marketing courses at a Swedish university. The use of students in consumer behavior research has been questioned because problems of external validity (e.g., Lynch, 1982; 1999), but has been advocated in research with a focus on theory application where internal validity is most important (e.g., Calder,

Phillips, and Tybout, 1981). We discuss the appropriateness of the use of students in this particular study in the discussion section.

Stimulus development

The empirical data were collected in a packaged goods context. We used snack foods and beverages, as these products have been used previously in studies on brand constellations and goal-derived categories (cf. Menon and Kahn, 1995; Ratneshwar and Shocker, 1991). The stimuli, goal-derived categories and brand constellations, were developed in a pre-test.

Pre-test

A pre-test with 47 undergraduate students (different subjects than in the main study) was conducted to select the stimuli. Initially, goal-derived categories where the subjects likely would eat and drink snacks were developed. Two goal-derived categories were used in this study; “when you are at home studying for an exam”, and “when you are alone at home and watching TV”. We measured consumption frequency in these goal-derived categories on a 9-point item (1 = Not at all likely, 9 = Very likely). The item was worded “How likely are you to consume snacks in...*goal-derived category*”.. Consumption frequency was significantly ($p < 0,001$) higher than the mid-point of the scale (criterion for consumption likelihood) in both categories (see Table 1).

Both goal-derived categories were presented in the main study by a context vignette (see Table 1) based on established methodology in goal-derived categorization (cf. Barsalou, 1983; Ratneshwar and Shocker, 1991; Dhar and Simonson, 1999).

Table 1:
Context vignettes and brand constellations in the main study

<i>Context vignette and brand constellations</i>			Consumption frequency
1. Imagine that you are at home and are studying for an exam. You have had a meal earlier but feel you are in the mood for some snacks. Which of the following combinations of products are you most likely to choose?			6.79***, n =47
<i>Brand Constellation 1</i> Orange juice Bag of candy	<i>Brand Constellation 2</i> Coffee Chocolate bar	<i>Brand Constellation 3</i> Soft drink Cookies	
2. You are home alone one night watching TV. While sitting in front of the TV you get in the mood for some snacks. Which of the following combinations of products are you most likely to choose?			6.29***, n = 45
<i>Brand Constellation 1</i> Tea Ice Cream	<i>Brand Constellation 2</i> Soft drink Bag of candy	<i>Brand Constellation 3</i> Coffee Cookies	

*** - $p < 0.001$

Product categories and brands in each goal-derived category were also obtained in the pre-test. Respondents judged the appropriateness of thirteen product categories in each goal-derived category on a 7-point item (1 = Not at all appropriate, 7 = Very appropriate). The wording of the question was based on previous research on goal-derived categorization (Ratneshwar and Shocker, 1991). Respondents were asked, “How appropriate are the following products in the... *goal-derived category*”.

Product categories with an appropriateness level significantly lower than the mid-point were excluded (three products when studying for an exam and two products when watching TV). These product categories were considered to be atypical of the goal-derived category and therefore not suitable for the study objectives.

The brand constellation choice set was decided upon at this stage. As ten or eleven different product categories were perceived as appropriate products in the pre-test, we decided to cover as many different products as possible without making the choice task too complex. As shown in Table 1, six of the appropriate and moderately appropriate product categories were used in the main study. The product categories were paired so that consumers chose between three alternative brand constellations comprising two brands in each goal-derived category.

Brands were selected by a simple brand evaluation measure. Respondents were asked questions for fifty-two familiar brands (four in each product category), and because of the large number of brands, a single-item measure was used (1 = bad, 7 = good). The wording was, "I think that *brand x* is..." and was inspired from previous measures of brand attitude (Loken and Ward, 1990; Simonin and Ruth, 1998). Paired samples t-tests were used to compare the brands.

When constructing the brand constellation choice set for each goal-derived category, we wanted to avoid dominant brand constellations that all respondents would select. This has been recommended in studies of choice (Carson et al, 1994). Therefore, we finalized the set of brand constellations by using moderately favourable brands from highly appropriate product categories, and favourable brands from moderately appropriate product categories.

Each brand constellation alternative also needed an adequate degree of perceived product fit. A poor product fit between members in a brand constellation can make a brand constellation highly unattractive and confound the results, as discussed previously. Therefore, we combined one food brand with one beverage brand as foods and beverages are a natural combination to consumers. Also, we confirmed with previous research on brand constellations to identify packaged goods complements that consumers would enjoy consuming simultaneously (Lange and Wahlund, 2001). To substantiate that poor product fit not were an issue, three expert judges who were familiar with the research objectives also rated how well they thought consumers would perceive the product fit (e.g., tea/ice cream) in the choice situation (e.g., while watching television) on a 5-point item (1= Very bad fit; 5= Very good fit). All judges rated all combinations three or higher.

Procedure

The respondents were recruited from two different marketing courses and were told that they would be participating in a study of consumer habits of food consumption. They were asked to come to a specified room at lunchtime the following week and that the study would take maximally forty-five minutes to complete. They were also told that they would receive a free lunch at some time during the session. The subjects were split into three groups and the study was run on three consecutive days in the same week.

Each subject was given three booklets. The first booklet contained the choice situations (plus one choice situation that was only used so that subjects could familiarize themselves with the choice task) and the sets of brand constellations for each choice situation. The context vignette and the alternative brand constellations for each choice situation were written out on the same page. The

subjects were told that they should make choices in the same way as they normally would in a real situation. When the subjects turned to the context vignette page, a supervisor read the context vignettes and the alternative brand constellations aloud to ensure understanding of the choice task.

The subjects marked their brand constellation choice on the answer sheet, turned the page, and answered some more questions about the brand constellations. This process was repeated for the second choice situation. Next, lunch was served (cold pasta salad), and used as distraction, before the second and third booklet was handed out. The second booklet contained questions on product-level evaluations and perceived fit. The third booklet contained measures of brand-level evaluations. Subjects completed the second and third booklet at their own pace.

Measures

For measurement of *brand constellation choice*, respondents were asked to mark the brand constellation they preferred among the three alternatives. This resulted in a discrete brand constellation choice variable.

Product-level typicality was measured by two 9-point items and was related to the goal-derived categories. The questions were worded “How well does Product X fit/How often do you consume Product X when you are at home studying for an exam/when you are at home alone watching television?” (1=Fits very poorly/Not often at all, 9=Fits very well/Very often). The two items were based on typicality measures for goal-derived categories (Barsalou, 1983). Inter-item reliability was high: Cronbach's Alpha ranged from 0.85 to 0.96 for the twelve product categories.

Brand attitude was measured with a three-item 7-point semantic differential (1= bad/low quality/unsatisfactory, 7= good/high quality/satisfactory), following Loken and Ward (1990) and Sujan and Bettman (1989). The inter-item reliability was high: Cronbach's alpha ranged from 0.84 to 0.92 for the twelve brands.

Results

Descriptive results on how the respondents chose between the three brand constellations in the two goal-derived categories are presented first. We expected that the choice shares should be evenly spread between the alternatives because they should all be plausible brand constellations. In the “watching television” category this was indeed the case as 47, 46 and 49 respondents chose the three brand constellations respectively. In the “studying for exams” category

one of the brand constellations (orange juice and bag of candy) was chosen by only 17 respondents (12 percent) and the other two were chosen by 56 and 69 respondents (see Table 2). Analyses showed that poor product fit might be one reason for the low choice share for the deviating brand constellation. Even though one brand constellation had a relatively low choice share, it was still preferred by some consumers. As the purpose of this research is exploratory, all brand constellations were used in further analyses.

Table 2:

Mean scores for product-level typicality (9-point items) and brand attitude (7-point items), and brand constellation choices in the goal-derived categories.

