Marcos Ormeño

Managing Corporate Brands

A new approach to corporate communication

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With a foreword by Prof. Dr. Ralph Berndt

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Foreword

Publications bridging the gap between brand management and communication management very often focus on product brands. In his dissertation, the author uses corporate brands as the starting point rather than product brands. Both a behavioural approach (for the purposes of deductively developing a stimulus-organism-response framework) and a managerial approach (for the purposes of developing a decision-making model for selecting corporate communication tools) are examined with the results of the behavioural analysis being integrated into the managerial analysis.

The author succeeds in dealing with a field seldom explored in such depth in marketing literature in an innovative way. The choice of subject stems from his position in the corporate marketing department of a global automotive company.

I wish the book the wide readership it deserves.

Prof. Dr. Ralph Berndt

Preface

> In competition for prestige it seems only sensible to try to perfect our image rather than ourselves. That seems the most economical, direct way to produce the desired result. Accustomed to live in a world of pseudo-events, celebrities, dissolving forms, and shadowy but overshadowing images, we mistake our shadows for ourselves. To us they seem more real than reality. Why should they not seem so to others?
>
> Daniel Boorstin, *The Image*

This research was initiated and completed during my five-year tenure at the German-American automotive company DaimlerChrylser AG. The company funded and supported my participation in the doctoral programme of the University of Tübingen as an external doctoral candidate.

I am grateful for the support of the many people who have made this research possible and I would like to thank each of the following:

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Marcos Ormeño

Abstract

Much attention has been devoted recently to corporate brands and corporate reputations. Companies go to great lengths to enhance their image in the minds of consumers, investors, employees, community members and other constituencies. These constituencies, previously informed about the company almost exclusively by the press and other third parties (e.g. financial analysts and governmental officials) are increasingly being targeted by corporate advertising and a whole array of ad-like communication activities. Because these 'controlled media' are flexible and easy to manage, they are essential to the corporate brand-building effort.

Despite the important role of corporate advertising and ad-like communication activities in building a corporate brand, current research fails to explain how brand-building corporate communication programmes should be designed. Managers need a more thorough understanding of how to select among the various means of enhancing the image of a company and increasing its awareness. These means of brand communication extend beyond conventional advertising media and include ad-like means such as events, trade shows, and sponsorship. Deciding which corporate communication tools to use is a challenging task because of the large number of alternatives available, the complexity of the communication phenomena and the economic importance of such a decision to a firm. Current approaches to tool selection mainly lack formalisation or fail to consider how corporate communication works, or both. As a result, managers have to rely on simple rules of thumb for decision-making (e.g. print is the right medium for corporate adverts) and on flawed notions of the nature of the communication process (e.g. corporate design increases awareness but does not enhance a company's image).

The purpose of this research is to provide guidance for using corporate communication in corporate brand management through the development of a decision-making model to assist managers in their selection of the appropriate corporate communication tools. This research is structured as follows: after defining corporate brands and corporate communication, it presents a behavioural stimulus-organism-response framework to explain how corporate communication works. Corporate communication stimuli (e.g. a corporate advert) affect brand-knowledge structures in constituencies' minds, which in turn may positively affect constituencies' responses to the marketing of a corporate brand. Resulting corporate brand knowledge is moderated both by constituency-related factors, namely prior knowledge and processing goals, as well as stimulus-related factors, namely modality, message, execution, time and place. This research then develops a managerial decision-making model for selecting the best corporate communication tools available. This model builds on the proposed behavioural framework: brand-knowledge structures serve to specify a model's objectives and stimulus-related moderators serve to identify a model's multiple attributes upon which alternatives are measured. The proposed decision-making model is then applied to an illustrative problem, which involves selecting from among major corporate communication tools: mass media advertising, corporate design, events, exhibitions, sponsorships and websites. The proposed model seems to be superior to previous approaches for selecting qualitatively different communication tools because it follows a proven method, rests on a strong behavioural basis, allows for more transparent decision-making, structures the selection decision better, reflects a manager's preferences more accurately and can be easily adapted and extended. Finally, this research discusses its contributions to theory and makes suggestions for using corporate communication in corporate brand management.

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List of Abbreviations

AHP	Analytic Hierarchy Process
AMA	American Marketing Association
CEO	Chief Executive Officer
DSS	Decision Support System
ELM	Elaboration Likelihood Model
GDP	Gross Domestic Product
IT	Information Technology
M&A	Mergers and Acquisitions
NGO	Non-governmental organisation
PR	Public Relations
S-O-R	Stimulus-Organism-Response
S-R	Stimulus-Response
UK	United Kingdom
US	United States

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Chapter 1: Introduction

1.1. Rationale

Much attention has been devoted recently to corporate brands, corporate images and corporate reputations, the focal point of serious managerial, academic, and consultancy concerns. Managers believe corporate brands are more important today than ever. According to a survey in Europe, Asia and North America, almost 90 percent of chief executive officers (CEOs) believe that a company's reputation is somewhat more important today than it was five years ago, and two-thirds of them agree that it is much more important today (Hill & Knowlton, 2003). The same survey suggests that a company's image is a priority for corporate executives today. Almost two-thirds of CEOs said they were taking personal responsibility for the protection and enhancement of corporate image. Very few placed responsibility on the board of directors (14%) or on corporate communication executives (12%).

Corporate brands have also recently been the focus of much academic interest. Ever since the publication of the seminal article by advertising executive King (1991) which argued for the benefits of positioning organisations as 'brands' in the minds of actual and potential customers, research activity on corporate brand management has grown, both in Europe and North America (Ind, 1998). There is indeed increased reference in literature to the notion of 'the corporate brand' (Balmer, 1998; Balmer and Gray, 2003; Knox and Bickerton, 2003). Also indicative of this development is the launch of the *Corporate Reputation Review* journal in 1997, an integrative outlet for research and practice on a company's image and reputation (Fombrun and van Riel, 1997).

Corporate brands are also a main concern for consultants today. More and more corporate identity advisers are now focusing on corporate brand management (Deekeling, 2003). Also graphic design firms and advertising agencies consider themselves 'branding specialists' (Balmer and Gray, 2003; Spaeth, 2003b). As the website of a leading corporate identity consultant candidly explains, 'by the mid-1990s it had become clear to Wolff Olins that brand could be used not only for product, but for the corporate whole', which led this identity specialist 'to focus on being a brand consultancy' (Wolff Olins, 2004).

Corporate brand management has thus become a priority for many companies, who go to great lengths to build their corporate brands. Companies turn particularly to communication to build their reputations and enhance their corporate images. Indeed, over 98 percent of German opinion leaders consider corporate communication to be important or very important in shaping a company's image (Capital, 2002). Communication managers have taken this on board and currently channel most of their efforts in building the corporate brand. Almost two-thirds of corporate communication executives of Fortune 1000 companies said that they manage the image and reputation of their companies and almost half of them consider corporate brand management their most important function (Corporate Communication Institute, 2002).

As such, there has been a growing interest in corporate communication in recent years. Corporate communication has become increasingly important for both North American and European companies. In the US, corporate communication managers are seen as fully-fledged strategic advisers to senior management (Troy, 1993). Indeed, 43 percent of corporate communication executives of Fortune 1000 companies report to the CEO (Corporate Communication Institute, 2002). In Germany, 95 percent of senior executives consider corporate communication to be important or very important to the corporate strategy (Capital, 2002). Growing importance of corporate communication is also reflected in the budgets of corporate communication departments. Spending has been increasing for some years and is expected to increase by almost 4 percent annually over the next five years, while spending on marketing communication is expected to shrink (Mercer Management Consulting, 2003). And, while layoffs and budget reductions have been customary in other functional areas due to the global economic downturn of the early 2000s, only one in five corporate communication departments has scaled back staff levels and one in three has suffered budget cuts (Corporate Communication Institute, 2002).

Corporate communication has also recently been the focus of much academic attention. Research on corporate communication, despite being fragmented, is now as abundant as marketing communication research — and it is increasing (van Riel, 1995, p. 14). Partly as a result, the *Corporate Communications* journal was founded in 1996 to cover the growing amount of pure and applied research in public relations, public affairs, and corporate communication (Emerald, 2004).

Companies are increasingly trying to inform and persuade their constituencies directly, using corporate advertising and ad-like communication activities. Indeed, companies, accustomed to informing consumers, investors, employees, community members and any other main constituencies indirectly, primarily via the press and other third parties (e.g. financial analysts and governmental officials), increasingly target their constituencies employing corporate advertising and the like.

Corporate advertising and ad-like activities are common in almost all companies, in all kinds of industries. Companies all have some sort of visual identification (i.e. corporate design), used in company facilities, stationery and products. They all run corporate websites and regularly organise corporate events such as annual shareholder meetings or employee training schemes. Furthermore, most companies engage in some kind of sponsorship, many use corporate advertising and some of them, particularly in the business-to-business market, participate in exhibitions. Evidently, corporate advertising and ad-like communication activities are omnipresent.

In fact, corporate advertising and the like accounts for a large share of a company's corporate communication budget. Spending on this form of communication (without considering employee relations) represents, on average, half of the corporate communication budget of large German companies and is almost four times the size of the press relations budget (Mercer Management Consulting, 2003). Sponsorship and mass media advertising alone accounts for almost two-thirds of the corporate communication budget of Fortune 500 companies (Thomas L. Harris and Impulse Research, 1999). Together with other ad-like corporate communication activities such as corporate design, events, exhibitions, and websites, they constitute an important slice of the $1 trillion worldwide advertising and marketing services industry.

Corporate advertising and ad-like communication activities are becoming ever more important. In fact, despite being considered as equally important as public relations (PR) for the success of a company today, its future importance is likely to surpass that of press relations. Indeed, only 3 percent of German marketing and corporate communication managers expect the importance of corporate advertising and the like to diminish over the next five years; in contrast, almost 30 percent of them see the significance of press relations decline over the same period (Mercer Management Consulting, 2003).

In short, corporate brands are becoming increasingly important, as well as the communication activities that build them, namely corporate advertising and ad-like communication activities, activities under a company's direct influence which directly target consumers, investors, employees, and community members. And because these 'controlled media' are flexible and easy to manage, they are indeed essential to a corporate brand-building effort.

1.2. Statement of the Problem

Despite the important role of corporate advertising and ad-like communication activities in building a corporate brand, current research fails to explain how effective corporate communication programmes should be designed. Managers need a more thorough understanding of how to select advertising media and other means of increasing awareness of a company and enhancing its image. These other means of corporate brand communication are best regarded from the manager's perspective as additional media, like traditional advertising media, and not as nonadvertising means of delivering the creative content to a target audience.

There is a dearth of research on this topic, although coordination of corporate communication has been considered a crucial 'object of research' in the corporate communication field (van Riel, 1997, p. 289). Indeed, CIARG — an international consortium of leading researchers on corporate brand management — has called for research on 'which communication tools (e.g. sponsorship, corporate image advertising) are most effective for communicating the desired corporate identity to different constituencies' (Dacin and Brown, 2002, p. 258).

Deciding which communication tools to use is a challenging task because of the large number of alternatives available, the complexity of the communication process and the economic importance of such a decision to a firm (Gensch, 1970, 1973; Dyer, Forman and Mustafa, 1992). Selecting corporate communication tools is particularly demanding because of the qualitative difference in the alternatives. There are indeed many means of information delivery available, more numerous and diverse than those available to marketing communication managers, who usually resort to packaging and some sort of mass media advertising to inform and persuade consumers (King, 1991). Furthermore, new, alternative channels for promoting the company are appearing, including oddities such as art collections (Bansa, 2003), blogs (i.e. personal online diary) (Leonard, 2003), and corporate campuses (Becker, Sims and Schoss, 2003). These innovative means of corporate brand communication should be also thought of as communication tools, just like advertising media.

Difficulties in selecting corporate communication tools are also caused by the complexities in understanding how corporate communication works. There are many variables to consider as well as a myriad of theoretical and practical studies explaining the effects of corporate communication. In 1992, advertising consultant Broadbent found 456 competing theories of how advertising works (Broadbent, 1992). And the selection among communication tools not only requires an understanding of mass media advertising, but also an understanding of other promotional tools such as sponsorship and events — all at a corporate-level — making the task more demanding.

The decision is also challenging because of its economic importance to the firm. As mentioned above, corporate advertising and ad-like communication activities account for a large share of the corporate communication budget. Corporate mass media advertising alone represents almost one-third of corporate communication spending for large companies (Thomas L. Harris and Impulse Research, 1999), and media selection is believed to account for 90 percent of this spending (Rossiter and Percy, 1997, p. 419).

Current approaches to selecting corporate communication tools mainly lack formalisation or fail to consider how corporate communication works, or both. Many consist of simple heuristics based on general notions taken from microeconomics, organisational behaviour, PR, and marketing. But these popular rules of thumb are often erroneous and, at best, too simple.

And although current optimising and non-optimising models for media selection may provide guidance for selecting mass media, they are not very useful for selecting corporate communication tools. Optimising models such as MEDIAC (Little and Lodish, 1969) usually consist of mathematical programming and are more suitable for selecting mass media vehicles. However, they hardly consider qualitative factors and are thereby unusable when qualitative differences among options are high. Non-optimising models, on the other hand, such as the decision model developed by Dyer, Forman, and Mustafa (1992) consist of simulation or heuristic techniques applied to media selection. They take qualitative factors more into consideration and hence constitute a better basis for selecting qualitatively dissimilar communication tools. However, no published model hitherto seems to accommodate the selection among communication tools of a corporate nature.

Besides lack of method, many approaches to selecting corporate communication tools fail to consider how communication works. Few theoretical expositions consider media selection in terms of communication objectives (Rossiter and Percy, 1997, p. 445). Many approaches pursue broad objectives such as ‘better company reputation’ and ‘increased company familiarity’, but specific operationalisations of these and other communication objectives are wanting. It is thus unclear how communication works in a way that is useful for deciding which means of corporate brand communication to use.

In fact, a sound conceptual basis for understanding how corporate advertising and ad-like communication activities build a corporate brand does not exist in marketing and consumer research literature. There are of course many conceptual developments that have thoroughly addressed means such as mass media advertising (MacInnis and Jaworski, 1989), corporate design (Schneider, 1991), events (Nufer, 2002) or sponsorship (Glogger, 1999) yet a general model for evaluating different communication activities does not exist. In the words of Keller (2001, p. 822), 'a conceptual framework by which the effects of individual marketing communication options can be interpreted and compared is needed.' This is also true for *corporate* communication activities. Indeed, a better understanding of the role that corporate advertising and ad-like communication activities play in the formation of constituencies' cognitive associations for a company is considered a research priority (Dacin and Brown, 2002).

Although current advances in marketing and consumer research literature (particularly those synthesised in brand equity and attitude formation frameworks) provide some insight into the communication process, they are not very helpful in explaining how corporate communication works in a way that is useful for deciding which corporate communication tools to use. Brand equity frameworks such as Keller's model (1993) and Brown's model (1998) explain the causes and effects of brand knowledge in constituencies' minds, and the factors that moderate the influence of brand knowledge on constituency behaviour. These frameworks, however, consider numerous and disparate antecedents of brand knowledge, not only communication, and thereby provide no further insight into the factors that moderate the influence of communication stimuli on brand knowledge. And understanding these factors is fundamental for making tool selection decisions.