	Studying for exams		
	Brand Constellation 1 Juice/Candy bag	Brand Constellation 2 Coffee/Chocolate bar	Brand Constellation 3 Soft drink/Cookies
Choice (%)	17 (12.0)	56 (39.4)	69 (48.6)
Product typicality			
Beverage Brand	4.82	6.12	5.66
Food Brand	4.58	5.03	4.49
Brand Attitude			
Beverage Brand	4.26	4.25	5.57
Food Brand	3.33	4.85	5.53
	Watching TV		
	Brand Constellation 1 Tea/Ice Cream	Brand Constellation 2 Soft drink/Candy bag	Brand Constellation 3 Coffee/Cookies
Choice (%)	47 (33.0)	46 (32.5)	49 (34.5)
Product typicality			
Beverage Brand	6.24	6.00	4.43
Food Brand	4.90	4.33	3.99
Brand Attitude			
Beverage Brand	4.95	3.87	4.87
Food Brand	4.06	5.34	5.37

Hypotheses testing

Both product-level typicality and brand attitude were measured for individual brands (mean scores are presented in table 2), whereas brand constellation choice measured how the brands are evaluated together. Some data preparations were therefore conducted for purpose of analysis. To examine the hypothesized relationships between individual brand evaluation and brand constellation choice,

we computed difference scores for individual respondents between the beverage brand and the food brand on product-level typicality and brand attitude in the six brand constellations. The difference scores were then used to form two groups of brands. We collapsed the data into two groups based on a median split; equally evaluated brands (absolute difference score smaller than 1) and unequally evaluated brands (absolute difference score higher than 1).

In order to investigate the effects of brand position on brand constellation choice we also computed the mean index of product-level typicality and brand attitude for each brand constellation. Thereafter, we collapsed the indexed product-level typicality and brand attitude measures into three groups (less typical/moderately typical/typical product and unfavourable/moderately favourable/favourable brand).

Note that by combining the equality measure and the indexed typicality/brand attitude measure we may still identify the individual evaluations. For instance, 'moderately typical' and 'unequal' indicate that there are one typical and one less typical product category in the particular brand constellation and 'moderately typical' and 'equal' indicate that there are two moderately typical product categories in the particular brand constellation. Moreover, the moderately typical and moderately favourable groups were used to get a clearer distinction between above and below average product-level and brand-level evaluations.

We investigated 284 brand constellation choices made by respondents, and contrasted them to the 568 non-chosen brand constellations. Of specific interest was how the included brands related to each other in terms of product-level typicality and brand attitude. We hypothesized (in H1a and H1b) that typical product categories and favourable brands should have the best chances of being included in brand constellations.

Comparisons between evaluation and choice were made by cross-tabulations. Effects of product-level typicality (Chi-square = 113.19; $p < 0.001$) and brand attitude (Chi-square = 44.47; $p < 0.001$) were found. Respondents were more likely to choose brands from typical product categories as well as brands that were favourably evaluated. The results are summarized in Table 3.

Table 3:

Comparisons between chosen and non-chosen brand constellations for different levels of product typicality and brand attitude (indexed).

Brand constellations	Product typicality			Total
	Less typical	Moderately typical	Typical	
Chosen	14.9 %	29.5 %	56.5 %	33.3 %
Non-chosen	85.1 %	71.5 %	43.5 %	66.7 %

Brand constellations	Brand attitude			Total
	Less favourable	Moderately favourable	Favourable	
Chosen	20.1 %	32.6 %	46.8 %	33.3 %
Non-chosen	79.9 %	67.4 %	53.2 %	66.7 %

Hypotheses 2a and 2b stated that equality (inequality) of individual brand evaluations might increase choice of brand constellations when the combined brand evaluations are above (below) average. The choice probabilities for different levels of typicality and equality of evaluations are presented in Table 4 and show strong support for our hypothesized effects (Chi-square = 37.34; $p < 0.001$). At high product-level typicality, brand constellation choice is more prevalent when the two product categories are equally evaluated (both are typical), 75.2 percent vs. 24.8 percent. At low product-level typicality and at moderate product-level typicality, the relationship is reversed. Brand constellations are in these cases chosen less often when they are equally evaluated, 40.5 percent vs. 59.5 percent and 37.2 percent vs. 62.8 percent. This indicates that a brand constellation with one typical product and one less typical product is more attractive than a brand constellation with two moderately typical products.

Similar results were found for choice probabilities for different levels of brand attitude and equality of evaluations (Chi-square = 17.71; $p < 0.001$). When the combined brand attitude is high, brand constellation choice is more prevalent (63.4 percent vs. 36.6 percent) when the two brands have similar brand attitude (both are liked). Also, brand constellations with one relatively favourable brand and one relatively unfavourable brand were more often chosen than brand constellations with two moderately favourable brands (61.9 percent vs. 38.1 percent – less and moderately favourable brand cells combined) as evidenced in table 4.

Table 4:

Choice of brand constellations:

Cross-tabulation between equally/unequally evaluated brands and different levels of product typicality and brand attitude (indexed)

	Product typicality			Total
	Less typical	Moderately typical	Typical	
Equal	37.2 %	40.5 %	75.2 %	59.2 %
Unequal	62.8 %	59.5 %	24.8 %	40.8 %

	Brand Attitude			Total
	Less favourable	Moderately favourable	Favourable	
Equal	38.9 %	37.6 %	63.4 %	50.0 %
Unequal	61.1 %	62.4 %	36.6 %	50.0 %

Discussion

Summary of main findings

Previous research on various joint brand activities (e.g., co-branding, advertising alliances, brand constellations) has mainly focused its attention on how perceived fit between brands and product categories influences the evaluation of a brand alliance or a brand constellation. In this article, we have explored how evaluations of individual brands may affect brand constellation choice. Our results demonstrate that brand constellations are most attractive when both brands come from typical product categories and when both brands are liked. However, by analysing individual brand evaluations we have also been able to identify that brands from atypical product categories and less favourable brands might also be included in brand constellations.

Consumers may choose weaker brands (e.g., from a less typical product category or a less favourable brand) when they are in constellations together with a strong brand (e.g., from a typical product category or a favourable brand). Interestingly, brand constellations consisting of moderately typical product categories were chosen less frequently than brand constellations consisting of one typical and one less typical product category. Similarly, brand constellations with moderately favourable brands were chosen less frequently than brand constellations with one favourable and one unfavourable brand.

Implications

These findings suggest that the relationship between typicality and choice and brand attitude and choice might not be as straightforward as generally thought. Brands that are not among the most favourable in its product category and brands that come from less typical product categories may still be chosen in goal-derived usage contexts as our results indicate. These brands are probably chosen as the second brand when consumers process alternatives sequentially. How can we explain these findings?

First, in some cases, the consequences of not making the 'right' brand or product choice may be trivial. It is likely that consumers may at times choose less typical and unfavourable brands in low-involvement contexts. Second, one product class (e.g., beverages) may be perceived as more typical, and relatively more important, than another product class (e.g., snack foods). When a brand constellation is desired, less typical products may become attractive due to their complementarity with more typical products.

Our findings have theoretical implications also for research areas such as across-category consideration (Ratneshwar, Pechmann, and Shocker, 1996; Lange, Selander, and Aberg, 2003) and non-comparable choice (Johnson and Lehmann, 1997; Park and Smith, 1989). Across-category consideration and non-comparable choice have previously been studied brand by brand, and not with brand constellations. Brand constellation choice may introduce more complexity to the choice process. For instance, consumers' level of involvement may differ between the first selected brand and the following brand selections. Some brands may be conditionally activated, i.e., only considered when specific brands have been selected and function as complements in consumption experiences.

For practitioners, our results highlight the importance of context. Brands are affected by how they are presented with other brands (cf. Buchanan, Simmons, and Bickart, 1999). Our results suggest that it is highly beneficial for all brands, from typical or less typical product categories as well as favourable or unfavourable brands, to be associated with the absolute top brands and the most typical product categories. Moreover, our results indicate that the benefits of cooperation for two moderately strong brands may be relatively small.

Marketers have some possibilities to influence how the brand is presented, for instance through advertising and in-store presentation. Joint advertising and cross-promotions are two marketing tactics that might be employed where the link to the consumption goal can be established. However, there are more options if alliances with top brands are impossible. Each brand has its own brand elements (e.g., advertising slogans, packaging, brand name, brand and line

extensions), that it can use to directly and indirectly strengthen its associations to other brands and products. For example, an ad for a potato chips brand might show how the consumption experience of beverages, such as beer or soft drinks, is enhanced with/shoddier without potato chips.