Attitude formation frameworks, on the other hand, such as Petty and Cacioppo's model (1986) and MacInnis and Jaworski's model (1989) focus on persuasive communication and its influence on attitude towards a brand. These frameworks encompass all individual-related and stimulus-related factors that seem to be particularly important in predicting the resulting brand attitude. Nevertheless, attitude formation frameworks, despite explicitly considering factors moderating communication effects, are not useful for fully understanding how communication works as they often consider communication effects solely in terms of brand attitude but do not fully consider brand knowledge. And it is precisely these features that are necessary for understanding how corporate communication works from a branding perspective.

In short, managers have to rely on simple rules of thumb (e.g. print is the right medium for issue advertising) and on flawed notions of the nature of the communication process (e.g. corporate design increases awareness but does not enhance a company's image) for selecting corporate communication tools. A better-grounded and more methodical approach for selecting means of corporate brand communication is required. In the words of Keller (1998, p. 262), managers need 'frameworks of consumer behaviour and managerial decision making to develop well-reasoned communication programs.' Hence, a better decision-making model for deciding which corporate communication tools is needed.

1.3. Purpose of the Research

The purpose of this research is to provide guidance for using corporate communication in corporate brand management through the development of a decision-making model to assist managers in their selection of the appropriate corporate communication tools. This model is normative, that is it shows how selection decisions should be made as opposed to how decisions are made (see Sheen, 1970). It is characterised by a high degree of formalisation and truly represents the complexities of the communication process. Moreover, it is explicitly aimed at building the corporate brand and is tailored to corporate advertising and ad-like communication activities, considering *all* means of corporate brand communication. The corporate communication tools thus extend beyond conventional advertising media and include nonadvertising means of information delivery such as events, company-owned properties, sponsored properties and company-run websites.

1.4. Outline of the Thesis

The rest of the thesis is structured as follows: chapter 2 reviews literature on corporate brands and corporate communication. Firstly, corporate brands are defined by exploring their object (i.e. the company behind the offering) and subjects (i.e. company's constituencies) in detail before developments in the business environment that have given rise to corporate brands are examined. Then corporate communication is defined and classified into public relations and corporate advertising. Corporate mass media advertising and other ad-like communication activities are then overviewed and empirical evidence of their increasing significance in a company's communication effort presented.

Chapter 3 presents a stimulus-organism-response (S-O-R) framework to explain how corporate communication works. The analysis is conducted from a constituency's point of view. As a result, the framework considers corporate brands and corporate communication from a behavioural perspective. This chapter first discusses the relevant background necessary for developing the behavioural framework, presenting a behavioural approach to understanding communication and a neo-behavioural paradigm for describing human actions. The analysis essentially focuses on enduring memory outcomes from communication. Following an S-O-R paradigm and based on empirical studies, this chapter then presents a conceptual framework and develops several propositions that relate a communication stimulus to constituencies' psychological and behavioural responses. Corporate communication effects, usefully represented as brand-knowledge structures stored in constituencies' minds, mainly depend on both constituency and stimulus characteristics. The most important constituency-related and stimulus-related moderators of corporate communication effects are identified and discussed, and lastly, the developed framework critically reviewed, comparing it with similar frameworks featured in marketing and consumer research literature.

Chapter 4, the main part of this thesis, develops a managerial decision-making model for selecting the best corporate communication tools from all available means of information delivery. In contrast to the last chapter, the analysis is conducted from a company's point of view. As a result, the model considers corporate brands and corporate communication from a managerial perspective. Firstly, the chapter presents the foundations of the managerial approach, to which the rest of the chapter adheres. Corporate brand management is defined and the significance of corporate advertising and ad-like communication activities as a brand-building tool assessed. Following this a discussion of the broad decision situations that arise in managing a corporate brand using corporate advertising and the like. This chapter then discusses in detail the tool selection decision and coincidentally develops a managerial decision-making model broadly following the steps of decision analysis: the selection decision among corporate communication tools is framed, its structure is modelled on the basis of the behavioural framework developed in chapter 3 and two heuristic techniques are presented to evaluate the available corporate communication tools and to single out the best alternative in terms of building the corporate brand under conditions of both certainty and uncertainty. This chapter then critically reviews the proposed decision-making model discussing theoretical and practical aspects of its development and application.

The developed decision-making model is then applied to an illustrative problem, which involves selecting from the range of major corporate communication tools: mass media advertising, corporate design, events, exhibitions, sponsorships and websites. Using an example, this section shows how the proposed model applies to a specific decision situation and thereby provides useful guidance for managerial decision-making. The chapter concludes with a critique of the illustrative model and its findings.

Finally, chapter 5 summarises the findings of this research and presents conclusions derived from their application. It presents managerial implications and discusses theoretical contributions in relation to the two groups of relevant research literature. The chapter closes with suggestions for the direction of future research in corporate brand management using corporate communication.

Chapter 2: Foundations

This chapter reviews major concepts relevant to corporate brand management using corporate communication. Applicable literature comes from various disciplines, mainly communication and marketing. Besides defining major concepts, this chapter points out the rising importance of corporate brands and that of the communication activities that build them, namely corporate advertising and ad-like communication activities.

This chapter is divided into two sections. The first section focuses on corporate brands. Firstly, it discusses brands in a broad sense. The brands are then defined and classified according to an abstract hierarchical ordering. This section subsequently looks at corporate brands, the highest-level brand in a brand hierarchy. Corporate brands are defined and their objects and subjects explored in detail. Finally, this section reviews market and company developments that have given rise to corporate brands in recent years.

The second section concentrates on communication. The total communication effort of an organisation is defined and classified into marketing and corporate communication. Corporate communication is then defined and classified. Finally, corporate advertising, one of the major forms of corporate communication, is overviewed and the most common corporate ad-like communication activities are briefly presented. The remainder of the section provides evidence of the growth of these communication activities.

2.1. Corporate Brands and their Growing Importance

2.1.1. Brands

2.1.1.1. Definition

Brands have been around since ancient times. In 3000 BC, in Ancient Egypt, symbols were used to identify the bricks leading to pharaoh tombs; in 2000 BC, in ancient Palestine, signs were employed to distinguish pottery (Esch and Langner, 2001). The word *brand* comes from the Old Norse word *brandr* (North Germanic language of the Scandinavian peoples prior to 1350 AD) which means ‘to burn’ or, more specifically, to mark livestock (Keller, 1998, p. 2; see also Langner, 2003, p. 1 ff. for a brief historical review).

According to a widely accepted definition proposed by the American Marketing Association (AMA), a **brand** is a name, term, sign, symbol, or design, or a combination of these elements intended to identify and differentiate a product in the minds of concerned subjects (AMA, 1995; Berndt, 2005, p. 38).

According to this definition, there are four ingredients which characterise a brand. Firstly, a brand consists of *names, symbols, designs, or any other feature*, which constitute its **brand elements** (Keller, 1998, p. 2 f.). These brand elements refer to the logotype, packaging and other tangible constituent parts of a product. For example, Figure 2.1 displays the brand elements of the DaimlerChrysler brand.

Secondly, brands *identify* and *differentiate* a branded product, both roles being the fundamental functions of a brand.[1] A brand identifies the goods and services of a seller and attests the product's source. Identification is objective; it relies only on the capacity of names, symbols, designs and any other external cue to describe or insinuate where the offering comes from.

Other than the purpose of identification, a brand differentiates the seller's offering from that of competitors. Contrary to identification, differentiation is subjective and depends on consumers' perceptions, attitudes and behaviour towards the brand. Differentiation does not occur just because the name or logotype on a product is distinct from that of competitors; differentiation implies that consumers perceive differences among brands in a product category (Kotler, 2000, p. 394). Therefore, it is possible that a brand name or logotype identifies a product but does not differentiate it from competitors. Kapferer (1997, p. 26), for example, mentions product categories such as writing pads, rubbers, felt tip pens, markers and photocopy paper, where brands, despite having distinctive brand elements, do not differentiate. Hence, brand elements per se do not differentiate (de Chernatony and McDonald, 1998, p. 37). In short, both functions are necessary and only when a brand identifies and differentiates a product is it possible to talk about a *branded* product.

Thirdly, brands involve *products*. Products, in a wide sense, refer not only to physical goods and services, but also to experiences, retailers and distributors, events, people, geographical locations, properties, organisations, information and ideas (Keller, 1998). Hence, almost everything can be branded, as some well-

1 Other functions of brands are often mentioned in branding literature. For example, Keller (1998, p. 7 ff.) mentions the following functions of brands for consumers: identification of products' source, assignment of responsibility to product maker, risk reducer, search cost reducer, symbolic device, signal of quality, and promise, bond or pact with product maker (see also Kapferer, 1997, p. 26 ff.; Esch and Wicke, 2001, p. 11 f., for similar views). In this thesis, however, these 'functions' are considered outcomes of strong brands and not functions of brands per se. See subsection 3.2.3 for a discussion on these outcomes.

known branding cases confirm. For example, a number of physical goods, once considered commodities, have been successfully branded in recent years: Perdue chickens, Perrier water, Chiquita bananas, and Dole pineapples (Aaker, 1991). Also ‘products’ such as sports, political candidates and religions are actively branded today.

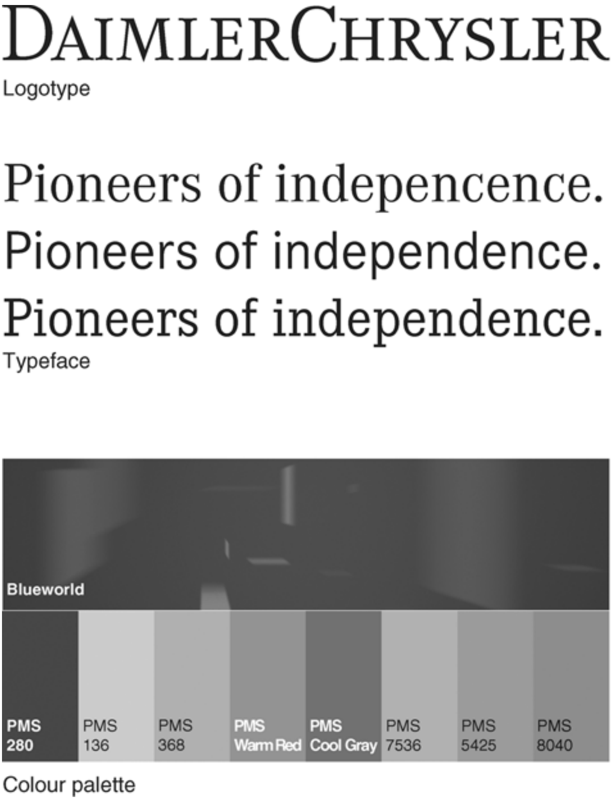

Figure 2.1. Brand elements of the DaimlerChrysler brand. Courtesy of DaimlerChrysler AG.

Interestingly, products differ from brands. A product refers to ‘anything that can be offered to a market to satisfy a want or need’ (Kotler, 2000, p. 394). A brand, on the contrary, is a product that differentiates the branded product from other products that satisfy the same want or need (Keller, 1998, p. 4). A product includes characteristics such as product category, attributes, benefits and uses; in addition to these product characteristics a brand includes user and usage imagery, country of origin, corporate associations, brand personality, symbols, a brand-consumer relationship and emotional benefits (Farquhar, 1989; Keller, 1998, p. 3 ff.; Bernstein, 2003). As the old marketing saying goes, products are what the company makes; a brand is what the consumer buys.

Lastly, a brand's identification and differentiation functions occur in the *minds* of the subjects concerned. A brand is thus ultimately something that resides in the subject's memory. (Keller, 1998, p. 4). Subjects, in the case of physical goods and services, are mainly consumers. In the case of other kinds of products, for example, these subjects are voters of a 'branded' political candidate, supporters of a branded idea, visitors of a branded exhibition or participants of a branded event. Evidently, there are many kinds of subjects involved with brands and thereby many kinds of brands; it thus seems sensible to classify them.

2.1.1.2. Classification according to level in a brand hierarchy

Classifying brands is not a simple task. There are a myriad of brand 'types' resulting from decades of academic research and business thoughts on the subject. A quick search through branding literature alone brings up strong brands, global brands, parent brands, endorser brands, service brands, driver brands, e-brands, master brands, linchpin brands, benefit brands, and many more. The task of classifying them has been made more challenging because brands have recently been on the agenda of not-for-profit organisations, political parties, government, and even religious entities. The Archbishop of Canterbury, head of the Church of England and spiritual leader of 70 million Anglicans worldwide, has reportedly been involved in a row about 'religious branding' (Jones, 2003). To make things worse, brands have increasingly been the subject of the popular press as well, with articles on brands in mainstream newspapers like *USA Today* doubling from 1998 to 2003. 'Branding' was indeed considered the buzzword of the 1990s (Spaeth, 2003b).

Despite the many potential classifications, a number of academics, particularly in the marketing field, classify brands according to a brand hierarchy (e.g. Aaker, 1996, p. 242 f.; Kapferer, 1997, p. 188 ff.; Keller, 1998, p. 409 ff., 2000, p. 116 ff.; Berndt, 2005, p. 40). A **brand hierarchy** represents an ordering of brands that takes into account the number and nature of common and distinctive brand elements across the product offering (see Aaker, 1996, p. 249; Keller, 1998, p. 79 f.). As in any hierarchical ordering, higher levels of the brand hierarchy contain fewer brands, while lower levels of the hierarchy typically contain more. As such, various levels of brands are likely to arise. Many general brand hierarchies have been proposed in branding literature and these hierarchies consider different numbers of levels as well as different labels for these levels. Three of these hierarchies, proposed by well-known branding academics, are shown in Table 2.1.

Table 2.1. Examples of generic brand hierarchies found in branding literature.

Aaker (1996)	**Kapferer (1997)**	**Keller (1998; 2000)**
Corporate brand	Endorsing brand	Corporate or company brand
Range brand	Source brand	Family brand
Product line brand	Umbrella brand	Individual brand
Subbrand	Range brand	Modifier
Branded feature, component, or service	Line brand	
	Product brand	

The hierarchical classification of brands allows for a number of generalisations. Firstly, a brand hierarchy is likely to emerge within every product offering. Brand hierarchies do not only apply to physical goods but also to services, retailers, people, organisations, and so forth. Illustrative brand hierarchies for different product types are shown in Table 2.2.

Table 2.2. Examples of brand hierarchies for different kinds of products.