The brand might also try to strengthen the associative link between the brand and relevant goal-derived categories through its advertising and other brand elements. For instance, a potato chips brand might extend its product line to include a "picnic package" and thus become a more typical product in the picnic category.

Limitations and further research

This research is exploratory and there are several limitations to consider. First, we did not investigate any interactions between product-level and brand-level evaluations. It is likely that the brand evaluation process is contingent on the selection of product categories, and if the product-level decision process is sequential or simultaneous. As the product category and brand was presented simultaneously, our choice task design did not enable us to investigate these contingencies. Future studies may investigate the interaction between product-level issues and brand-level issues. For instance, are unfavourable brands more often chosen as the second brand in sequential processing? And, are unfavourable brands more often chosen in less typical product categories?

Second, the option of not choosing a brand constellation was not present in our empirical study. Some consumers may have disliked all available choice options. Some indications of this were found in the studying for exam goal-derived category. We do not know how many brand constellation choices that would have included unfavourable brands and less typical products if consumers had a no-choice option?

Third, researchers have questioned the notion of "students as consumers" (cf. Lynch, 1982). The use of students in consumer behavior may produce a threat to the external validity of the results (Lynch, 1982; Winer, 1999). In this study, our focus is theory application where the conceptual underpinnings are of interest for generalization (Calder, Phillips, and Tybout, 1981). A homogeneous sample is desirable in theory application studies. We believe that our proposed theoretical relationships should be maintained across subpopulations of consumers, as there is evidence of typicality structures in goal-derived categories in many other research studies (e.g., see Lange and Wahlund, 2001, who used "real" consumers). Furthermore, the present study does not directly study responses to new marketing stimuli where students have been found to process information differently than other respondent groups (cf. Soley and Reid,

1983; Heath and Chatterjee, 1995). Consumers' brand choices might be affected by the same basic principles across sub-populations. Yet, future replications of this study with other subpopulations are of interest.

Finally, our empirical investigation did not provide a structured experimental test of our proposed effects. A more narrow set of experimentally manipulated product categories and brands should be subject to empirical tests.

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PERGAMON

Scand. J. Mgmt. 18 (2002) 341–363

SCANDINAVIAN JOURNAL OF
Management

www.elsevier.com/locate/scajman

Real consumers in the virtual store

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Received 1 September 1999; accepted 1 July 2000

Abstract

This article deals with shopping on the Internet. On a basis of environmental psychology theory, we examine the effects of this new retail interface on consumer shopping behaviour. In an empirical study, we contrast Web shopping with physical store shopping. The findings show discrepancies with regard to the amount and form of purchase planning. Internet shoppers plan their purchases better and seem to be less susceptible to marketing activities. However, these discrepancies can be attributed to differences in store stimuli, as the Web retail interface is not well designed in marketing terms. The mediating effect of shopping orientation was examined and found not to be significant. However, the distribution of shopping types has important implications. © 2002 Elsevier Science Ltd. All rights reserved.

1. Introduction

Electronic marketing has the potential to upset almost every industry in the 21st century and the law-like generalisations of marketing need to be revisited (Achrol & Kotler, 1999; Sheth & Sisodia, 1999). The Web is a new retail format (Griffith & Krampf, 1998), as yet largely unexplored. As business moves onto the Web, retailers are confronted by a new consumer interface. What effects does this shift bring about? This is one of the most important issues in marketing today (Hoffman & Novak, 1996; Degeratu, Rangaswamy, & Wu, 2000). In this article, we will address the issue of changing consumer shopping behaviour as marketing and retailing moves online.

A growing body of research has focused on the new marketing logic in the Internet shopping environment (cf. Hoffman & Novak, 1996, 1997; Armstrong & Hagel, 1996; Berthon, Pitt, & Watson, 1996; Peterson, Balasubramanian, & Bronnenberg,

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1997; Venkatesh, 1998; Klein, 1998). However, research concerned with comparing shopping behaviour in online and traditional stores is still very limited. Alba et al. (1997) discuss information search conceptually. Degeratu et al. (2000) test empirically the differences in the salience of search attributes. In the present article, we go one step further and empirically investigate the differences between shoppers on the Net and in traditional stores with respect to actual purchase behaviour.

Previous research on the impact of Internet retailing on shopping behaviour has treated the virtual store layout as a given, exogenous factor (cf. Alba et al., 1997; Degeratu et al., 2000). In this article, we will not only identify differences between online and offline shoppers, but will also explain how these differences are based on the virtual store layout. In doing so, we draw on the vast body of literature regarding traditional store layout. This is important since at the present time Web store formats are fairly rudimentary, e.g. taking the form of product lists in alphabetical order. This need not be so. The Internet offers enormous technological potential for promotion and manipulations of store design (Burke, 1996, 1997a, b), a potential that has not yet been exploited (cf. Jarvenpaa & Todd, 1997a, b; Spiller & Lohse, 1997). What is the customer response to existing Web store formats, and how can Internet shoppers be expected to respond to more advanced designs? These questions will be addressed below.

The article begins with the presentation of a theoretical framework based on environmental psychology and the classical S–O–R model. We then review the theory that is relevant to the three elements in the S–O–R model on retailing: the way marketing stimuli affect consumer behaviour and how the stimuli differ as between Web stores and physical stores, consumers' inherent shopping orientations and central aspects of shopping behaviour. On a basis of this, a number of hypotheses regarding differences between Internet shoppers and traditional shoppers are proposed and tested in an empirical survey of Web grocery shoppers. The article ends with a discussion of our results and some implications for management, as well as suggestions for further research.

2. Theoretical framework: environmental psychology

Environmental psychology has been applied in numerous studies on the effects of store layout on consumer shopping behaviour (for a review, see Spangenberg, Crowley, & Henderson, 1996; Bitner, 1992; Ridgway, Dawson, & Bloch, 1990). It is based on the stimulus-organism-response (S–O–R) model. The model indicates that different stimuli (S), mediated by consumer characteristics (O), will result in different consumer responses (R) (cf. Wärneryd, 1979). Thus, marketing stimuli, such as retail environments and promotional activities, will affect consumer behaviour (Spangenberg et al., 1996; Bitner, 1992; Donovan & Rossiter, 1982).

Investigated stimuli include colour (Crowley, 1993), clutter (Bitner, 1990), crowding (Eroglu & Machleit, 1990), in-store music (Milliman, 1986) and scent (Spangenberg et al., 1996), for example. These are all factors that should be considered when designing a physical retail store. On the Internet, the interesting

aspects are those that are directly related to the presentation of the merchandise constituting the customer interface. Technology enables endless manipulations of this interface (Burke, 1996, 1997a,b). The Web retail interfaces of today differ markedly from traditional stores.

When comparing consumers' shopping behaviour in the Internet and in traditional stores, it can be useful to consider the consumers' shopping orientations, as they have been proven to affect marketing response (cf. Spiggle & Sewall, 1987; Solomon, 1992; Laaksonen, 1993). The consumers' shopping orientations can mediate the effects of the differences between the Web and traditional store customer interfaces and can operate as an organism variable.

Consumer responses to different store stimuli have been measured in terms of evaluations of the store (e.g. overall attitude towards the store, shopping enjoyment, perceived time spent, etc.) and of actual shopping behaviour (cf. Spangenberg et al., 1996; Bitner, 1990, 1992; Donovan & Rossiter, 1982). In this study, we will focus on actual shopping behaviour. We will look at three important facets of shopping behaviour: purchase planning (cf. Kollat & Willett, 1967; Cobb & Hoyer, 1986; Iyer, 1989), store patronage patterns (cf. Mägi, 1999; Drèze & Hoch, 1998) and goal-derived purchases and consumption (cf. Ratneshwar & Shocker, 1991; Cohen & Basu, 1987; Lange & Wahlund, 2000). These all help to determine how much influence the retailer has on consumer choice, with regard to the choice of products and the amount of products purchased. The first concerns the extent of planning involved in the individual purchase, the second concerns the extent of planning over purchases, and the third concerns the form of the planning. All three can be expected to change when consumers are faced with the new retail environment.

Applying the S-O-R model to the problem at hand, we find that the Internet and the physical store constitute two completely different customer interfaces and thus present consumers with different stimuli. Hence, we have reason to believe that consumers will behave differently when shopping on the Internet, in response to the different stimuli that the Web store offers. The impact of the stimuli (i.e. the Web store design) and resulting behaviour may differ between consumers depending on their shopping orientations. In the following section, we review the literature supporting the claim that customer interface affects consumer behaviour, and take a look at retail practice on the Internet to date.

3. The impact of customer interface on consumer behaviour

A majority of product choices are made in-store (cf. Needel, 1998; Malhotra, 1993; Lange & Wahlund, 1997). Since most purchases are low involvement, simple external cues are consequently all that are needed (cf. Engel, Blackwell, & Miniard, 1995; Solomon, 1992; Petty, Cacioppo, & Schumann, 1983). This means that consumers may be greatly influenced by the store layout and promotional activities. Studies of catalogue shopping have shown that visual cues such as the groupings, the placement and the size of products all affect the attention and search behaviour of the

consumers and the rules that govern their decisions (cf. Huffman & Kahn, 1998; Janiszewski, 1998).

There are several examples of innovative layouts leading to an increase in sales and margins. Walters (1991), Drèze, Hoch, and Purk (1994) and Drèze and Hoch (1998) have shown that cross-merchandising (i.e. presenting certain products next to each other or promoting them jointly) can boost sales substantially. Interestingly, Drèze and Hoch (1998) found that two cross-promoted brands do not have to be complementary or located close to each other in the store to generate higher sales. One reason for this is the increase in in-store 'foot traffic', with consumers walking around more in the store.

Space management is a common device employed by retailers and manufacturers. The idea is to optimise the shelf space used by various products in order to maximize revenue. This entails deciding how much space to allot to different product categories and brands, and where these should be placed. There is strong evidence that placement affects consumer choice, e.g. products that are given more space (cf. Cox, 1970; Curhan, 1972; Drèze et al., 1994; Janiszewski, 1998), or put on special display (cf. Chevalier, 1975; Wilkinson, Paksoy, & Mason, 1981; Julander, 1984) will sell better (they attract attention and are being flagged as important). Me-too brands placed next to category leaders will also do better (Buchanan, Simmons, & Bickart, 1999).

Few experiments have been performed on the effects of Web store layout on consumer behaviour and sales. Those reported have all been conducted in a laboratory setting. Westland and Au (1997) compared catalogue search, bundling and virtual reality storefront Web interfaces, and found that the last of these requires more search time but does not generate more sales. The experimental design was presented to student subjects and simulated gift shopping, a fairly special category where there is a low propensity for impulse buying and the consumers probably have rather a fixed budget. In another laboratory experiment, Burke (1997b) notes that a virtual reality storefront requires less time on the part of the consumers and makes them less price-sensitive, compared with a text-based system. Comparisons have also been made between scanner data generated by physical store shopping and computer simulated shopping. Burke, Harlam, Kahn, and Lodish (1992) and Campo, Gijsbrechts and Guerra (1999) found discrepancies in the quantities purchased, the selection of products and the effects of promotions.

3.1. The web retail customer interface

In an often-cited article, Burke (1996) describes the existing technology for virtual shopping, as mirroring or even surpassing existing physical structures. Compared to the physical shopping environment, production costs are low, as displays are created electronically, added to which it is very flexible—'...the virtual store has great flexibility. It can display an almost unlimited variety of products, styles, flavours, and sizes in response to the expressed needs and desires of consumers' (Burke, p. 131). It is possible to extract knowledge about consumers in a much more detailed way (e.g. time spent shopping in each product category, time spent examining each

side of a package, quantity of products ordered and the order in which items are purchased). 'One benefit of a computer-simulated environment is that it gives marketers more freedom to use their imagination' (Burke, 1996, p. 123). This author believes that the virtual store may one day become a channel for direct, personal and intelligent communication with the consumer, a channel that encompasses research, sales, and service. The argument is developed further in Burke (1997a,b).

There should with the virtual shopping technology available, one might think, be ample opportunity for virtual retailing today. Griffith and Krampf (1998, p. 73) claim that 'The Web may be a fundamental paradigm shift in retail format', and go on to say that '[t]he limitless opportunities of the Web make it one of the most important issues in retailing today'. An evaluation of the way retailers actually use the Internet and its various features can flesh out these prophecies somewhat. In a study of the US Top 100 Retailers, Griffith and Krampf (1998) found that 64 per cent maintained Web sites. Only a fraction of these used sales promotion, visual aids and product displays or other marketing stimuli. Shelley Taylor and Associates (1999) studied 50 retail sites and concluded that Web retailers fare less well when compared with physical retailers, as they provide little help and put little marketing effort into the consumer interface.

In a survey of Internet users, Jarvenpaa and Todd (1997a) found a general dissatisfaction with Web stores due to their lack of knowledge of consumer behaviour and their poor performance when it comes to important factors such as product perceptions, shopping experience and customer service. Similarly, in a classification of Internet retail stores, Spiller and Lohse (1997) reveal that 'a preponderance of the stores ... had limited product selection, few service features and poor interfaces'.

A review of Web retail sites shows that the customer interface differs markedly from that in physical stores. Generally speaking, there is a lack of the kind of marketing stimuli that we have treated in the preceding section. Few promotional activities are employed and the presentation of products is fairly rudimentary. We can thus conclude that there is a difference in stimuli as between the Web store and the physical store, and we expect this to result in a different kind of shopping behaviour on the Net. This point will be discussed further in the later section on the development of hypotheses.

4. Shopping orientation

A prominent feature in models of shopping behaviour is the consumer's *shopping orientation*, which can be described as a general attitude towards shopping (Solomon, Bamossy, & Askegaard, 1999). The consumer's shopping orientation is an enduring trait that affects the individual's store patronage, behaviour in the store and reactions to marketing activities (cf. Spiggle & Sewall, 1987; Solomon, 1992; Laaksonen, 1993). It has been the subject of research over the last 50 years or so and has been used to explain how people react to changes in the retail environment (for a review, see Dahlén, 1999). As Web retailing poses a major change in the retail

environment, it is relevant to look at shopping orientation as a mediating variable to consumer response.

Stone (1954) categorizes consumers in four different shopping types. The *economic consumer* is rational and goal-oriented and seeks to maximize the value of his or her money. The *personalizing consumer* wants service, assistance and personal contact, while the *ethical consumer* shops with a conscience, for example by supporting the local store. The *apathetic consumer*, finally, sees shopping as a necessary but unpleasant chore to be dealt with as painlessly as possible. In a later study, Bellenger and Korgaonkar (1980) identify a fifth shopping type called the *recreational shopper*. This person enjoys the shopping experience and devotes much time to it. Solomon (1992) brings these together in a set of five shopping categories. Laaksonen (1993) points out that a consumer can appear in different categories depending on the product (a person may be an apathetic grocery shopper for instance, and a recreational clothes shopper).

In groceries, for instance, every consumer can be described in terms of one of these shopping orientations. Depending on the shopping orientation, the consumer will behave in a specific way both when choosing a store and when being in it. The economic consumer will look for the lowest prices and will not be affected by special displays, etc., whereas the apathetic consumer will not be interested in shopping around and will care less about prices and service. The recreational shopper will take her time, browse and be stimulated by the shopping environment, whereas the personalizing consumer will appreciate assistance and information.

Several studies have been made on consumers' shopping orientations. Table 1 presents a summary of the distribution of shopping types in previous studies.

For our purpose, a study of Internet shoppers' shopping orientations is interesting on two counts. Firstly, we can identify the current distribution of shopping types in the Web store and what potential this offers. Secondly, we can expect that the five shopping types will react differently to the Web retail environment and will thus differ in the way they change their behaviour. Some shopping types are more susceptible to marketing stimuli than others and the different shopping types will focus on different aspects, which means that the Web customer interface will constitute a greater change for some than for others. For example, apathetic consumers may be more influenced by the retail environment than economic

Table 1
Shopping orientation — previous studies^a

Shopping orientation	Per cent
Economic consumer	27–48
Personalizing consumer	10–28
Ethical consumer	7–18
Apathetic consumer	17–35
Recreational shopper	3–3

^aStone (1954); Williams Painta, and Nicholas (1978); Tollin (1990); Dahlén (1999).

consumers; hence, they will change their behaviour more when they shop on the Internet.