Kind of product	**1st level**	**2nd level**	**3rd level**
Physical goods	DaimlerChrysler AG	Mercedes-Benz, …	A-Class, B-Class, C-Class, …
Services	Deutsche Bank AG	Maxblue, …	Depot, DepotSpar, DepotKredit, …
Retailers and distributors	J Sainsbury plc	Sainsbury's, …	Central, Local, Savacentre
People	Kennedy family	John F., …	Caroline B., John F. Jr.
Organisations	Tübingen University	Faculty of Economics, …	Marketing Department, Strategic Management Department, …
Sports, art and entertainment	National Basketball Association	NBA, …	All Star, Playoffs, Finals, Draft, …
Geographical locations	Spain	Illes Balears, …	Menorca, Mallorca, Ibiza, Fortmentera

Secondly, brands that are lower in the brand hierarchy differ from higher-level brands. Brand elements related to a high-level brand are more common and less distinctive because they are used in many products. In contrast, name, logotype or any other brand element of lower-level brands is said to possess more commonality and less distinctiveness because they are used in fewer products. For example, the Honda brand name is hardly distinctive across the product offering of that company because it is used to identify an extensive range of products, from automobiles to power generators. On the contrary, the Honda Civic Sedan EX brand name is a less common and thus more distinctive brand element within that offering.

Thirdly, as Table 2.1 suggests, a brand hierarchy involves an arbitrary number of levels. The three generic brand hierarchies presented consist of between four and seven different levels. Actual brand hierarchies of organisations however, are much more diverse as they depend on factors such as organisation size, the breadth and complexity of product offering as well as historical and organisational developments. Some organisations, such as many small service providers, have a one-story brand hierarchy — the whole offering is identified with one single brand — whereas other organisations, such as most medium and large companies, may have a complex multi-story brand hierarchy.

Among all levels in a brand hierarchy, one level or various levels are likely to be emphasised, depending on the branding strategy. A **branding strategy** refers to how brand elements from different levels of the hierarchy (mainly brand name, but other brand elements as well) are combined, if at all, also how a brand element is linked, if at all, to multiple products and the prominence that brand elements receives when combined (Aaker, 1996, p. 241 f.; Kapferer, 1997, p. 206 ff.; Keller, 1998, p. 78 ff.; Esch and Bräutigam, 2001b; Rao, Agarwal and Dahlhoff, 2004). A company's branding strategy, in turn, depends on various product, company and market characteristics (Walker and Keefe, 1998; Alessandri and Alessandri, 2004). Depending on the branding strategy, different levels of a brand hierarchy are more or less strongly communicated or present in a company's marketing effort. This implies that although different levels may be *technically* present they may not be visible at all (Keller, 1998, p. 410). Two well-known examples of 'invisible' brand levels include Philip Morris Corp. (now Altria Corp.) which is not mentioned in the packaging and marketing communication activities of its Kraft products and The Clorox Company (strongly associated with its flagship product Clorox liquid bleach) which is not visible in the company's Hidden Valley salad dressings and K C Masterpiece sauces. Both companies, for obvious reasons, pursue a branding strategy that places the accent on lower-level brands and avoids the mention of the corporate brand.

Lastly, regardless of the number of levels identified and the branding strategy adopted, a highest-level brand and possibly one or various lowest-level brands are present in the brand hierarchy. Lowest-level brands, which are used to brand a single product, can usually be identified. Their brand elements are common to no other product but are fully distinctive. In other words, there is no similar product in the product offering. A single highest-level brand can also be identified in every brand hierarchy, at least technically. Its brand elements are common to the whole product offering and thus have no distinctiveness. The highest-level or 'corporate' brand is the focus of this thesis and is discussed in detail in the next subsection.

2.1.2. Corporate brands

2.1.2.1. Definition

The highest-level brand in the brand hierarchy — the one that provides no distinctiveness but is common to the entire offering — is referred to in this thesis as a corporate brand. Taking this into consideration and elaborating on the definition of brands given in the previous subsection, a **corporate brand** is a name, term, sign, symbol or design or a combination of these elements, intended to identify and differentiate the whole product offering in the minds of the subjects concerned. A **product brand**, on the other hand, refers to any lower-level brand in a brand hierarchy, regardless of its level in that hierarchical ordering. A product brand is distinctive within the product offering. Hence, a product brand offers less commonality and more distinctiveness than a corporate brand.

This novel characterisation of corporate brands (and, residually, of product brands) differs from many previous conceptualisations found in branding literature in one essential way. Brands are considered 'corporate' because they represent the single highest-level brand in a brand hierarchy. Brands are not considered 'corporate' because they refer to a company or corporation, as argued by some authors (e.g. Keller, 2000; Olins, 2000; Meffert and Bierwirth, 2002; Esch et al., 2004). Neither are brands considered 'corporate' because they refer to an organisation (Davidson, 2002; Mazur, 2002; Aaker, 2004b). Although this may be the case — and a corporate brand can indeed identify and differentiate a company, a corporation or an organisation — the detail that gives a brand its corporate character is its position at the highest level in the brand hierarchy. In other words, the corporate nature of a brand depends on its level in a brand hierarchy and not on the nature of the object it refers to. The object and the subjects of a corporate brand are discussed below in more detail.

2.1.2.2. Object of a corporate brand

The object of a corporate brand is the whole product offering. The term *corporate* is etymologically derived from the Latin *corpus* understood as 'the whole group as distinguished from the individual members or parts' and as 'a unified body made up of individuals or particulars', according to Webster's Third New International Dictionary.[2] Thus, the whole product offering is identified and differentiated by a corporate brand (Keller, 1998, p. 409 f.). Corporate brands refer to the whole offering, regardless of the kind of product, and encompass physical goods, services, ideas, families, companies and organisations. Indeed, the first-level brands of the brand hierarchies illustrated in Table 2.2 (i.e. DaimlerChrysler AG, Deutsche Bank AG, J Sainsbury plc, the Kennedy family, the Tübingen University and so forth) are all considered corporate brands.

The object of a corporate brand often refers to the organisation behind the whole product offering. Corporate brands are common to the whole product offering, and common to the whole product offering is the product source, which is frequently one of several types of organisations including companies, not-for-profit organisations or any other organised group of individuals actively engaged in marketing the offering (Dacin and Brown, 2002). This is particularly true when the products are physical goods, services, retailers and distributors, organisations, sports, art and entertainment. Organisations often stand behind these products. This is sometimes true when the branded 'products' are people, particularly famous people. Indeed, organisations stand behind the 'offering' of artists such as Keith Haring and Andy Warhol, for example, whose foundations promote their public image, provide information about their lives and works and exploit licensing opportunities, among other functions. In these and in many other cases, organisations provide the entire product offering and are thus the object of corporate brands.

The primary emphasis in this thesis is on companies as brands. That is, the object of a corporate brand will refer exclusively to a company. Nevertheless, most of the ideas presented here can also be applied to organisation brands, and some of the ideas can also be used for all kinds of highest-level brands. A corporate brand thus relates to a company as a whole, rather than to any of its physical goods or services or any of its constituent parts, whereas a product brand relates to the

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2 See subsection 2.2.2 for an additional discussion of the term *corporate*.

goods or services provided by the company (Merbold, 1994; Ind, 1997, p. 2 f.; Keller, 2000; Olins, 2000; Meffert and Bierwirth, 2002; Esch et al., 2004).

Throughout this thesis, corporate brands will refer to companies and thereby corporate brands will be equivalent to company brands. Interestingly, the contrary is not always true: company brands are not always corporate brands. For example, although Kraft Foods and Philip Morris are *company* brands (i.e. they identify and differentiate companies) they are not *corporate* brands as both companies are subsidiaries of the Altria Group, which is the highest-level brand in that particular brand hierarchy, and thereby the sole corporate brand. As such, Kraft Foods and Philip Morris are both product brands.

The object of corporate brands differs from that of product brands, particularly in their nature, because a company is plainly different from its products (Esch and Bräutigam, 2004). Hence, the nature of a brand's object relates to its level in a brand hierarchy. A corporate brand identifies and differentiates an organised group of individuals working together because of the common goal of providing products, whereas product brands identify and differentiate only the provided products. A corporate brand is, in essence, about people, values, practices and processes, whereas product brands are about physical goods and services and their marketing (King, 1991; Balmer and Gray, 2003).

2.1.2.3. Subjects of a corporate brand

The subjects of a corporate brand are all individuals concerned with the product offering. These individuals are concerned either with the whole product offering or, interestingly, with any of its offered products. For example, although business administration students are mostly concerned with the Tübingen University's 'Faculty of Economics' brand, they are of course also concerned with the 'Tübingen University' brand. And, despite not caring much for any other of the Tübingen University's product brands (e.g. 'Faculty of Geosciences' brand), they are however subjects of the corporate brand. Corporate brands thus identify and differentiate in the minds of those individuals concerned with any part of the whole product offering.

Throughout this thesis, the subjects of a corporate brand will be the company's constituencies. A **constituency** is any individual who can affect or is affected by the achievement of the company's objectives (Freeman, 1984, p. 46).[3] Constitu-

3 The term *constituency* originated in the political science field and has been increasingly used in branding and corporate communication literature (e.g. see Argenti, 1996, 1998; Keller, 2000) at the expense of terms such as stakeholders, clientele groups, claimants, constituents, interest

encies of a corporate brand therefore are those individuals concerned with the company behind the entire product offering and those individuals concerned with any product provided by the company.

In contrast, subjects concerned with a product brand are its consumers who are mostly buyers, decision makers, and ultimate users or consumers of a good or service (AMA, 1995). There are also other individuals who are concerned with a product brand such as intermediaries and regulators. For simplicity's sake however, they will all be referred to as consumers in this thesis. Constituencies will thus represent those individuals concerned with a corporate brand, whereas consumers will represent those individuals concerned with a product brand.

The subjects of corporate brands differ from those of product brands, particularly in terms of their number and nature. The number and nature of brand subjects thus relates to the brand's level in the brand hierarchy (Meffert and Bierwirth, 2001, 2002). Lower-level brands are more distinctive and thereby relevant to fewer people, whereas higher-level brands are important for the sum of the concerned subjects of each of the lower-level brands and many other constituencies. Constituencies are thus more numerous than consumers, mainly because corporate brands exhibit more commonality than product brands. For example, constituencies of the German-based conglomerate Bayer include the consumers of each of its Animal Health, Crops, and Medical divisions. Hence, constituencies of the corporate brand Bayer are more numerous than the consumers of any of its product brands.

In addition, constituencies differ from consumers in their nature, the former being more diverse than the latter. Lower-level brands are often relevant to a certain group of similar individuals whereas higher-level brands are often relevant to individuals of a more diverse nature. Back to the Bayer example: consumers of its Animal Health division include ranch owners (buyers) and veterinarians (decision makers) whereas Bayer's constituencies consist of consumers of the Animal Health division as well as other divisions, but also include investors, employees, community members, regulators, and many more. Hence, the constituencies of the corporate brand Bayer reflect more variety than the consumers of any of its product brands. Product brands are thus relevant only to a relatively small number of similar individuals, mostly end users of a product, whereas corporate brands are relevant to a relatively large number of diverse individuals.

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groups, publics, and audiences. The term is preferred because it stresses the individual level and not the collectiveness of a group of people (Freeman, 1984, p. 46; Mitchell, Agle and Wood, 1997).

While it is clear that constituencies are manifold and diverse, it is not so clear what these constituencies are. According to their conceptualisation, almost anyone can be considered a constituency, which makes their identification a challenging task (Mitchell, Agle and Wood, 1997). Various sets of constituencies and approaches for identifying them have been proposed in research literature. Most authors consider a finite and static set of constituencies. For example, Fombrun (1996, p. 57 ff.; see also Argenti, 1998, p. 37 ff.) considers employees, investors, customers and community members as the four primary constituencies of a corporate brand for almost every company, all apparently equally important for achieving the company's objectives.

Many authors not only identify a corporate brand's constituencies but also assign them with different degree of importance. For example, Kapferer (1997, p. 223) identifies the following constituencies of a corporate brand, from the most important to the least important: stockholders, financial markets, government commissions, regulatory authorities, academia, local community, issues groups, press, suppliers, employees, trade associations and customers (see Franzen and Kumbartzki, 2004, for another perspective).

Some authors go further and provide more advanced theories for identifying constituencies. For example, Mitchell, Agle, and Wood (1997; see also Grunig and Hunt, 1984, p. 147 ff.; Kernstock et al., 2004, p. 33 ff., for concurrent theories) propose a well-regarded situational theory of constituency identification. According to this theory, constituencies can be identified as possessing one or more attributes: power to influence the company, legitimacy of the constituency's relationship with the firm, and urgency of the constituency's claim on the company. Mitchell and colleagues further propose a dynamic model which considers situational uniqueness and managerial perceptions to determine which constituencies should be attended. Their theory supposes that (1) levels of power, legitimacy and urgency are variable, not steady state, (2) attributes are subjective, not objective, and (3) an individual may not be conscious of possessing a certain attribute or may not be willing to exercise any behaviour. Managers may or may not give priority to a constituency's claim, depending on the cumulative number of constituency attributes that managers perceive. Therefore, according to this theory of constituency identification, a corporate brand's constituencies are all those individuals who can affect or are affected by the achievement of the company's objectives, identified according to the possession of power, legitimacy, urgency or any combination of these attributes.

2.1.3. Developments that have given rise to corporate brands

Corporate brands have become more important for all kinds of companies, in all kinds of industries. Traditionally, the corporate brand served as a basis for communication programmes in service, business-to-business, high technology and durable goods industries (Fombrun, 1996, p. 288; Kapferer, 1997, p. 221 ff.; de Chernatony and McDonald, 1998, p. 189 f.; Aaker and Joachimsthaler, 2000, p. 157). In these industries, consumers and other constituencies are likely to know and care about the link between the product and the firm, and companies are prone to promote their corporate names. Corporate brands have also taken over the automotive industry. Despite some backlashes — e.g. Ford Motor Co. (2003) scrapping a distinctive corporate logotype and replacing it with the historical Ford blue oval —, corporate branding is becoming more prominent in automotive giants such as DaimlerChrysler, Volkswagen (Pimpl, 2003) and General Motors (Greenberg, 2005; Scholz and Léger, 2005). Recently, corporate branding has also taken over the pharmaceutical industry, with companies like AstraZeneca and Pfizer raising their public profile and running advertising campaigns to promote the company (Colyer, 2003). More recently, corporate brands have also begun to play a crucial role in the packaged-goods industry, where they previously tended to be downplayed. Companies such as Procter & Gamble and Unilever, who traditionally focused on their product brands, are now featuring their company logotypes in many of their products and actively communicating their corporate brands (Hatch and Schultz, 2001; Mazur, 2002; Lewis, 2003; Darby, 2004; Solley, 2004). In 2003, according to brand consultancy Interbrand (Anonymous, 2003a; see also Holt, Quelch and Taylor, 2004), 72 of the world's 100 most valuable brands were corporate names.

Companies are paying more attention to their corporate brands due to a number of changes in the business environment, the most evident perhaps being the general rise of brands (see Keller, 1998, p. 7 ff.). Branding and marketing principles and practices have recently been used on all kind of products, including retailers (Ailawadi and Keller, 2004), celebrities (Anonymous, 2003b; Grannell and Jayawardena, 2004), individuals (Peters, 1997), football clubs (Anonymous, 2004c), religions (Jones, 2003), languages (Ferguson, 2004) and countries (Olins, 1999; Kotler and Gertner, 2002; Frost, 2004). A recent well-publicised example of country branding is the major branding and communication programme initiated by the City of Madrid, which used leading agencies in the field of branding and design, market research, public relations, direct marketing, and marketing communication to reposition Spain's capital (Landor, 2005). Even funeral services are actively branded and marketed today (Gardner, 2004). And brands have, of course, also taken over companies and organisations.

Apart from this general branding frenzy, various trends and developments have also contributed to the rise of *corporate* brands. Corporate brands are actively being built today mainly because of increased competition for consumers, but also increased competition in supply markets, as well as changes within companies themselves in terms of their structures, processes, and cultures (Meffert and Giloth, 2002). Some of these market and company developments are highlighted in Table 2.3 and are discussed in more detail below.

Table 2.3. Market and company developments that have given rise to corporate brands.

Market developments	Company developments
More intense competition for consumers	Stronger dependence on mergers and acquisitions
Changing consumers' media habits	Increasing service levels
Increasing general interest in business	Broad brand extensions
Expanding retail capital markets	
Growing competition for employees	

2.1.3.1. Market developments

Various market developments have sharpened the necessity of marketing the company behind the offering. Five of these developments, relating to consumers, community members, investors, and employees, are discussed below.

More intense competition for consumers

More intense competition for consumers is evident in most industries. In the early stages of industrial development, competition was based on a product's physical characteristics. But back then, most functional aspects of products rapidly became imitable. Competition began to emerge on the basis of image-related factors such as symbolic and experiential benefits. 'The new competition', observed marketing academic Theodore Levitt (1969, p. 2, cited in Kotler, 2000, p. 395), 'is not between what companies produce in their factories but between what they add to their factory output in the form of packaging, services, advertising, customer advice, financing, delivery arrangements, warehousing, and other things that people value'.

In recent years however, many of these augmented product benefits have become increasingly similar. By any objective means, most products are at parity with competitors. Among all products tested over a two-year period by Germany's test magazine *Stiftung Warentest*, 85 percent of them were rated 'good' (Michael, 1994). Worse still, products and brands are seen as equivalent. According to research by advertising network BBDO, products in different categories were perceived as exchangeable by an average 72 percent of consumers (Esch and Wicke, 2001, p. 19 f.). It is thus increasingly difficult for companies to differentiate their offering and sustain a comparative advantage over competitors.

Facing more intense competition, corporate brands are being employed to help differentiate products. They are indeed used by an increasing number of firms as a strategic marketing tool (Kroehl, 2000; Roberts and Dowling, 2002; Hoeffler and Keller, 2003). Corporate brands embellish the meaning and associations of individual products. Product brands can thus differentiate themselves and maintain an advantage by linking their images to the company behind the offering (Aaker, 1996, p. 115 ff.; Biehal and Sheinin, 1998; Aaker and Joachimsthaler, 2000, p. 118 ff.; Kotler, 2000, p. 26). In these cases, a corporate brand becomes a means to transcend the types of associations found in product brands, these corporate associations being an increasingly important competitive factor (Keller, 2000; Aaker, 2004a, p. 257 ff.). The ability to express who they are and what they stand for is the basis upon which many companies compete today (Schultz, Hatch and Larsen, 2000, p. 1). In future, a company's image might be the only difference consumers can perceive, given how competitively aggressive many industries have become (Argenti, 1998, p. 76; Aaker, 2004b).

Companies can differentiate their offering through their corporate brands in mainly two ways. Firms can link their product brands to the corporate brand by means of corporate endorsement, an increasingly used form of communicating corporate brands. Corporate endorsement provides reassurance and credibility to the offering (Aaker, 1991, p. 212 f., 1996, p. 132 ff. and passim; Argenti, 1998, p. 79 ff.; Keller, 1998, p. 426 ff.). The rationale is that the product will deliver the promised benefits because the company behind the brand is a substantial and successful organisation that would only ever be associated with a strong product.

Companies may also differentiate their products by making corporate associations an essential part of their product brands. Company values, culture, and employees, for example, were successfully integrated into the marketing programmes of General Motors' Saturn brand until 2002 (Aaker, 1996, p. 118 f.). The focus on corporate associations was indeed embodied in the slogan 'a different kind of company, a different kind of car.' Other companies, such as cosmetic retailer The Body Shop and ice-cream maker Ben and Jerry's, have also acknowledged their marketplace success partly to the corporate associations linked to their brands (i.e. environmental concern and social responsibility, respectively) (Kotler, 2000, p. 25 f.). Therefore, while products and most brands look alike and offer little differences or advantages from a customer's point of view, companies may differentiate their products by positioning themselves as 'brands' in the minds of actual and potential consumers.

Changing consumers' media habits

Another important development in the marketplace has been the changing media habits of consumers, which has been accompanied by profound changes in the media landscape. Media has become more fragmented with the erosion of mass media and the emergence of non-traditional media (Esch, 2004). Less and less people tune into broadcast TV. In the US, the audience share for broadcast TV has dropped dramatically, from over 90 percent in the mid-1970s to under 45 percent by 2004, mainly due to the emergence of cable and satellite TV (Keller, 1998, p. 32 f.; Anonymous, 2004a). Other traditional media became equally fragmented with the appearance of a myriad of new radio stations, daily newspapers and magazines.

Media has also become fragmented because new, alternative ways to reach consumers have rapidly emerged. Adverts in once unthinkable places like subways, taxis, public toilets and lifts are common today. Also new technologies such as fax machines, mobile phones, but primarily the internet, have contributed to this fragmentation. Above all, it is essentially the emergence of ad-like communication activities, such as sponsorship and events, which is responsible for the fragmentation of media and the explosion of non-traditional media. Today, spending on non-traditional media is believed to account for nearly 40 percent of the marketing communication budget of European firms and approximately 70 percent of US company budgets (Nufer, 2002, p. 9).

Besides being increasingly fragmented, media has become more expensive. The cost of national TV advertising has increased dramatically in most developed countries. In the US, the cost-per-thousand viewers is five times higher today than it was in 1970 (Keller, 1998, p. 32). In total, spending on communication has been steadily increasing since the 1990s. US communication spending — half of the world market — grew at a 5.5 percent compound annual growth rate from 1997–2002, faster than nominal GDP growth (Veronis Suhler Stevenson, 2003). And, despite the spending slump in the early 2000s due to the technology bust and terrorist attacks, communication spending continues to increase (Anonymous, 2004a).

As a result of greater spending on communication and growing media clutter, communication effectiveness has significantly decreased in recent decades, particularly where traditional media is concerned. This is especially true for mature brands and declining product categories. Indeed, a report by the Deutsche Bank argued that more than half of packaging-goods brands show a negative return on investment in TV advertising (Neff, 2004).

In an attempt to face these changes and increase communication effectiveness, corporate brands are increasingly being employed in marketing communication programmes. And, although using the corporate brand proactively may add cost and complexity, and divert resources and focus from product brands (Aaker, 1996, p. 135; Dowling, 2004), a corporate brand may in fact become a source of communication efficiency.

A corporate brand extensively used in the marketing of the offering results in economies of scale and scope in increasing brand awareness and economies of scale in enhancing brand image (Aaker, 1996, p. 294 f. and passim; Biehal and Sheinin, 1998, p. 102 f.; de Chernatony and McDonald, 1998, p. 359; Aaker and Joachimsthaler, 2000, p. 120 ff.). A corporate brand extended over various product categories provides economies of scale because the fixed cost of maintaining a brand name can be spread across different divisions. Indeed, corporate brands that are extensively used in a branding strategy have an advantage over product brands in building presence and awareness (Aaker, 1991, p. 65 and passim, 1996, p. 127 f. and passim; Aaker and Joachimsthaler, 2000, p. 116 f.).

A corporate brand extended over diverse product categories is also a source of economies of scope in creating brand awareness because media spillovers into adjacent markets are likely to occur. For example, advertising Siemens mobile phones (now BenQ) helped to increase the visibility of the Siemens brand, benefiting Siemens computers and Siemens medical equipment. Enhancing the visibility of a company may thus be an effective means of enhancing the visibility of all its individual products. Interestingly, enhancing company visibility alone may enhance its image. Visibility per se denotes size, substance and competence. By being highly recognisable, consumers may conclude that (1) the firm is extensively advertised, (2) the firm has been in business for a long time, (3) the firm is widely distributed or (4) its products are extensively used (Aaker, 1991, p. 63 ff.).

Finally, a corporate brand may increase communication effectiveness because it is a source of economies of scale in creating a positive image. Brand associations linked to brands at higher levels of the brand hierarchy shape the image of the many lower-level brands of that hierarchy. The marketing effort for these lower-level brands may thus require fewer brand associations to be created because higher-level brands already convey part of the desired image. The corporate brand may, for example, provide corporate associations such as quality and innovativeness that increase the product brands' credibility, whereas the product brands' marketing efforts may convey product-related attributes and benefits.

These communication efficiencies are particularly manifest in global sport events such as the World Cup or the Olympics. To benefit from sponsoring these events, significant economies of scale and scope are required. Consequently, communication efficiencies are only possible when sponsoring brands are employed in many products, like corporate brands often are (Aaker, 2004b). Corporate brands are thus likely to be employed to sponsor these high-ticket events. Indeed, corporate brands were all main sponsors of the 2002 Japan and Korea World Cup and comprised 7 of the 10 main sponsors of the 2002 Salt Lake City Winter Olympics (FIFA, 2002; International Olympic Committee, 2002).

Increasing general interest in business

Community members and consumers have shown an increasing interest in business in recent years (van Riel, 1995; Kapferer, 1997, p. 345 ff.; Argenti, 1998). They expect companies to behave like good corporate citizens (Tischler, 2004). Indeed, a poll by market research firm MORI found that 87 percent of individuals think that companies, particularly larger ones, have responsibility towards the communities where they make business (Ind, 1998). Communities are also taking a more vocal and challenging approach to company decisions which may affect them negatively (Davies, 2003; Colyer, 2005). For example, when US candy maker Hershey was put up for sale, workers and residents of the small town of Hershey (Pennsylvania, US) staged loud public protests (Barrett, 2002). Community activism has been particularly evident against retail giant Wal-Mart, who constantly faces angry residents opposing the opening of Wal-Mart stores in their areas (Anonymous, 2004b).

In addition to community members, consumers also care about the companies behind the products they purchase. Nowadays, they feel particularly affected by a company's social record. Consumers seem to care more for a company's responsibility than for its brands or the quality or price of its products, as a recent worldwide poll suggests (Lewis, 2003). Almost 90 percent of consumers said that the reputation of a company often determined the product they would buy (Demworth, 1989). Indeed, facts related to a company itself may affect a constituency's attitude to its products (Kapferer, 1997, p. 221 ff.). Negative reports about a company are likely to affect consumers, as illustrated by the massive boycotts of Shell stations in Germany prompted by the company's controversial operations in Nigeria and the proposed maritime sinking of the offshore drilling platform Brent Spar, as well as the boycotts of Nike stores in the US because of the alleged poor working conditions in the Asian factories manufacturing Nike goods (Fombrun and Rindova, 2000; Klein, 2000).

Greater interest in business has increased the significance of corporate brands. Corporate brands are a way of reassuring constituencies who stand behind the products. A corporate brand is indeed a useful means of effectively communicating the programmes, strategies, people and values of a firm. It is thus a powerful means of expression for firms who are not tied to specific products (Aaker, 1996, p. 115 ff.; Keller, 1998, p. 16 ff., 2000, p. 115; Aaker, 2004b).

Expanding retail capital markets

Another important change in the business environment has been the increasing number of individual shareholders. The 1990s, in particular, saw a 'popularisation' of stock markets in most developed countries. According to a survey commissioned by the US Federal Reserve Board, in 1989, 52 million individuals owned stocks in the US; by 1998, the number of retail investors rose to 84 million, which included individuals from all occupations, age groups, regions and educational levels (NYSE, 2000). Today, individuals own 37 percent of shares issued by US companies (Federal Reserve Board, 2003).

The rise of retail capital markets was partly due to the increasing number of employees owning company stock. In 2002, 25 to 30 million US employees were estimated to own stock in their companies through employee stock ownership plans (ESOPs) and other similar programmes (National Center for Employee Ownership, 2002). According to these estimates, employees own, or have options to own stock worth about $800 billion, or about 8 percent of all stock in the US.

The popularisation of stock markets has been supported by the substantial expansion of discount and online brokerage in recent decades. The number of discount brokers grew rapidly in the 1980s and the number of specialised on-line brokerage firms grew during the 1990s. Both these trends led to easier share trading and lower trading costs for retail investors (NYSE, 2000). As a result of these developments, finance became a mainstream talking point and the 1990s saw the appearance of a large number of financial publications and financial TV channels (Truell, 1997).

Faced with expanding retail capital markets and more intense competition for retail investors, corporate brands have gained in importance for most listed companies. Awareness of a company and its image are decisive factors for investors, particularly retail investors (Gregory, 1991, p. 136 f.). Favourable public images are indeed created to entice investors. According to a survey among managers of large European firms, luring investors is one of the main reasons why companies build their corporate brands (Einwiller and Will, 2001, p. 6). And, according to the major US surveys on corporate mass media advertising, the business and financial communities, together with consumers, are the primary focus of this promotional tool, one of the most commonly employed for building a corporate brand (Schumann, Hathcote and West, 1991).

Growing competition for employees

Attracting suitable employees has become increasingly important for a company's success. However, this has become increasingly difficult in view of current labour market conditions, characterised by profound changes in both labour market supply and demand (Schramm, 2003). On the supply side, demographic trends, such as low birth rate, will lead to a shrinking workforce in most developed countries. In the US alone, a 15 percent decline is expected in the number of 35- to 45-year-olds (Chambers et al., 1998). On the demand side, more workers, particularly senior executives and high-skilled personnel will be needed. In the US, labour requirements are expected to increase by about 15 percent a year until 2010 (US Bureau of Labor Statistics, 2001). According to this estimate, in 2010 there will be only 17 million new entrants in the US workforce to fill 22 million new jobs (Schramm, 2003).

Other factors are likely to intensify this shortage, such as small and medium-sized companies targeting the same people as large companies, increased job mobility and a growing demand for sophisticated talent (Chambers et al., 1998). By 2020, 60 percent of jobs will require skills that only 20 percent of the workforce currently possesses (Hudson Institute, 2003). And although immigration, importing high-skilled workers from overseas and the fact that many older employees will stay longer in the workforce may reduce the shortage (Schramm, 2003), a 'war for talent' seems imminent.

More intense competition for employees has led to the increased importance of corporate brands. Corporate brands are particularly relevant for prospective employees who prefer to apply for jobs in well-known companies (Sovina and Collins, 2003). Managers of large companies are aware of this and agree that attracting employees is one of the main reasons why companies have to build their corporate brands (Einwiller and Will, 2001, p. 6). In Japan, current and prospective employees are the primary focus of corporate advertising — a main tool for building the corporate brand (Aaker, 1996, p. 113).