5. Consumer response: development of hypotheses

In this section, we will discuss three important dimensions of shopping behaviour that may change in the new environment: consumers' planning, store patronage patterns and goal-derived purchases and consumption. We will consider how the 'webbified' retail environment may affect these aspects of shopping behaviour. On this basis, we will then develop hypotheses regarding the way Internet shoppers are likely to differ from shoppers in physical retail stores.

5.1. *Planning: purchases*

The impact of in-store purchase decisions on retail profits is great (for a review, see Persson, 1995). For retailers the propensity among consumers to make unplanned purchases is therefore a very important factor.

Research on physical store shopping shows that consumers make many purchase decisions at the point-of-purchase (Cobb & Hoyer, 1986). Empirical findings revealed a strong propensity among consumers to make unplanned purchases. Cobb and Hoyer (1986) report that two-thirds of all product purchases are unplanned. In a Swedish study Lange and Wahlund (1997) found that total grocery purchases exceeded planned purchases by 80 per cent. Moreover, a large proportion of the planned purchases are only partially planned (Engel et al., 1995; Lange & Wahlund, 1997). That is to say, the choice of category to be purchased is made outside the store while brand choice is deferred until the consumer is at the store shelf. The consumers' choice of brands is thus often made in the store. Figures of up to 80 per cent have been reported (cf. Needel, 1998; Malhotra, 1993).

Few shopping trips are completely planned or completely unplanned (Iyer, 1989). Shoppers actively use the grocery stores to remind them of purchase needs and even to inspire them about what to consume (Holmberg, 1996). Because consumers make considerable use of grocery stores as a planning tool, the store layout and the merchandise presentation are very important factors for retailers. Once the consumer has chosen which store to buy from, in-store marketing can have a strong impact on retailer sales on individual shopping trips. Consumers who are prone to be "non-planners" will use the store itself as the main tool in their planning process (Holmberg, 1996). These shoppers may be influenced more than others by a stimulating store design with special displays and visual aids. Iyer (1989) relates the extent of unplanned purchases with the shoppers' knowledge of the store environment. A consumer who is unfamiliar with the store layout and the assortment will make more unplanned purchases. Knowledgeable consumers can use the store as an external memory and can plan their purchases in advance.

The level of unplanned purchases on individual shopping trips is expected to be lower on the Internet than in physical stores, since consumers are discouraged from

browsing in the Web store by the alphabetical product displays and the paucity of visual stimuli offered by Internet retailers. Moreover, the simple design of Web stores is easily learned by shoppers. Web shoppers are thus not stimulated or inspired to make unplanned purchases. This leads us to our first hypothesis:

H1: Internet shoppers will make fewer unplanned purchases than traditional shoppers.

By traditional shoppers we mean shoppers in physical retail stores. We contrast grocery shopping on the Internet (the new store environment) with shopping in physical retail stores, which can be characterized as traditional shopping behaviour. By unplanned purchases we mean purchases that are not planned either as regards product category level or as regards particular brands. Following Iyer (1989), we include impulse buying in our conceptualisation of unplanned purchases. However, unplanned purchases embrace more than impulse buying, as some products can be purchased as a result of a decision made in the store but *without* a sudden urge felt by the consumer.

5.2. *Planning: store patronage*

Grocery store patronage is intensive. Eighty-four per cent of the shoppers in one study visited physical retail stores twice or more each week (Mägi, 1995). Consumers' planning of their purchases can be represented by a distribution over three kinds of shopping trip, which together constitute a patronage pattern: stockpiling, complementary purchases and single-item purchases (Lange & Wahlund, 2001; Kollat & Willett, 1967; Cobb & Hoyer, 1986).

Stockpiling is mainly a question of large purchases that consumers undertake rarely but regularly. These shopping trips can be regarded by default as being well-planned as the consumer has several consumption episodes in mind and a longer planning time span ('I need to buy the following products for breakfast, lunch and dinner for the whole of next week'). Complementary purchases may be less regular and less well-planned ('I need to buy breakfast for tomorrow on the way home from work'). Lange and Wahlund (2001) specifically establish that single-item purchases are common in grocery retailing. A single-item purchase can be regarded as highly specific to one consumption goal ('I've run out of cigarettes. Where's the nearest store?' or 'I crave a sugar rush. I need a candy bar now!') and can be carried out at any time.

The structure of the patronage pattern will obviously differ from one consumer to another. Those who make many single-item and complementary purchases will be more unplanned regarding their purchases as a whole, and will make more store visits than the stockpiling-prone consumers, who will have longer intervals between visits and will thus behave in a better planned manner overall.

The patterns of consumers' store patronage make a strong impact on the conditions for retailer organization and on retailer profits. One aspect concerns the number of visits that consumers make to the store, and thus the number of opportunities for the retailer to influence their choices. A second aspect, as noted above, concerns the planning of purchases. It has been shown that planned

purchases are made in the categories that serve basic consumption needs (cf. Kollat & Willett, 1967; Lange & Wahlund, 1997). The profitability of these products is presumably lower than that of products serving needs of an higher order, which are often bought on impulse.

In this study we focus on retailer stimuli. Is it possible that store type will affect the nature of shopping activities consumers make in the store? What is the role of Web stores? Consumers perceive the Web environment as dull and not very stimulating. Studies by Indiana University and KPMG (1999) and NFO Interactive (1999) show that Internet users perceive Web stores as boring compared to physical stores, and do not feel inspired to shop there. Web shoppers can thus be expected to make fewer store visits and try to get as much as possible (i.e. stockpile) out of each shopping trip. The store design also encourages large purchases, since the only discriminating criterion in presentation of the merchandise is the differences in price, suggesting a disposition to buy economy packs.

We can expect longer intervals between store visits on the Web, which in turn will call for better overall planning of grocery purchases. Grocery purchases on the Internet will then consist mainly of the kind of products that consumers do normally plan for. We expect the patronage pattern of Internet shoppers to be better planned in, i.e. that they will make fewer shopping trips for complementary or single-item purchases and that they will stockpile more. This brings us to our second hypothesis:

H2: In their patronage patterns, Internet shoppers will be better at planning their overall purchases than traditional shoppers. More specifically, Internet shoppers will (a) do more stockpiling, (b) make fewer complementary purchases and (c) make fewer single-item purchases than traditional shoppers.

5.3. Goal-derived consumer behaviour

In developing our third hypothesis, we start from the idea the categorization and choice of products on the part of consumers is, as evidence shows, goal-derived — that is to say, consumers consume products to fulfil goals (Cohen & Basu, 1987; Ratneshwar & Shocker, 1991). Exploitation of this situation holds much promise for retailers, as it makes it easier to inspire consumers and remind them of their needs than the more traditional presentation of the merchandise based on logistics. The goal-derived approach is attracting increasing attention in research (Barsalou, 1983; Ratneshwar & Shocker, 1991; Ratneshwar, Pechmann, & Shocker, 1996; Lange & Wahlund, 2000) and in practice (cf. Burke, 1997a).

It is generally thought that the goal-derived categorization operates as a means to an end (Ratneshwar & Shocker, 1991). Examples of goal-derived categories are “foods to not eat on a diet” and “snacks to eat in front of the TV”. Products belonging to several supply-defined categories may be considered in the same purchase situation, while products from the same supply-defined category may never be included in the same goal-derived category (Lange & Wahlund, 2001). Thus, product choice consideration often operates across supply-defined product categories, which suggests that consumers categorize products differently compared

with producers and retailers (Cohen & Basu, 1987; Alba, Hutchinson, & Lynch, 1991).