2.1.3.2. Company developments

At least three developments within companies have led firms to pay more attention to their corporate brands: increasing mergers and acquisitions activity, growing service offering and broader brand extensions (Meffert and Giloth, 2002). These developments are discussed below.

Stronger dependence on mergers and acquisitions

Since the beginning of the 1980s, companies have strongly relied on mergers and acquisitions (M&A) for expansion and these have increased in number accordingly. The total number of M&A deals worldwide grew an annual 42 percent between 1980 and 1999 (UNCTAD, 2000). According to Thomson Financial Securities Data, the value of M&A worldwide reached a record high of $3.5 trillion in 2000, up from $3.3 trillion in 1999 (Anonymous, 2001). In total, the value of global M&A activity as a share of world GDP rose from 0.3 percent in 1980 to 8 percent in 1999 (UNCTAD, 2000).

Rising M&A activity has added to the importance of corporate brands (Esch et al., 2004). A strong corporate brand serves to show investors the ‘added value’ of corporate headquarters. Parent companies can legitimise themselves only if they create value (Campbell, Goold and Alexander, 1995). Companies merge or acquire others to obtain competitive advantages and spread risk. However, investors can spread risk themselves by acquiring a varied share portfolio. Therefore, when companies merge or acquire others, there is a need to justify larger corporate headquarters. Corporate brands help headquarters to legitimise themselves (Maathuis, 1999). Indeed, corporate brands help to ‘sell’ central functions, to communicate continuity, and to explain the benefits of a merger to employees, investors and business partners (Ind, 1997; Brockdorff and Kernstock, 2001), a necessary task because of mounting shareholder criticism against M&A (Henry, 2002). Interestingly, building the corporate brand has also helped to protect companies from takeovers because a strong corporate brand serves to support stock prices (Gregory, 1991, p. 60).

Increasing service levels

Services are becoming more important and represent a greater share of the product offering for most manufacturers. They are provided as a way of differentiating the offering from that of competitors. Indeed, competition in most developed countries takes place at the ‘product-augmentation’ level, which mainly includes services (Kotler, 2000, p. 395). Offering services to consumers has, in fact, become a necessity because consumer expectations in that regard have risen dramatically in recent years. As a result, the cost related to providing these services has significantly increased.

Furthermore, service companies represent an increasing share of the whole economy. According to the US Bureau of Labor Statistics, in 1994, labour requirements of the US services industry accounted for 79 percent of all jobs and 74 percent of GDP (Henkoff and Sample, 1994). The estimates of this bureau also suggest that all net job creations in 2005 came from services.

Increasing service levels in the economy as a whole, and particularly as part of a firm’s offering, has led to more attention being given to corporate brands (Knox, Maklan and Thompson, 2000; de Chernatony and Segal-Horn, 2003). Strong corporate brands help companies providing services by enhancing consumer experience. Consumers are usually in direct contact with service firms. These companies cannot ‘hide’ behind brand names or retailers; rather they interact with consumers. Therefore, well-understood images are necessary when providing services (Grönroos, 1984, p. 39). Moreover, strong corporate brands are important the greater the information asymmetry between company and consumer (Gürhan-Canli and Batra, 2004). This information asymmetry is likely when the offering consists of services. Indeed, services are high in experience and credence qualities — characteristics of the offering that the buyer cannot evaluate until after purchase or struggles to evaluate even after consumption (Kotler, 2000, p. 436). Therefore, purchasing services represents a greater risk for consumers, a risk which can be reduced by buying well-regarded corporate brands.

Broader brand extensions

As a way of expanding, companies are increasingly extending their brands into new product categories. Since the 1980s, more and more new products have been launched as brand extensions. Between 1977 and 1984, only 40 percent of new products were brand extensions; in 1990, 90 percent of new products were launched under an already known brand name (Aaker and Keller, 1990, p. 27; Rangaswamy, Burke and Oliva, 1993). After almost exhausting 'line' extension opportunities (i.e. extension of a brand within a same product category), companies have started looking at other product categories to extend their brand franchises. So, while brand extensions have been popular since the 1980s — particularly within the same product category as the parent brand — the 1990s saw the emergence of brand extensions across product categories (Aaker, 1996, p. 292). Although many branding experts advise against them (e.g. Ries and Trout, 1981), category extensions are extensively used today. The Crest brand, for example, launched in 1955 as a single-product brand, competes today in a broad range of product classes, including toothbrushes and tooth whitening systems (Procter & Gamble, 2003). Like the Crest brand, many other brands have been extended in dissimilar product categories today. Indeed, one in four of all brand extensions launched in 1990 involved a category extension (Keller, 1998, p. 453).

In the face of a greater number of category extensions provided by companies, corporate brands have proven useful for extending a brand franchise. The more the brand extensions cover dissimilar product categories, the more they must draw on the deeper meaning of the brand (Kapferer, 1997, p. 226 ff.). Higher-level brands, particularly corporate brands, are more likely to convey this deeper meaning. Indeed, if the new product is beyond the scope of a company's current offering, corporate brand extensions generally have more chance of succeeding (Keller and Aaker, 1998). The Virgin brand is a good example here. Virgin, which started in the 1970s as a student magazine and a small mail order record company, is today a highly diversified corporation that extensively uses category extensions as part of its successful growing strategy. Part of its success is attributed to the strong corporate associations linked to the Virgin brand, which have allowed the company to extend the brand to dissimilar product categories such as planes, trains, finance, soft drinks, music, mobile phones, holidays, cars, wines, publishing and bridal wear (Aaker and Joachimsthaler, 2000, p. 118). Therefore, increasing brand extensions into dissimilar product categories has encouraged companies to build their corporate brands.

In short, various trends and developments have contributed to the growing importance of company promotion. The recent rise of corporate brands has been boosted by an increasing general interest in business and more intense competition for consumers, employees and investors, coupled with various changes within companies themselves. To face these challenges, companies are increasingly employing corporate communication to build their corporate brands. These communication activities, particularly corporate advertising and the like, are discussed in detail below.

2.2. Corporate Communication and its Growing Importance

This section presents the relevant background to corporate communication. Firstly, it examines the total communication effort of a company. Communication in an organisational setting is conceptualised and classified into marketing and corporate communication. This section then concentrates on corporate communication, which is defined and classified into public relations and corporate advertising. This section then looks at corporate advertising and ad-like communication activities in greater detail, which usually target a company's ultimate constituencies directly, without mediation of the press or any other third parties. The following major corporate communication tools are briefly examined: advertising, corporate design, events, exhibitions, sponsorship and websites. Lastly, this section assesses the significance of corporate advertising and ad-like communication activities by reviewing the size of the industry serving these promotional efforts, the number of companies using such activities and their share in the corporate communication budget. These corporate communication activities seem to be used extensively, and represent a large percentage of a company's corporate communication budget.

2.2.1. Communication in organisations

2.2.1.1. Definition

Companies exchange information between themselves and their constituencies all the time. Firms constantly communicate with current and prospective consumers, employees, investors, regulators and any other constituencies. Organisational communication is indeed ubiquitous and difficult to conceptualise.

Although communication in an organisational context is not always explicitly defined (van Riel, 1995, p. 25), there is broad consensus, at least among marketing academics, about its meaning (e.g. Berndt, 1995b; Bruhn, 1997; Kotler, 2000; Meffert, 2000). **Communication in organisations** is generally understood to be the goal-oriented transmission of a message aimed at eliciting cognitive, affective or behavioural responses from a target audience. A brief review of this conceptualisation allows for a number of key observations. Communication in organisations (1) implies the transmission of a message, (2) explicitly attempts to elicit some kind of response, (3) involves the existence of an identified target audience, and (4) satisfies organisational goals. Evidently, many organisational activities satisfy these criteria; it thus seems sensible to classify them.

2.2.1.2. Classification according to message presenter

In marketing theory, organisational communication has been classified in many different ways. Steffenhagen (2004), for example, proposes the following dichotomous classifications: personal or impersonal, two-sided or one-sided, physical or textual, conveying pictures, sounds, or both, and addressed at either a defined target audience or an anonymous public. Visibly, many different aspects can be considered, which ultimately depend on the use given to the classification.

In practice, a company's total communication effort has often been classified into marketing and corporate communication. This classification is useful from a branding perspective because it considers whether the message's presenter is either a product brand or a corporate brand. This classification is also useful from a managerial perspective because it reflects common organisational structures, namely the functional and organisational division between marketing and public relations. Functionally, the advertising function has been traditionally separated from the publicity function, at least in medium to large companies. Organisationally, a functional area, usually termed *marketing, marketing communication* or *advertising*, has often been separated from a staff function usually referred to as *public relations, public affairs, communication* or *corporate communication* (van Riel, 1995, p. 2 ff.). Moreover, such a classification is increasingly popular among academics concerned with organisational communication (e.g. van Riel, 1995, 1997; Argenti, 1996, 1998).[4] As such, two forms of organisational communication are discussed in this thesis: marketing communication and corporate communication.

Marketing and corporate communication differ in many ways. A useful way of differentiating both forms of communication is by using Lasswell's formula (Lasswell, 1964). This formula ('who says what in which channel to whom with

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4 Note that managerial communication, a third form of organisational communication proposed by some authors (e.g. van Riel, 1995, p. 8 ff.; Beck, 1999), is not considered here. Managerial communication refers to the speeches, public lectures or interviews given by company managers, particularly by its most senior staff (van Riel, 1995, p. 9). In this thesis, managerial communication is considered as either marketing or corporate communication, according to the message's presenter. For example, when the former Chrysler Corp.'s CEO Lee Iacocca appeared in TV commercials as the face of the Chrysler brand, it was mostly about marketing communication, because the 'presenter' was a product brand. Whereas when Iacocca addressed analysts or employees, it was about corporate communication, because he was representing the organisation behind the offering.

what effect?') has been often used to represent general communication processes (e.g. Argenti and Forman, 2000; Kotler, 2000, p. 551; Meffert, 2000, p. 685). Hence, this formula has been proven to give insight into the nature and the components of both forms of organisational communication. Because of this, the components of this formula may serve to differentiate marketing communication from corporate communication. Table 2.4 presents these features, discussed in detail below.

Table 2.4. Features of marketing and corporate communication according to the Lasswell's formula ('who says what in which channel to whom with what effect?').

Component	Marketing communication	Corporate communication
Presenter	Product brand	Corporate brand or more than one product brand
Message	Product-related	Company-related, including product-related information
Channel	Mass media advertising	Press releases and other PR techniques
Receiver	Consumers	All kind of constituencies, including consumers
Effect	Mostly enhance the product brand image Behavioural effects explicitly pursued	Mostly enhance the corporate image Do not explicitly pursue modify or create behaviour

Marketing communication

Marketing communication represents the largest share of a company's total communication budget (van Riel, 1995, p. 11). It is considered the most flexible element within the marketing mix due to its manageability and the broad range of available tools, including sales promotions, sponsoring, product placement, product publicity and direct marketing (Berndt, 1995b, p. 274; Kotler, 2000, p. 551).[5]

Marketing communication occurs when the message's presenter is a product brand, a single brand referring to a good, a service or a group of these products. Hence, its portrayal of a lower-level brand is that which characterises marketing communication. From an organisational perspective, marketing communication activities are usually planned and implemented by a marketing department,

5 Marketing communication is not the focus of this thesis and is thus not discussed in detail here. For reviews of marketing communication from a branding standpoint, see Aaker (1991, p. 72 ff. and passim; 1996, p. 186 ff.), Aaker and Biel (1993), Keller (1998, p. 218 ff.) and Aaker and Joachimsthaler (2000, p. 197 ff.).

which is supported by external suppliers, such as advertising and marketing services firms. These functions are generally centralised under the responsibility of a marketing or brand manager.

Marketing communication can be further characterised as follows: firstly, marketing communication activities mostly convey product-related messages, often focusing on the attributes and benefits of a product. These messages may also be about a company, as they increasingly are, as illustrated by the examples of Saturn, Ben & Jerry's and The Body Shop mentioned in subsection 2.1.3. In these cases however, companies seek to obtain a marketing advantage rather than communicate the company per se.

Secondly, marketing communication mostly employs mass media advertising to carry the message, particularly for fast-moving consumer goods, although the use of non-traditional media is also possible and indeed increasingly common. These activities reach consumers directly. However, publicity or marketing-oriented public relations are increasingly being used as marketing communication tools to address consumers indirectly (Kotler, 2000, p. 606 f.). Indeed, marketing-oriented public relations may be as effective as mass media advertising in building strong product brands, as argued by many marketing authors, including Ries and Ries (2002), marketing consultants and authors of the best-selling book *The fall of advertising and the rise of PR.*

Thirdly, marketing communication almost exclusively addresses consumers. Consumers are understood to be the end users of the product (individual or business consumers), those involved in the consumption or purchasing decision (e.g. mothers that buy breakfast cereals for their children or doctors that prescribe drugs for their patients), but also wholesalers, distributors and retailers (see also subsection 2.1.1).

Finally, this form of communication explicitly pursues behavioural effects. Thus, marketing communication, apart from increasing brand awareness and enhancing brand image, can and should support sales of particular products by bringing prospects and customers closer to the purchase.

Corporate communication

Corporate communication accounts for a relatively small part of a company's total communication budget. Taking expenditure and personnel into consideration, spending on corporate communication is estimated to account for between one-seventh and one-fifth of marketing communication spending (van Riel, 1995, p. 14; Thomas L. Harris and Impulse Research, 2002). Spending on corporate communication in absolute terms, and as a slice of the total communication budget, is believed to be escalating, as suggested by a number of studies discussed in chapter 1.

The main feature of corporate communication is that not any one specific product brand is the presenter. Rather, the presenter is a corporate brand or, in some rare cases, multiple single product brands owned by a company (see Keller and Aaker, 1998, p. 357). Hence, corporate communication activities usually display a corporate brand, although this is not always the case, as illustrated in Figure 2.2. In this corporate advert, several DaimlerChrysler Corp.'s product brands, and not the DaimlerChrysler brand, are the presenter.

From an organisational perspective, the structure of the corporate communication function strongly depends on company size. In small companies, corporate communication is often carried out by external PR firms, who work as 'outsourced' corporate communication departments. In medium and large companies, corporate communications often emanate from staff functions usually referred to as public relations or corporate communication (Argenti, 1996, p. 73). Other areas however, are also the source of these communications.

When hosted within an organisation, the corporate communication function is seldom centralised. Besides corporate communication departments, corporate communication activities are carried out by many other functional areas such as finance, employee relations and production. These activities have been historically decentralised because much functional expertise is usually required for many of these communicative tasks (van Riel, 1995, p. 12 f.). For example, the possible legal consequences of a sloppily redacted financial report containing forward-looking statements on sales or profits are immense. Because of this, part of the corporate communication function is carried out in functional areas and is likely to remain so in the future (Argenti, 1998, p. 50 ff.). Indeed, returning to the example of financial communication, only 37 percent of corporate communication departments of Fortune 1000 companies have responsibility for investor relations (Corporate Communication Institute, 2002). Thus, contrary to marketing communication, practice in corporate communication is fragmentary. As a result, no one apart from top management holds full responsibility for the whole corporate communication effort of a company (van Riel, 1995, p. 8).