Since product categorization precedes product evaluation (Sujan, 1985), the former will 'decide' the brands between which the consumers will choose when they make their purchases. Retailers traditionally use store shelves to separate different product categories from each other. We have already pointed out that the majority of purchase decisions are made in the store. The retailer's categorization of products will thus probably be a major factor in determining the products that consumers will evaluate — in terms of shelf space allocation in physical stores and the alphabetical product displays in Internet grocery retailer stores.

Grocery retailers do not usually think in terms of goal-derived categorization. Logistics, rather than consumer behaviour, have been the main reason why traditional retail stores look the way they do (Fader & Lodish, 1990). And logistical considerations have often been an obstacle when retailers have tried to use consumer-based product categories. Internet retailing can omit logistics in their interaction with consumers, and can instead build assortments that are more in line with the way consumers make their categorizations, since the restrictions of physical space management are far less prominent. The identification of attractive goal-derived product bundles or constellations can lead to larger purchases (Chintagunta & Haldar, 1998). Burke (1997a) reports that an American retail chain boosted its sales by 50–600 per cent as a result of their meal composition programme, a different form of product categorization than the usual.

It might be expected that goal-derived assortment-building and merchandise presentation would give Internet retailers an opportunity to serve their consumer needs better than traditional retailers. Has this opportunity been exploited? Far from it. On the contrary, Web retailers do the opposite: the alphabetical presentation of supply-defined categories and of the brands within these categories does very little to stimulate goal-oriented purchase behaviour. Compared with the customers of physical retailers, who are faced with some cross-merchandising and enjoy interaction with store employees who can remind them of consumption goals, Web consumers will be less inclined to think in goal-derived categories when they are doing their shopping. We expect therefore Web stores to discourage goal-derived shopping. This leads us to our third hypothesis:

H3: Internet shoppers will be less goal-oriented in their shopping behaviour than traditional shoppers.

5.4. The mediating effect of shopping orientation

Changes in customer interface should lead to different reactions on the part of the different shopping types (cf. Spiggle & Sewall, 1987; Laaksonen, 1993). We would expect apathetic consumers to change their shopping behaviour more than economic consumers. As the former are more susceptible to external visual stimuli and tend to seek the simplest solution, they should be much better at planning in the virtual store (compared to the physical store, where the store itself can be used as a planning tool) as well as being far less goal-oriented (as no such stimuli are offered). Economic

consumers, on the other hand, look for low prices regardless of the store environment and are less dependent on external visual stimuli, which means that the virtual store should exert less impact on their patronage patterns and their goal-oriented shopping. The same differences from economic consumers could be expected among recreational shoppers. These last are greatly affected by 'atmospherics', that is to say the presence of a variety of salient in-store stimuli (Bellenger & Korgaonkar, 1980). Fewer and less prominent stimuli in the customer interface should therefore lead to a greater change in behaviour among recreational shoppers than among economic consumers. This leads us to our fourth hypothesis:

H4: The consumer's shopping orientation will mediate the effects of the 'webbified' retail interface on the consumer's change in behaviour. More specifically, economic consumers will change their behaviour less (a) than apathetic consumers and (b) than recreational shoppers.

6. Research method

To test our hypotheses we need to compare shopping behaviour on the Internet with traditional shopping in physical stores. In an earlier study Degeratu et al. (2000) used separate samples of Web shoppers and physical store shoppers, and behaviours were compared at the aggregate level. In order to claim that differences are due to changes in behaviour that in turn are due to the 'webbified' environment, and to test for the mediating effect of shopping orientation, we cannot compare aggregate behaviours from separate samples. Instead we need to compare shopping behaviours on and off the Net at the level of the individual consumer, which thus calls for data on the same individual's shopping behaviour in the Web store and in the physical store.

The necessary data must include information on the actual shopping behaviours of these consumers on and off the Net. Actual behaviour data in physical stores is very hard to come by. The best proxy is scanner data. This data has certain drawbacks for our purpose, as it shows only the *outcome* of one shopping trip—or in the best case, when a panel is employed, of several shopping trips (Håkansson, 1994). Retail-level scanner data is better suited to studies focusing on brand and product-category effects (cf. Blattberg & Wisniewski, 1989; Persson, 1995). Scanner data tells us nothing about how the consumers actually act and think in their shopping, e.g. whether or not the purchase of a product was planned. For this kind of information, it is necessary to ask the consumers. We wanted to get information about the consumers' general shopping behaviours and about how they use the stores in their shopping. Consequently we conducted a survey, asking consumers questions about their shopping behaviours.

The appropriate sample must consist of people who shop both on the Internet and in physical stores. As we can safely assume that everybody buys at least some groceries in physical stores, the solution is to sample consumers who are customers in a Web store. For this study, we have sampled consumers from the customer database of one of Sweden's largest Web grocery retailers.

6.1. *The Web store*

We chose this particular Web retailer because it is one of Sweden's largest grocery retailers on the Web, as well as being the one that is most active in marketing its Web presence, for example through TV commercials and direct mail. The retailer is a typical example of a Web grocery store, with the same features that are generally found on grocery retail sites. Its interface consists of 15 product categories including bread, meat, fish, frozen foods and so on, which are listed in a frame on the left of the screen. If you click on one of the categories, an alphabetically ordered list of products is displayed, giving package size and price information. The customers click on the product they want and specify the number of items, whereupon it is placed in the shopping basket. It is also possible for shoppers to create their own shopping lists on the site, thereby standardizing their shopping by choosing automatically to buy products on the list.

6.2. *Data collection and the sample*

A sample of 1000 e-mail addresses to active Internet shoppers, defined as having shopped on the Internet at least three times during the last six months, was drawn from the Web store's customer database. The addresses included both private and work addresses. By e-mail, a letter was sent to all the selected shoppers, stating the purpose of the study and inviting them to participate.

A Web site was designed, with an on-line questionnaire for visitors to complete. The address to this site was given in the e-mail to the selected Internet grocery shoppers. These were the only people to know the address, and there were no links elsewhere to the questionnaire. All these measures were taken to ensure full control over the sample. During a two-week period from 15 to 29 June 1999, 368 responses were recorded, giving a response rate of a little less than 40 per cent. No reminders were sent, as we did not want to intrude on the customers more than necessary. Further, all respondents were anonymous, so it was not possible to make an analysis of potential non-response bias.

All 368 respondents were active Web customers. They were also active shoppers in physical stores. The reported share of grocery purchases on the Internet gave a mean value of 33.9 per cent and a median value of 25.0 per cent, indicating a combination of Web store and physical store grocery shopping.

6.3. *Measures*

The Web retailer asked us to keep the number of questions to a minimum, so as not to annoy their customers. A considerable effort was thus made to capture the central issues connected with our hypotheses in as few items as possible. This corresponds to the suggestions in Kingsley and Anderson (1999), which criticize the old paradigm of multiple-item measures (see also Guttman, 1977).

Unplanned purchases: The operationalization of unplanned and planned purchases has varied among the studies in this area (Cobb & Hoyer, 1986). The differences in

research approach have been most obvious in studies comparing the purchase planning for different categories of products. In measuring the overall planning of grocery purchases a combination of entrance interviews and exit observations was used. These observations were either made visually or with the help of check-out receipts (cf. Granbois, 1968; Lange & Wahlund, 1997). In analysing data, the number of products given on entry to the store have been compared with the number of products actually purchased. We deemed this approach to be too difficult in our context, as “entrance” interviews are very difficult and expensive to conduct in a Web retail setting.

Hence, we used a self-reported measure of purchase planning on the Net. It has been shown that respondents develop well-formed scripts as to how they conduct grocery shopping (cf. Iyer, 1989), which suggests that they do have reasonable knowledge of their behaviour when it comes to planning their grocery purchases. The respondents’ propensity to make unplanned purchases in the Web store was measured by asking ‘How large a share of the grocery purchases you made last time on the Internet was *not* planned in advance?’. The answers were to be given in any figure between 1 and 100 per cent. In order to validate this self-reported measure, one more item was included: the statement ‘I know what I am going to buy before I enter the Web store’ was measured on a seven-point scale, ranging from ‘never’ (1) to ‘always’ (7).