Corporate communication can be further characterised as follows: firstly, corporate communication conveys company-related messages such as financial information, employee information, social responsibility and corporate governance. Of course, it also includes product-related information.

Secondly, this form of communication usually uses PR techniques as the medium for carrying the message. According to Grunig and Hunt (1984), the most common PR techniques include press releases, videotapes, brochures, fact sheets and direct mail, newsletters, newspapers, magazines, photographs and illustrations, slides and multimedia presentations, films, exhibits, special events, financial reports advertising and lobbying. Evidently, most of these means of information delivery have been directed at journalists and other third parties and not towards a company's consumers or the general public. In other words, corporate communication has traditionally been mostly of an indirect nature, that is, it has reached ultimate constituencies through third parties. Although some communication options such as newsletters and corporate mass media advertising have also been used to address consumers and other ultimate constituencies, they mostly served only as a complement to traditional PR techniques. However, corporate communication activities other than PR techniques are increasingly important for a company's corporate communication effort, as illustrated in chapter 1 and further discussed in subsection 2.2.4.

Thirdly, corporate communication addresses all kinds of constituencies, including consumers (van Riel, 1995, p. 12 f.). Grunig and Hunt (1984), for example, propose that the most frequent constituencies addressed by corporate communication programmes are journalists, community members, employees, voters and governments, consumerists, environmentalists, minorities, students, teachers, the financial community, consumers and investors. Again, most of these target audiences have been intermediate constituencies and not ultimate constituencies of a corporation.

Finally, enhancing a company's image in constituencies' minds is almost the sole objective of corporate communication. Thus, contrary to marketing communication, corporate communication does not explicitly aim to modify or create behaviour (van Riel, 1995, p. 12 f.). Nevertheless, this merely informative function of corporate communication is changing, with companies requiring direct support from corporate communication for achieving marketing and company goals (Keller, 2000; Kotler, 2000, p. 606). Corporate communication is discussed in detail below.

Figure 2.2. Corporate communication indirectly promoting a corporate brand. Corporate advert where the presenter is not the DaimlerChrysler corporate brand but the product brands Dodge, Chrysler, and Jeep. Courtesy of DaimlerChrysler Corp.

2.2.2. Corporate communication

2.2.2.1. Definition

Defining corporate communication is a challenging task.[6] The new and interdisciplinary nature of the field has puzzled academics and practitioners alike. For example, Kotler (2000, p. 606) defines corporate communication simply as 'promoting understanding of the organization through internal and external communications.' And van Riel (1995, p. 12), one of the leading academics in the corporate communication field, vaguely defines corporate communication as 'all forms of communication used by the organization, other than marketing communication'. Neither practitioner agrees on the meaning of the term, maybe because of the rising popularity of the subject in business publications since the mid-1990s and the many functional areas involved in the corporate communication function.

The analysis carried out in subsection 2.2.1 using Lasswell's formula provided some insight into the corporate communication function. This analysis characterised corporate communication as having the corporate brand (or more than one single product brand) as the presenter. The discussion also highlighted that the message of corporate communication is about the company and its products, and that these messages are mostly carried in press releases and other PR media. In addition, this analysis described corporate communication as addressing all kinds of constituencies, including consumers, with the goal of enhancing the corporate image but not explicitly modifying or creating constituency behaviour.

By thoroughly dissecting the corporate communication process, this analysis also allows for a conceptualisation of the term. **Corporate communication** can be defined as the goal-oriented transmission of a message identified with the corporate brand or with more than one single product brand, aimed at eliciting responses from a company's constituencies.

It is worth noting that, despite explicitly specifying companies in this definition, corporate communication concerns all kinds of organisations. Etymologically, as mentioned in subsection 2.1.2, *corporate* does not refer to a company or corporation but comes from the Latin *corpus* meaning 'body'. Corporate communication is thus not restricted to companies alone but also applies to non-for-profit organi-

6 Note the difference between corporate communication and corporate communication*s*. Without an *s* it denotes the corporate communication function, a part of a company's total communication effort; with an *s* it implies means of information delivery (i.e. channels or systems of communication) resulting from the corporate communication function. For another view on this issue, see van Riel (1995, p. 26).

sations and any other kind of organised group of individuals (van Riel, 1995, p. 26). In the rest of this thesis however, the focus will be on for-profit organisations, although much of the forthcoming discussion applies to other types of organisations as well.

This conceptualisation of corporate communication requires two additional remarks. Firstly, the term *corporate communication* has several meanings and is not unequivocally used in research literature (Will, 2001). This term often designates the whole communication effort of a company, including marketing communication (e.g. van Riel, 1995). Secondly, corporate communication has received other names in academic literature. Corporate communication is sometimes referred to as *corporate advertising* (e.g. Garbett, 1988), *organisational communication* (e.g. van Riel, 1995) and *public relations* (e.g. Grunig, 1992). Nevertheless, the term *corporate communication* is preferred by some communication academics (e.g. Argenti, 1996, 1998) and most marketing academics (e.g. Berndt, 1995b; Kotler, 2000). Besides, this denomination is commonly found in companies' organisation charts and is frequently used by communication practitioners today. Therefore, the term *corporate communication* will be used here to designate this form of communication.

2.2.2.2. Classification into public relations and corporate advertising

It is possible to distinguish two main forms of corporate communication: public relations and corporate advertising (Berndt, 1995b, p. 280 ff.). These forms of communication differ in the immediacy of the information exchange between a company and its main constituencies (Will, 2001; see also Esch, Hardiman and Mundt, 2004, p. 220). Public relations reaches a company's main constituencies *indirectly*, by means of the press, analysts or regulators, whereas corporate advertising reaches these ultimate constituencies *directly,* without the participation of any third parties.

This classification implies that journalists, financial analysts and governmental officials are not 'main' or 'ultimate' constituencies for a company. Indeed, despite their significance for achieving a company's goals, these third parties are seldom affected by the consequences of a company's actions (Grunig and Hunt, 1984, p. 223). Among others, exceptions include journalists for media conglomerates, who are considered actual or prospective employees, and regulators for non-governmental-organisations (NGOs), who are considered 'consumers' of the lobby efforts of these organisations. For these organisations, journalists and regulators are their main constituencies respectively. For most companies however, consumers, employees, investors and community members are their main constituencies.

Some other points are worth noting in this classification. Firstly, this classification is useful from an organisational perspective because it reflects the two traditional departments of many corporate communication areas: the corporate marketing department, responsible for corporate advertising, and the press relations department, responsible for public relations.

Secondly, this classification is consistent with notions of system theory applied to communication, which formally represents communication structures and processes as single- or multi-staged schemas (Bruhn, 1997, p. 18 ff.; Meffert, 2000, p. 686 ff.). Single-staged communication systems reflect an immediate relationship between sender and receiver, whereas multi-staged communication systems represent a mediate relationship between sender and receiver. In the latter, additional elements in the communication system — sometimes called 'inductors', that is, a part of a system that acts upon another — mediate the relationship between sender and receiver, between a company and its main constituencies.

Thirdly, this classification reflects the traditional division between paid and non-paid forms of communication, with most corporate advertising being paid for and most public relations not requiring compensation from a company. The most common paid form of communication is without doubt mass media advertising, which refers to the paid promotion of goods, services, companies and ideas by an identified sponsor.[7] On the other hand, the most common form of promotion and information not directly paid for is publicity, defined as 'the nonpaid-for communication of information about the company or product, generally in some media form' (AMA, 1995). It should be noted that nonpaid-for communication has associated costs. The company does not pay for the space or time obtained in the media, but it pays for staff to prepare and disseminate the material (Kotler, 2000, p. 606). Both forms of corporate communication are further characterised below.

Public relations

Public relations reaches a company's ultimate constituencies by means of the press, financial analysts, congressional and political representatives, opinion leaders or any other third parties. The relationship between a company and its ul-

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7 Interestingly, the compensation for promotion is not necessarily monetary. Bartering, a common business practice in some industries, consists of trading time or space in advertising media for merchandise or other nonmonetary forms of compensation (AMA, 1995). In these situations, there is a direct exchange of goods with no money involved (Kotler, 2000, p. 471).

timate constituencies is thus mediate and the communication system that describes this process consists of multiple stages.

Public relations addresses intermediate constituencies. This form of communication does not target ultimate constituencies but targets the press or other third parties. These target audiences are usually easily defined and can be easily contacted. For example, journalists can be reached effortlessly by addressing the media companies that employ them or the associations that represent them, such as the Deutscher Journalisten-Verband in Germany and the Newspaper Guild in North America. The same applies to financial analysts, who are employed by only a handful of banks and research firms, as well as governmental officials, whose appointments are usually officially communicated. Even opinion leaders are readily accessible as they are often included in mailing lists and databases. Clearly then, target audiences of public relations can usually be reached quickly and effectively.

Public relations reaches ultimate constituencies with a derivative message. The message these constituencies receive is second hand because its content depends, to a great extent, on the inductors who mediate the flow of information between a company and its ultimate constituencies. The message received may be altered because inductors are responsible for its interpretation. Worse still, the message may not be received at all if inductors do not pass it on to the ultimate constituencies. This implies that the message received by ultimate constituencies is only partially controlled by a company. In fact, there are limitations to the message content because it needs to be tailored to pass through inductors, acting as 'gatekeepers' in the communication process to the ultimate audiences (Grunig and Hunt, 1984, p. 223 and passim). Companies thus have a harder time getting their message through to ultimate constituencies by means of public relations. As a result, they cannot fully determine the ultimate effect of the message and, consequently, a company's communication objectives sometimes have to be compromised.

Corporate advertising

Corporate advertising reaches a company's main constituencies directly, without the intermediation of any third parties. The information exchange between the company and its ultimate constituencies is thus immediate, and the communication system representing this relationship is single-staged.

Corporate advertising usually addresses ultimate constituencies. Target audiences of corporate advertising are thus a company's main constituencies, which, contrary to public relations' target audiences, are not easy to pinpoint. Indeed, a company's main constituencies often consist of broad and diverse groups of individuals with very little in common. Consumers, for example, are difficult to identify, particularly in packaged-goods markets, and companies are often only able to profile the average consumer through market research. Investors, particularly of large publicly-owned companies, may exceed well over the thousands and in many countries are not individually registered. The 'general' public is even harder to delineate. Furthermore, almost anybody can be considered a prospective consumer, employee or investor. The delineation is made more challenging because these constituencies often overlap. Many employees own shares of their companies or purchase their employer's products. At carmaker DaimlerChrysler, for example, at least one in four of its employees in Germany own company shares and at least one in three of them drive a company-made car.

Corporate advertising reaches ultimate constituencies with a message in its original form. Of course, 'noise' in the communication system may affect the received message. Nevertheless, taking noise into consideration, the message received is unmodified. This implies that the message ultimate constituencies receive is company-controlled and there are thus no limitations to the message content. Because of this, corporate advertising and ad-like communication activities are called 'controlled media' (Grunig and Hunt, 1984, p. 447). As a result, firms can better determine the message, and thereby its effect on ultimate constituencies. Hence, communication objectives do not need to be compromised: companies can say what they want, how they want, when they want, as often as they want, as long as budget constraints permit. Indeed, corporate advertising and ad-like communication activities have been increasingly important for achieving communication objectives and for building a corporate brand, as argued in subsection 4.1.3.

It is worth noting that the differences between corporate advertising and public relations are sometimes difficult to ascertain. This ambiguity applies to every aspect used above to distinguish between these forms of corporate communication, whether it is the existence or not of inductors or the controllability or not of the transmitted message. It could be argued that most corporate advertising involves some kind of inductors in the information exchange between a company and its ultimate constituencies: the mass medium might be thought of as an inductor. Moreover, corporate advertising may reach ultimate constituencies but also intermediate constituencies simultaneously. Most corporate advertising is catered towards ultimate constituencies but also attempts to shape the perception that journalists and governmental regulators have of the company. Regarding these communication activities, it is unclear whether they are about corporate advertising or public relations.

It could also be argued that a message rarely reaches its ultimate addressees unmodified. For example, an advertising message may be affected by the medium where the advert is placed, such as the transfer of prestige from business magazines like *Fortune* or *Forbes* on the companies advertised in their pages (Belch and Belch, 2004, p. 400). It could also be argued that press coverage might be controlled to a certain extent. Companies may overtly pay or threaten to place or withhold advertising in a medium in exchange for favoured treatment. With this misconduct a company could influence news coverage and control a newspaper or magazine's editorial content, although this is obviously unprincipled and prohibited by journalists' codes of professional ethics (see e.g. Society of Professional Journalists, 1996).

Despite these many borderline examples, where it is not perfectly clear whether a communication activity is part of the corporate advertising or of the public relations effort, a communication activity should be considered corporate advertising first and foremost if its message is controllable. This implies that message controllability is the main criterion for distinguishing between these two major forms of corporate communication. Because of the managerial perspective of this thesis, which focuses on communication as a brand-building tool, the degree of controllability of the message content is the most pre-eminent feature of corporate advertising and ad-like communication activities.[8] Hence, message controllability may shed light on whether a communication activity should be considered influenceable or not.

A message is deemed controllable if a company can initiate or terminate the communication about the brand. That is, a message is considered controllable, not so much if the company completely controls its content, but if at least the company can initiate or terminate the information exchange. Hence, whether there is a message at all is perhaps the most essential feature of message controllability. In most cases, press coverage about the corporate brand can be neither initiated nor terminated by the portrayed company. This means that it is not in the company's hands to decide whether an article about the company or its interests is published or not or whether a financial report on the company or its industry is issued or not. Going one step further, the affected company cannot decide

8 See section 4.1 for a characterisation of the managerial perspective on corporate brands and corporate communication.

which journalists cover the company's industry or which legislators or regulators police the company's interests.

On the contrary, corporate advertising and the like can, as a rule, be initiated and terminated by a company. The company can decide where to put its advertising dollars. Moreover, managers can withhold their advertising if they think that these communication activities do not promote the company's well-being. For example, an advertiser may refuse to place adverts if the editorial content of the advertised medium does not fit the message the advertiser wishes to communicate. The well-known Coca-Cola Co.'s ongoing policy of not advertising during news coverage is a good example (see Rossiter and Percy, 1997, p. 482).

In short, corporate advertising is easily manageable because the messages transmitted to ultimate constituencies in this way are under a company's direct influence. On the other hand, public relations are not always under the influence of a company because inductors filter the message that ultimate constituencies receive. Regardless of the degree of influence a company may have over the communication content, a company will always be able to initiate and terminate corporate advertising and ad-like communication activities, which ultimately makes a message controllable.