Patronage pattern: Drawing on previous research (e.g. Kollat & Willett, 1967; Cobb & Hoyer, 1986; Lange & Wahlund, 2001) we included three items, namely stockpiling, complementary shopping trips and single-item shopping trips. To measure consumers’ patronage patterns when shopping on and off the Net, a seven-point Likert scale was used (1 = never, 7 = always). Following Iyer (1989), the wording chosen for the items was, ‘I use grocery retail stores (Web store) for stockpiling’, ‘I use grocery retail stores (Web store) for complementary purchases’ and ‘I use grocery retail stores (Web store) for single-item purchases’.

Goal-derived categorization: To measure consumers’ behaviour as regards goal-derived categorization when shopping on and off the Net, a seven-point Likert scale was used (1 = rarely, 7 = often). The same six items were used for the Web store and the physical store. The wording of the question was based on previous studies of goal-derived categorization (Barsalou, 1983; Ratneshwar & Shocker, 1991), ‘Does it occur that you shop in a grocery store (Internet grocery store) for a specific purpose?’ which gives the respondents a relevant context (cf. Barsalou, 1983). The listed purposes were breakfast, lunch, dinner, party, picnic and evening in front of the TV, namely six goal-derived categories in which taxonomically different product categories can be evoked. In selecting the six usage situations we followed the recommendation in Ratneshwar and Shocker (1991), i.e. that goal-derived categories should be broadly rather than narrowly defined. To ensure their economic relevance for marketers they are also based on enduring consumer needs (Ratneshwar & Shocker, 1991).

Shopping types: For our classification of respondents into shopping types, we used the detailed descriptions that were given in Stone (1954) and Solomon (1992) and tested in Dahlén (1999). Respondents were asked: ‘When shopping for groceries,

which of the following types do you resemble most?'. The five descriptions were then listed, without labels, as types 1–5, from which the respondents were to choose one.

7. Results

7.1. Planning: purchases

The first hypothesis stated that Internet shoppers will make fewer unplanned purchases than traditional shoppers. We have reported data from several sources regarding the share of unplanned purchases on the consumer's latest visit to a physical store. In a study of Swedish grocery shoppers Lange and Wahlund (1997) found that the mean value of unplanned purchases was 45 per cent. This is a comparatively low figure (cf. Cobb & Hoyer, 1986, for a review; Malhotra, 1993). A mean value significantly lower than 45 per cent for the latest shopping trip in the Web store should thus support our hypothesis.

The responses to the question 'How large a share of the grocery purchases you made last time on the Internet was *not* planned in advance?' produced a mean value of 13.0 per cent (median 10 per cent). Comparing this with the mean value of 45 per cent from the survey data on traditional shopping in Lange and Wahlund (1997), the share of unplanned purchases in the Web store is significantly lower ($p < 0.001$). The item 'I know what I am going to buy before I enter the Web store' yielded a mean value of 5.69 (median 6), indicating that the consumers plan their purchases well and do not let themselves be influenced in the Web store. The bivariate correlation between this question and the share of unplanned purchases on the Internet was -0.49 ($p < 0.0001$), providing strong validation of the self-reported measure. The purchase-planning behaviour in the Web store is in stark contrast to the behaviour in physical stores that has been reported in several of the studies reviewed above.

Hypothesis 1 is thus supported: Internet shoppers make fewer unplanned purchases than traditional shoppers.

7.2. Planning: patronage patterns

The second hypothesis stated that in their patronage patterns Internet shoppers will be better at planning their purchases. Paired samples *t*-tests were performed on the mean values reported for the different shopping trips on and off the Net. The results are presented in Table 2.

As can be seen, stockpiling reveals a much higher mean value in the Internet case, whereas the mean values for complementary purchases and single-item purchases are considerably lower. All three mean differences are statistically significant ($p < 0.0001$). We find that stockpiling is more common in connection with shopping on the Internet, and other shopping behaviour is less common. Further, behaviour on the Internet seems to be more polarized between stockpiling and the other types of shopping trip than the more evenly distributed behaviour in traditional stores. There are no significant correlations between the amount of stockpiling on the

Table 2

Store patronage patterns in Web stores and in traditional stores^a

Type of store visit	Web store	Traditional store	Significance of mean difference
Stockpiling	6.1903	4.5994	Sig*
Complementary purchases	1.3125	5.1187	Sig*
Single item purchases	1.2089	3.8449	Sig*

^a * = $p < 0.01$.

Internet and the share of purchases on the Internet, which could have indicated that the Web store is just a substitute for traditional stockpiling store visits. This is not the case: Internet shopping represents a change in patronage patterns.

Hypothesis 2 is thus supported: In their patronage patterns Internet shoppers are better at planning their overall purchases than traditional shoppers. More specifically, Internet shoppers (a) do more stockpiling, (b) make fewer complementary purchases and (c) make fewer single-item purchases than traditional shoppers.

7.3. Goal-derived shopping

The third hypothesis stated that Internet shoppers will be less goal-oriented in their shopping behaviour than traditional shoppers. Paired samples *t*-tests were performed on the mean values reported for goal-derived shopping on and off the Net. The results are presented in Table 3.

The mean values are overall quite low, suggesting that grocery stores can do more to remind consumers of consumption goals. Only two of the twelve alternatives—'dinner' and 'party' in physical stores—have a mean value significantly above the middle alternative of the scale ($p < 0.001$).

For the specific usage situations studied, consumers make their purchases in traditional stores more often than in Internet stores. Five of the six tested mean differences are highly significant ($p < 0.001$). The exception was 'lunch', where the difference between stores was significant at the 5% level.

Thus, goal-derived shopping behaviour seems to be more frequent in traditional stores than in Web stores. The differences reported between store types indicate that Internet retailers in particular do not encourage consumers to think about and purchase for consumption purposes.

Hypothesis 3 is thus supported: Internet shoppers are less goal-oriented in their shopping behaviour than traditional shoppers.

7.4. The mediating effect of shopping orientation

The fourth hypothesis stated that the consumer's shopping orientation will mediate the effects of the 'webbified' retail interface on the consumer's change in behaviour. Table 4 shows the distribution of shopping types in the sample.

A large majority, 80 per cent, of the shoppers report themselves as being apathetic consumers. The second largest category of shoppers are economic consumers,

Table 3
Goal-derived purchases in Internet stores and in traditional stores^a

Goal-derived category	Web store	Traditional store	Significance of mean difference
Breakfast	2.51	2.97	Sig**
Lunch	2.38	2.57	Sig*
Dinner	3.26	4.70	Sig**
Party	2.96	4.65	Sig**
Pic-nic	1.93	3.51	Sig**
TV-dinner	1.79	2.75	Sig**

^a * = $p < 0.05$, ** = $p < 0.01$.

Table 4
Shopping orientation, frequency and percentage distribution

Shopping orientation	Frequency	Percent
Economic consumer	43	11.7
Personalizing consumer	8	2.2
Ethical consumer	11	3.0
Apathetic consumer	294	80.1
Recreational shopper	11	3.0
Missing value	1	<0.1
Total	368	100

comprising 12 per cent. The other shopping types together constitute eight per cent of the sample. Compared with the studies reviewed above, apathetic consumers are greatly overrepresented (80 per cent as against 17–35 per cent), while economic consumers are clearly underrepresented (12 per cent as against 27–46 per cent). These are very interesting results, as the majority of Web store customers prove to be apathetic consumers with great potential for being influenced by marketing efforts. Further, the other shopping types do not seem to be particularly attracted by the existing Web store format.

In order to test the mediating effect of shopping orientation on change in shopping behaviour as proposed in hypothesis 4, we calculated difference scores for each individual for the two previous questions, H2 and H3, and performed mean comparisons with shopping type as the factor. Difference scores have been used in several areas of consumer and marketing research as measures of constructs (cf. Peter, Churchill, & Brown, 1993; Ross & Lusch, 1982).

Difference scores were computed for all individuals and for each of the matched items (between Internet store and traditional physical store) regarding patronage patterns and goal-oriented shopping. As an example, the average difference score for stockpiling between Internet store and traditional store was 1.59 for apathetic consumers (6.19–4.60 averages for original stockpiling variables) and 1.45 for economic consumers (6.00–4.55 averages for original stockpiling variables).