2.2.3. Corporate advertising and ad-like communication activities

A communication activity is any company-initiated form of communication employed to elicit desired responses from target audiences (see Berndt, 1995b, p. 15; Bruhn, 1997, p. 2; Kotler, 2000, p. 15; Keller, 2001). Corporate communication activities include disseminating press releases to news agencies, producing promotional videos about a company, preparing fact sheets for analysts, creating recruitment brochures, issuing employee newsletters, participating at trade shows, sponsoring local events or lobbying parliament representatives.

Considering this widely accepted definition, **corporate advertising and ad-like communication activities** can be defined as those company-initiated forms of communication employed to elicit desired responses from ultimate constituencies, directly addressed towards them. These activities thus target ultimate constituencies, not third parties. Interestingly, a communication activity can sometimes be considered a part of the corporate advertising effort and sometimes considered a PR activity, depending on the constituency it reaches. In other words, it is not only the nature of a communication activity that makes it corporate advertising or public relations, but also the nature of the target audience whom it reaches. Organising an event, for example, is an *ad-like* communication activity when its participants are major shareholders, but it is a *PR* activity when assisted by financial journalists.

Corporate advertising and ad-like communication activities mostly employ a medium to carry the message to their target audiences. As stated in the last subsection, they target numerous constituencies, which are inadequately reached by face-to-face communication.

Corporate communication activities can be conveniently grouped according to their similarities. Many characteristics serve to group them. It is possible, for example, to consider the kind of information that communication activities convey and thereby classify them according to financial, product and technological communication activities. It is also possible to consider the constituency that these activities address and thereby group them according to employee relations, investor relations and community relations.

In practice, various characteristics are often simultaneously considered for grouping corporate communication activities, resulting in the formation of more eclectic groups. This is particularly evidenced by current organisation charts. Most companies structure their corporate communication departments — and thereby implicitly group corporate communication activities — considering various criteria simultaneously, including the constituencies addressed, management processes, communication techniques and geographic regions (Grunig and Hunt, 1984, p. 101 ff.; see also van Riel, 1995, p. 143 ff.; Argenti, 1998, p. 52 ff.). It is thus evident that classifications are endless and that presenter, message, channel, receiver, effect or any combination of these aspects may serve to group communication activities.

Consistent with most marketing academics, communication activities are grouped here according to the means of brand communication they use (e.g. Berndt, 1995b; Rossiter and Percy, 1997; Kotler, 2000; Keller, 2001; see also Grunig and Hunt, 1984). Similar to these marketing authors, means are understood here in a very broad sense and extend beyond conventional advertising media and include ad-like means such as events, company-owned properties, sponsored properties, exhibition booths, electronic media and any other channels or systems of brand communication. These groups of similar communication activities are referred to as communication tools. A **corporate communication tool** can be defined as a group of communication activities that employs the same means of corporate brand communication. Most common corporate communication tools include

- mass media advertising
- corporate design
- events
- exhibitions
- sponsorship
- websites

all of which are conceptualised below.[9]

Corporate mass media advertising

Advertising refers to 'the placement of announcements and persuasive messages in time or space purchased in any of the mass media' (AMA, 1995). It is thus paid communication in a mass medium, including newspapers, magazines, direct mail advertising, directories, radio, broadcast and cable television and outdoor and environmental media. Corporate advertising refers to media space or time bought for the benefit of a company, rather than for its products (Garbett, 1982, p. 100; Schumann, Hathcote and West, 1991).

Corporate advertising is different from advocacy advertising. The former serves to promote the company; the latter is intended to communicate a viewpoint about a controversial topic relating to the social, political or economic environment (AMA, 1995). With the latter, the company thus promotes an issue or cause that only indirectly affects its operations.

Corporate design

Corporate design refers to the use of consistent visual elements in company-owned properties (Olins, 1990).[10] Visual elements include all the company's visual corporate brand elements: company name, logotype, slogan, colours, typography, layout grid, style for illustration and photography and architectural design (Schneider, 1991, p. 82). Product design however, is not considered a corporate

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9 It is assumed that these communication tools are the most common because they are employed by many companies, represent a significant source of revenue for the advertising and marketing services industry and account for a large share in most corporate communication budgets. Moreover, they are mainly used to reach a company's ultimate constituencies. See subsection 2.2.4 for a survey on the significance of these major corporate communication tools.

10 Corporate design is sometimes considered a different brand-building tool than corporate communication (e.g. Schneider, 1991, p. 12; Berndt, 1995b, p. 278). According to this view, corporate design, corporate communication and corporate behaviour are, together with the corporate mission, the determinants of a company's corporate identity. In this thesis, however, corporate design is an ad-like communication activity, which is part of a company's corporate communication effort.

brand element (see Schneider, 1991, p. 91), despite its demonstrated effect on the image of automotive companies, for example (Kang, 1995). These corporate brand elements are employed on company-owned properties, including buildings (head offices and distribution outlets), signage, company reports, stationery, uniforms and vehicles.

Corporate design is different from branding. Corporate branding is defined as the conception of all visual elements that identify and differentiate a company (Schneider, 1991, p. 82; see also Langner, 2003, p. 4 ff.). In this thesis, branding is considered an episodic task that has been completed; corporate brand elements are thereby considered given. Indeed, decisions regarding the company name or logotype are made at the highest level, mostly directly by the CEO (Margulies, 1977; Fombrun, 1996, p. 273). Corporate design is thus not about the choice of the initial corporate brand elements, but about their use on company-owned properties.

Corporate design is also different from sponsorship. The former displays corporate brand elements on company-owned properties, the latter displays these elements on sponsored properties that do not belong to the company.

Corporate events

Events refer to the production of interactive and experiential activities initiated by the company (Nufer, 2002, p. 19). An event thus consists of a special or unique activity produced or at least commissioned by the company that requires the participation of its attendees and conveys interactive and multi-modality experiential messages (Nufer, 2002, p. 16 ff.). A corporate event is an experiential activity staged by the company for the promotion of the company as a whole, ignoring or downplaying individual products.

Corporate events are distinct from sponsoring activities and exhibitions (Nufer, 2002, p. 27 ff.; Belch and Belch, 2004, p. 543). Sponsoring activities, despite having the corporate brand as presenter, are not organised by the company. Moreover, sponsoring activities are usually neither interactive nor experiential. Events are also distinct from exhibitions, the latter not being organised by the company.

Corporate exhibitions

Exhibitions refer to 'the participation in a gathering at which manufacturers, suppliers, and distributors in a particular industry, or related industries, display this products and provide information for potential buyers' (AMA, 1995). They are organised for a limited period of time at a defined location. Corporate exhibitions are employed for the benefit of a company rather than specific products (Gopalakrishna and Lilien, 1995). Exhibitions differ from events, as discussed above.

Corporate sponsorship

Sponsorship refers to the cooperation between a sponsor and a sponsored property: while the sponsor gives money, goods or services to the sponsored property, the latter agrees to a return, which generally consists of exposure (Berndt, 1995b, p. 297; Rossiter and Percy, 1997, p. 339). Corporate sponsorship refers to exposure obtained for the benefit of a company rather than its products (Javalgi et al., 1994).

Sponsorship is distinct from philanthropy or patronage. Philanthropy is an altruistic activity, where no return is required from the sponsored (Collins, 1993). Sponsorship also differs from events and corporate design, as discussed above.

Corporate websites

Websites, as a communication tool, refer to the creation of an electronic presence on the internet (Kotler, 2000, p. 666). Websites take two basic forms: corporate and marketing websites (Levin, 1996; Kotler, 2000, p. 666 f.). A corporate website provides information about a company's history, mission and philosophy, products and location. It often includes current events, financial information, as well as job opportunities. A corporate website is thus an interactive communication initiated by the constituency, established for the promotion of the company as a whole rather than its divisions or products. In contrast, marketing websites consist of catalogues, shopping tips, and promotional features such as coupons, sales events or contests. Unlike corporate websites, marketing websites refer to an interactive communication initiated by the company.

2.2.4. The growth of corporate advertising and ad-like communication activities

Interest in corporate advertising and ad-like communication activities is extensive and growing rapidly. Indicative of this development is the increased priority given to this form of communication, as discussed in chapter 1. This is particularly evident in the popularity of major corporate communication tools such as corporate mass media advertising, corporate design, corporate events, corporate exhibitions, corporate sponsorship and corporate websites.[11] The importance of these tools, and thereby of corporate advertising in general, is reflected in the size of the industries serving these promotional efforts, the number of companies employing such activities and their share in corporate communication budgets.[12]

Corporate mass media advertising constitutes the largest single corporate communication expenditure for the increasing number of companies using it. It also represents a significant business for the advertising industry, accounting for roughly $11 billion in 2004, in North America alone (Belch and Belch, 2004).

Use of corporate mass media advertising is widespread, particularly among service companies and large manufacturers (Schumann, Hathcote and West, 1991). According to a triennial survey conducted by the Association of National Advertisers between 1995 and 1997, corporate advertising was employed by two-thirds of large US advertisers (Cardona, 1998).

Companies spend vast sums of money on corporate mass media advertising, more than on any other corporate communication tool. Between 1995 and 1997, large US advertisers spent, on average, over $16 million annually on this form of advertising (Cardona, 1998). In 1998, Fortune 500 companies spent almost 30 percent of their corporate communication budget on mass media advertising (Thomas L. Harris and Impulse Research, 1999).

Corporate mass media advertising was the fastest growing form of advertising during the 1980s and 1990s (Argenti, 1998, p. 58). Comparing the periods 1989–1991 and 1995–1997, the usage of corporate mass media advertising grew 15 percent among large US advertisers and the amount spent on corporate advertising also escalated (Cardona, 1998). Large US advertisers raised their spending by roughly 5 percent a year between 1992 and 1997 (Cardona, 1998). Apart from during economic downturns, spending on corporate advertising is likely to continue to increase (Schumann, Hathcote and West, 1991).

Corporate design is an important form of corporate communication used by nearly all companies today. It also represents an immense market for the market-

11 It is assumed that most of these activities, both in terms of usage and the money spent on them, are addressed to a company's ultimate constituencies. This has partly been proven by surveys among communication managers responsible for these activities, who often mention consumers, investors, employees, and community members as the main addressees of these promotional efforts.

12 Unfortunately, aggregate statistics of company spending on corporate communication and revenues of the advertising and marketing services industry related to corporate communication are not available. In fact, many companies do not even track their corporate communication spending (van Riel, 1995, p. 14). The forthcoming discussion does its best to estimate these figures.

ing services industry. In the US, new companies alone spent an estimated $120 million in 1994 on creating and implementing new company logotypes (Anson, 1998). In 2001, companies generated almost €550 million worldwide in revenues for the world's 10 largest corporate identity consultancies in corporate design programmes alone (Horizont, 2002). Assuming that leading consulting firms handle between only two-fifths to a half of dollar volume of the identity and design business (Spaeth, 2003a), companies may have spent approximately $11 billion in 2001 on corporate design programmes and their implementation (Williams, 1998).

Corporate design is universally employed. All companies have a company name, a logotype and other visual elements that are concertedly and uniformly used in company-owned properties, from facilities to stationery to company literature, such as brochures and annual reports. Moreover, most companies renew their visual identification from time to time. In the 1990s, branding programmes were adopted by 55 percent of large UK companies (Williams, 1998). According to brand consultancy Enterprise IG, in the year 2000, over 2,000 companies changed their names due to mergers and acquisitions alone (Langner and Esch, 2004).

Companies clearly spend large amounts of money on corporate design programmes and their implementation, although the exact amount is difficult, if not impossible, to estimate. Firms purposely hide true costs or in fact rarely track them (Spaeth, 2003a), although some anecdotic evidence is available. In 1997, beverage giants Guinness and Grand Metropolitan spent £250,000 on their new corporate name Diageo and British Airways reportedly spent £60 million on a branding and corporate design programme (Williams, 1998). However, companies often inflate these figures by including all implementation costs to make the story sound more impressive (Spaeth, 2003a).

Corporate design is becoming an increasingly important communication tool and spending on corporate design programmes is increasing. This is particularly evident in the rising revenues of corporate identity consultancies. Worldwide, these revenues grew significantly in the 1990s — as much as 49 percent between 1999 and 2000 — before turning sharply negative in 2000 (Horizont, 2002; Spaeth, 2003a). Since 2003 however, the industry has been picking up (Edelmann, 2004), propelled by the recovery of total communication spending and the increase of M&A activity (Anonymous, 2003c; ZenithOptimedia, 2003), two indicators that are strongly correlated with company spending on corporate design.

Corporate events, besides being commonplace today, are growing in number and in terms of spending. Vast numbers of events are organised both in Europe and in North America. In Germany, about 300,000 events are organised annually; in North America, over one million meetings and events are held each year (Nufer, 2002; MPI Foundation and George P. Johnson, 2003). However, these figures may be understated as companies organise most of their events in-house for which the spending is difficult to estimate.

Common examples of corporate events include annual general meetings, investor meetings, motivational events, incentive trips, congresses and seminars, sport and cultural events, anniversary events, ceremonies, kick-off meetings and road shows (Nufer, 2002, p. 36 ff.).

In the US, events account for over 7 percent of the budget of corporate communication departments (Thomas L. Harris and Impulse Research, 2002). Total spending on corporate events is actually likely to be higher given that functional areas such as employee relations, finance and production also organise many events. This high level of spending seems to pay off. Indeed, almost 40 percent of companies believe that events deliver the best return on investment compared with other elements of the communication mix such as broadcast advertising, internet advertising and direct-response marketing (Furness, 2005).

Events are becoming an increasingly important component in the corporate communication mix. Companies are supporting more events of every sort and are increasingly staging their own events instead of sponsoring third-party activities. Indeed, companies produce an increasing number of proprietary events and are spending less on industry trade shows (Kovaleski, 2004). As a result, the event industry is widely believed to have grown nine-fold in the 1990s (Nufer, 2002). The increasing amount of money that companies are spending on corporate events is most evident in large events such as annual shareholder meetings, which are more lavishly staged and include the cost of flat screens, flowers and other amenities.

Exhibitions are also a common corporate communication tool, representing an important part of the total communication budget for many companies, particularly in business-to-business sectors. Exhibitions represent a multibillion-dollar industry that, in 1997, exceeded the $12 billion mark in the US (Anonymous, 1999).

Thousands of exhibitions are held annually and most of them serve to promote the company. In 1999, 85 percent of exhibitions held in the US were in business-to-business sectors (CEIR, 2001). These sectors, as discussed in subsection 2.1.3, base their communication programmes on the corporate brand. Exhibitions are thus employed mostly as a corporate communication tool.

Exhibitions are one of the most significant line items in the communication budget for many companies both in the United States and Europe. In 1997, US firms with sales over $50 million spent over 17 percent of their business marketing communication budget on trade shows, making them the third-largest line item after advertising and sales promotion (Anonymous, 1999). European companies are believed to spend even more (Sandler, 1994).