An independent samples *t*-test was performed on the mean values of the difference scores between apathetic consumers and economic consumers. The mean values were

not significantly different for any of the patronage pattern or goal-oriented shopping items. Mann–Whitney U non-parametric tests on the mean values of the difference scores between recreational shoppers and economic consumers yielded similar non-significant results.

Hypothesis 4 is thus not supported: the consumer's shopping orientation has not been shown to mediate the effects of the 'webbified' retail interface on the consumer's change in behaviour.

8. Implications

What happens when the physical store is replaced by the virtual Internet-based store? What happens about the opportunities for brand managers and retailers to influence consumers in the purchase situation? In this article, we have shown that Internet shoppers differ from traditional shoppers in several respects. Internet shoppers plan their purchases better, stockpile to a greater extent, and are less goal-derived in their shopping behaviours. Using the S–O–R theoretical framework, we have suggested that these differences in behaviour were to be expected as a consequence of the new Web retail environment.

The Web store and the Internet shopping experience are both still new to the consumers, and we can expect shopping behaviour to change even more as consumers get used to and adapt to the new interface. An empirical study reported in Dahlén (1997) showed that Internet users tend to form rather stable and focused usage patterns, as they get more experience of the new medium. Web shopping behaviour may progress towards automaticity (cf. Alba & Hutchinson, 1987), whereby the visit to the Web store becomes a routine matter and minimal effort need be exerted once the consumer is in the store.

The uninspiring Web retail interface as it is designed today, and the use of electronic shopping lists for automatic shopping can be problematic for both consumers and marketers. Well-known brands and low prices are probably the strongest factors influencing the choice of products from the alphabetical lists. This probably results in rather stable purchase patterns. Electronic shopping lists makes shopping even more a matter of habit. This must make it difficult for new brands to get across and be tested. Moreover, we know that most consumers display at least some variety-seeking behaviour (cf. Trivedi, 1999). However, there is probably less variation in the consumption, as there are few stimuli to encourage alternative product selections. The consumers are thus worse off in the long run.

An examination of the shopping orientations of Internet shoppers suggests that there is great potential for this new marketing arena. We have found that Web store customers are not generally rational, in the sense of being price-focused or well-planned in the ordinary way. A large majority describe themselves as apathetic consumers, whereas a much smaller fraction say they are economic consumers. The Web retail interfaces today are fairly rudimentary, and with the only differentiating factor between products in the same category being price, they make little input into the consumers' purchase processes. This does not seem to be an effective match for

the actual behaviours of the consumers. The apathetic consumers are highly impressionable and together they represent a great potential opportunity for marketers to inspire and persuade the consumers in the store and use it as a marketing arena in much the same way that the physical store has always been used.

A first implication is thus that the potential for marketing efforts directed at the existing customers is not being exploited. The study has also shown that other shopping types such as the personalizing or recreational shoppers are poorly represented in the Web store, indicating that Internet shopping as it is today does not cater for their needs. This suggests that Web retailers need to redesign the store interface if they want to attract more customers. Both the personalizing and the recreational customer types could be very profitable, as they appreciate marketing stimuli in the form of interaction, product information, suggestions, pleasing displays and so on.

Traditional promotion tends to focus on price. Research has shown that in the long run this has created problems for marketers. Consumers learn to anticipate promotions and adjust their behaviours accordingly, becoming much more price-sensitive and buying brands only when a sale is on (Doyle & Saunders, 1990; Zenor, 1994). This makes traditional promotion costly and renders it less attractive (Buzzell, Quelch, & Salmon, 1990). We have mentioned other techniques above that focus less on price, namely space management, cross-merchandising, special displays and the presentation of information. Research has proven these techniques to be effective, but logistical constraints have limited their use in physical stores.

The Web store is the perfect arena for these non-price-based marketing tools. They are all about perception, with customers being exposed to various kinds of visual stimuli and product information, special displays and cross-merchandising. On the Internet there are no limits to the way products and information can be presented and combined. Consequently, marketing in the Web store can go far beyond the modes of promotion in traditional physical stores. The use of perception-based marketing tools will make an impact on the purchase process, helping consumers with ideas, making their visits more enjoyable and less demanding. All shopping types could benefit from this.

Going one step further than is possible in physical stores, *effective promotion* can be used. This means focusing on promoting the right product at the right time, e.g. effective cross-merchandising: when a customer picks out or investigates a particular product, another complementary product can automatically be displayed and promoted. On the Internet the retailer does not have to force the promotion on every customer, nor risk missing any customer who would have been interested in the promoted item. The Web store retailer can use effective promotion, approaching each customer at the right time.

Further, the interface does not have to be the same for all customers. In our study we found no evidence that the different shopping types reacted differently to the 'webbified' retail environment. An obvious reason for this is that existing Web stores offer few stimuli and leave little room for variations in shopping behaviour. Active marketing may exploit the potential differences that exist between the shopping types. Different store designs can be displayed to match the shopping orientations of

different customer groups, perhaps as identified from previous purchase patterns. Using *effective display*, Web retailers can design the interface with the consumer in focus. The Web store can collect and use knowledge about its customers, enabling the interface to suit different consumer profiles. Effective display means designing different interfaces for different customers, for example more fun-filled, experiential interfaces for recreational shoppers and more deal-focused interfaces for economic consumers. The matching of profiles can be based on data about previous purchase behaviours (log files), and questionnaires.

We have pointed out above that consumers categorize products differently compared with marketers. Just like retailers, households presumably plan and build assortments of their own. The rationale for the consumers' assortment building lies in the planning of their consumption needs, and their household supply of groceries will thus consist mainly of complementary products. Goal-derived categorization does not focus solely on substitutes but also on complementarities. The consumers' perception of the kind of product constellations that are attractive to them will be a cornerstone in their assortment building.

The results in our study indicate that retailers, especially on the Web, are not consumer-oriented in the way they define and manage their product categories. The alphabetical displays offered by Internet grocery retailers do very little to encourage consumers to think in terms of consumption situations or to facilitate purchases for specific purposes.

Thus, at the present time grocery retailers do not build their assortments in accordance with consumer needs. A retail store can adjust its product categorization to the consumers in several ways. A limited step would involve systematic use of cross-merchandising. Earlier research has indicated that these promotion campaigns do not necessarily have to include complementary products, since the increased foot traffic had a major impact on the extra profit generated. Retailers on the Web, however, cannot take advantage of increased foot traffic since cross-merchandising in Internet stores will not involve any walking on the part of the consumers. Hence, they may be restricted to cross-merchandising between product categories that the consumers perceive as usage complements.

A bigger step for the retailers would involve the full implementation of consumption-oriented goal-derived categories. Instead of having sections for frozen food, dairy product and soups, grocery stores are designed in sections according to needs such as breakfast, parties or TV-dinners. Since they represent the distribution channel's interface with the consumers, retailers could collect data about the consumers' assortment building and product categorization, and then plan the grocery retail assortment and define the product categories accordingly.

If consumers find that their grocery shopping trips are facilitated by this new categorization, they will in all likelihood find it preferable to the present arrangement. Retailers will doubtless have to educate consumers in the ways of the new store environment, as the current practices have a long history in the market for groceries. Retailers in the physical world may benefit from a more consumer-focused product categorization, but they will have to offset higher in-store logistical costs. For Web retailers the cost of changing the presentation of the merchandise

from an 'alphabetical' to a goal-derived system will be low, making additional profits easier to earn.

9. Further research

The present study has made some theoretical contributions to our understanding of how the 'webbified' retail environment affects shopping behaviour. Previous research has shown that Internet users change their behaviour with experience (Dahlén, 1997). The same thing can be expected to apply to Web shoppers. Empirical studies should be conducted to capture the Internet grocery shoppers "e-learning curve". This would provide a valuable construct for attempts to produce models for future shopping behaviour as well as development of the Web interface.

Acknowledgements

The authors wish to thank Magnus Söderlund, one anonymous reviewer and the editor for their valuable comments on earlier versions of the article.

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