Exhibitions are becoming increasingly important. In North America, the number of large exhibitions grew by more than 7 percent a year, from 2,733 to 7,933 between 1986 and 1999 (CEIR, 2002). And although the economic recession, the technology slump and terrorist attacks hit the trade show industry hard in the early 2000s, exhibitions are growing again as shown by both the increasing number of trade and consumer shows held and increasing attendance in North America (Tradeshow Week, 2004). Interestingly, consumer shows are increasingly being used for promoting corporate brands. DaimlerChrysler, for example, designated 5 percent of more than 4,000 sq metres of its exhibition surface to corporate presentation at the 2002 Geneva International Motor Show.

For many companies, sponsorship is one of the most significant components of the corporate communication budget — and spending on this tool is growing fast. In 2004, spending on sponsorship rights fees was an estimated $30 billion worldwide (Anonymous, 2005) and most of this money may have been spent on promoting corporate brands.

Sponsorship should be seen mostly as a form of corporate communication. Promoting the corporate brand via sponsorship is the goal of most business-to-business companies. Moreover, the largest sponsorship spenders are service-related businesses such as telecommunications, banks and credit cards (Anonymous, 2005), willing to promote their corporate brands. And corporate promotion also seems to be the communication goal of many consumer product companies when sponsoring third-party activities. Indeed, according to a managers' survey of sponsoring events for large US consumer product companies, corporate communication objectives were pursued by 54 percent of them, whereas marketing communication goals was the objective of 41 percent (Javalgi et al., 1994).

Companies spend considerable sums of money on corporate sponsorship. In 1998, Fortune 500 companies spent 34 percent of their corporate communication budget on sponsorship, mostly on foundations funding and social responsibility projects (Thomas L. Harris and Impulse Research, 1999). After mass media advertising, sponsorship is indeed the second-largest item in the corporate communication budget for many large companies.

Corporate sponsorship is becoming increasingly important. Sponsorship is indeed the fastest growing form of promotion in North America (A. T. Kearney, 2003). In recent years, the industry grew about an annual 9 percent in North America, and probably at a faster pace in the rest of the world (IEG, 2003). According to the World Sponsorship Monitor, an ongoing survey of major sponsoring deals worldwide, in 2004 alone, there were almost 1,400 reported sponsoring agreements, 6 percent more than in 2002 and 47 percent more than in 2000 (Anonymous, 2005). And sponsorship as a corporate communication tool is likely to expand more rapidly in future. Indeed, the two segments of the sponsorship industry which have seen the fastest growth in recent years have been philanthropy and the arts (IEG, 2002), two segments that usually serve to enhance a corporate brand.

Corporate websites have been rapidly adopted as a communication tool, with most companies spending increasing sums of money on creating their internet presence. This presence is first and foremost a brand-building effort, despite the many other functions it fulfils. In the US and the rest of the world, company websites attempt to enhance the company image rather than generate revenues, control costs, communicate with constituencies or disclosure information (Liu and Arnett, 1997; Sullivan, 1999).

And company websites are seen more as a corporate communication tool than a marketing tool (Levin, 1996). Indeed, websites of Fortune 500 manufacturers focus much more on company-related information than on products or product brands (Perry and Bodkin, 2002).

The use of corporate websites is extensive today. In fact, it is hard to imagine a company without an online presence; back in 1995, however, only 34 percent of Fortune 500 companies were present on the internet (Anonymous, 1997). Therefore, companies may have adopted corporate websites more rapidly than any other corporate promotion tool. Moreover, companies renew their websites frequently. In 2003 alone, 44 of the UK's 100 largest companies re-designed their websites (Interactive Bureau, 2004).

Companies devote substantial sums of money to establishing and updating their internet presence. In the IT budget of US companies, internet-related projects represented over 23 percent in 2001 (Upton, 2001). The total amount however is, difficult to estimate because spending on websites is often spread across different areas such as IT, marketing, corporate communication and logistics.

Websites are becoming a prime corporate communication tool. Companies use them because more and more of their constituencies are going online for sourcing information, including an increasing number of investors (Davis, Clements and Keuer, 2003), prospective employees (Hanrick Associates, 1999), consumers (J. D. Power and Associates, 2001) and journalists (Euro RSCG Middleberg, 2002). As a result, a company's use of the website as a corporate communication tool is growing rapidly (Hill and White, 2000). Companies convey more information, provide more online services, and include more features such as personalisation and interactive content, resulting in increasing company spending on websites (Upton, 2001).

2.3. Summary

The business environment has become more challenging due to a number of recent market and company developments. As a result, corporate brands — which were previously mostly relevant in the service, business-to-business, high technology, and durable goods sectors — have become increasingly important to all companies, in all kinds of industries. A corporate brand is a name, term, sign, symbol or design or a combination of these brand elements intended to identify and differentiate the company behind the entire product offering in the minds of company's constituencies. Strong corporate brands help companies differentiate their products, increase communication effectiveness and reassure the community members who stand behind the products. Corporate brands are also useful for luring retail investors, attracting new employees and coping with company developments, such as increasing M&A activity, growing service offering and broader brand extensions.

The rise of corporate brands has raised the profile of the communication activities that build them, particularly those identified with the corporate brand or not any one specific product brand. In fact, companies increasingly turn to corporate advertising and ad-like communication activities for building their corporate brands. These communication activities refer to those company-initiated forms of corporate communication used to address a company's ultimate constituencies without intermediaries. Corporate advertising and the like are easily manageable: they usually reach a company's main constituencies directly, with no participation of the press or any other third parties. As a result, these controlled media are an important form of corporate promotion, which is becoming ever more significant, as shown by (1) its growing slice in the revenues of the advertising and marketing services industry, (2) the increasing number of companies employing such a form of communication, and (3) its rising share in the corporate communication budget.

Despite the rise of corporate brands and corporate communication, as well as related research activity in both fields, it is not yet clearly understood how forms of corporate communication other than public relations relates to corporate brands. A theoretical study, explaining how corporate communication works, is needed to advance the theory of using corporate advertising and ad-like communication activities in corporate brand management.

Chapter 3: Behavioural Perspective

This chapter develops a behavioural framework to explain how corporate communication works. The framework considers corporate brands and corporate communication from a constituency's point of view. More specifically, it explains constituency's psychological and behavioural responses to corporate communication. The analysis is thus carried out from a behavioural perspective. According to a neo-behavioural paradigm to communication, corporate communication stimuli affect corporate brand knowledge in constituencies' minds, these corporate communication effects being moderated by both constituency-related factors as well as stimulus-related factors. In turn, corporate brand knowledge may affect constituency behaviour.

This chapter is made up of three sections. The first section presents the relevant background for explaining how corporate communication works. Firstly, it introduces a behavioural approach to communication, which considers human actions as opposed to economic variables for explaining communication outcomes. A behavioural and a neo-behavioural paradigm for understanding human actions is then presented and critically assessed. Finally, based on a neo-behavioural paradigm to communication, different communication outcomes are explored.

Following a stimulus-organism-response (S-O-R) paradigm, the second section develops a behavioural framework to explain how corporate communication works. Firstly, corporate communication stimuli are explored. Secondly, based on an associative network memory model, corporate communication effects are meaningfully represented through a psychological construct. Thirdly, studies that show the possible positive behavioural outcomes to corporate communication are assessed. Lastly, moderators of corporate communication effects are identified and reviewed.

The third section assesses the relative merits of the proposed framework in explaining how corporate communication creates constituency's psychological and behavioural responses. The framework is compared with previously developed similar psychological frameworks and, lastly, the significance of the proposed framework for explaining corporate communication effects is critically evaluated.

3.1. Behavioural Foundations

3.1.1. Behavioural approach

Research of communication phenomena in organisations is a relatively new field of inquiry which only began to be systematically scrutinised at the end of World War II (Bruhn, 1997, p. 14). Before then, most knowledge on organisational communication was based on the intuition and experience of publicists, marketers, managers and other individuals responsible for informing and persuading a company's constituencies. In the 1950s however, communication research started being carried out systematically and since then it has evolved into an interdisciplinary field of inquiry (Trommsdorff, 2003). Communication theory draws from disciplines such as economy, psychology, social psychology and sociology (Batra, Myers and Aaker, 1996, p. 32). The theoretical ground of communication is also based on theories and methods from other fields such as system theory and decision analysis theory (Bruhn, 1997, p. 14 ff.). In addition, communication research has benefited from studies on advertising, public opinion, employee communication, dissemination of news and rumours, propaganda and diffusion of products, ideas and practices. Clearly, the disciplines involved are manifold and the resulting approaches to communication research are numerous.

Much research on organisational communication has been conducted using one of two major approaches. These competing approaches, despite both being still common today, have been developed and widely employed over different periods of time (Batra, Myers and Aaker, 1996, p. 109 ff.; Bruhn, 1997, p. 14 ff.). In the 1950s and 1960s, most researchers followed an economic approach to communication studies. Micro economic theory, which had been successfully applied to understanding the relationship between price and sales, was then extended to understanding communication phenomena, particularly advertising effects (Bruhn, 1997, p. 15). The core issue of the economic approach is the relationship between communication activities and variation in economic variables, measured in terms of money or other quantities. Some frequently considered economic variables include sales in units or in euros, market share, profit, marginal income and return on assets (Berndt, 1995c, p. 20 f.).

The economic approach faces much criticism, which usually focuses on two major shortcomings. First, the economic approach only considers a few of the many possible antecedents of communication effects, mostly those of an economic nature. Economic models, for example, often consider the advertising budget as the sole input variable to explain sales of a certain product, although many other factors (e.g. creative content, individual characteristics and competitors' actions) are obviously very likely to influence product sales. In fact, these models assume that these other factors remain unaltered. In other words, the economic functions proposed to explain communication effects has a lot of ceteris paribus conditions (i.e. other things being equal) (Bruhn, 1997, p. 15).

A second major shortcoming of the economic approach to communication relates to the period of analysis considered. Only short-term outcomes to communication are incorporated in the analysis because economic variables become unpredictable in the long-term (Batra, Myers and Aaker, 1996, p. 109). However, communication effects can be long-term. Indeed, some advertising executives believe that money spent on advertising in the 1950s and the 1960s is still paying off — 50 years later (Keller, 1998, p. 32).

To overcome the shortcomings of the economic perspective to communication research, a behavioural approach has been increasingly used since the 1970s. This approach, based on behavioural science theory and empirical findings applied to communication, owes its advance to progress in motivation research and consumer behaviour studies (Batra, Myers and Aaker, 1996, p. 33). Instead of focusing on economic variables, this approach focuses on human actions as relevant outcomes to communication. Specifically, communication effects on human actions are explained through stimulus-response schema. Although this approach is not free of criticism (see Bruhn, 1997, p. 26 ff., for a review), this research perspective is thus far the best way of understanding the communication phenomena and will therefore be used in this thesis to explain how corporate communication works.

3.1.2. Neo-behavioural paradigm

Behavioural science theory proposes two contrasting paradigms to help understand human actions. Both general theoretical frameworks, termed behavioural and neo-behavioural paradigms, are overviewed in Table 3.1.

During most of the 20th century, behaviourist researchers followed a behavioural paradigm for studying human actions. This paradigm exclusively considers observable variables for understanding behaviour; psychological processes are not recognised or are considered irrelevant to the analysis. No introspective analysis is carried out and the individual, as a result, is seen as a black box.

According to a behavioural paradigm, the relationship between certain communication stimuli and certain behavioural responses is immediate. This relationship is usually represented using black-box models, also called stimulus-response (S-R) models. These models do not reconstruct the communication process in detail and have almost no psychological foundations (Berndt, 1996, p. 106). Instead, these models represent the relationship mathematically, replacing the communication process with a regression or stochastic algorithm. Some basic forms of probabilistic models of consumer behaviour include models for brand selection, retailer selection or selection of time to buy (see Berndt, 1996, p. 101 ff.).

Table 3.1. Behavioural and neo-behavioural paradigms for explaining human actions.

	Behavioural paradigm	**Neo-behavioural paradigm**
Variables considered	Observable	Observable and non-observable
Relationship between stimulus and response	Immediate	Mediate
Perspective into the individual	Black box	Complex inner life
Models employed	S-R models	S-O-R models

The behavioural paradigm has come up against much criticism. This paradigm is deemed inadequate for explaining the communication process because it does not provide enough insight into the relationship between a communication stimulus and a behavioural response, but instead supposes a functional S-R relationship. As a result, individuals exposed to a communication stimulus are always expected to react the same way, even in different places and at different points in time. In other words, the communication stimulus that individuals are exposed to is alone expected to determine their actions. The resulting behaviour, however, obviously depends on many uncontrollable factors, and behavioural responses to communication are difficult to forecast and even more difficult to represent in the form of a probabilistic model.

To overcome the behavioural paradigm's explanatory shortfall, psychologists have been using a new behavioural paradigm since the 1950s. The neo-behavioural paradigm considers observable and non-observable factors and processes to study human actions. To do this, this paradigm has recourse to hypothetical or theoretical constructs to represent non-observable psychological factors and processes; the complex inner life of the individual is thus partially or totally examined.

According to the neo-behavioural paradigm, non-observable psychological processes and outcomes mediate the relationship between communication stimuli and behavioural responses. These non-observable psychological phenomena are collectively subsumed under an intervening construct generically termed 'organism', which mediates the S-R relationship. This mediated relationship is usually represented through structural models, also called stimulus-organism-response (S-O-R) models. Contrary to behavioural black-box models, S-O-R models represent the communication process in detail, fully considering the psychological variables involved. These models thus reflect a strong cognitive basis and are necessarily grounded on extensive empirical evidence. More importantly, these models can better represent communication processes and help understand communication effects (Peter and Olson, 2005, p. 26). For these reasons, a neo-behavioural paradigm will be used here to explain how corporate communication works.

3.1.3. Corporate communication effects

Communication effects, in a broad sense, refer to 'all kinds of individual response that result from a communication stimulus' (Steffenhagen, 1984, p. 12). Some examples of communication effects include the exposition of an unexposed individual, the elicitation of brand thoughts and feelings by a person with no previous brand knowledge, the persuasion of a person with negative or neutral brand attitude and the conversion of a non-buyer into a buyer (see MacInnis and Jaworski, 1989). Assuming that effects can be created and that communication can influence behaviour, communication stimuli may thus cause all kinds of individual responses at cognitive, affective, conative, as well as at behavioural level. Clearly, there are many kinds of communication effects and each one of them may help explain how communication works.

Communication effects can be classified in a number of ways. For example, it is possible to consider the tangibility of communication effects and thereby classify them as either observable or non-observable. Perhaps the best-known classification of communication effects, and maybe one of the first proposed, considers stages in a hierarchy of communication effects (see Strong, 1922; Lavidge and Steiner, 1961; Rogers, 1962). An illustrative classification, based on the hierarchy-of-effects model proposed by Lavidge and Steiner (1961, p. 61), is shown in Figure 3.1. This classification, and any other based on hierarchy-of-effects models, assumes a continuous or connected series of responses to communication, where a certain effect occurs prior to another, which leads to the latter. In other words, the hierarchy-of-effects models make the strong assumption that effects occur in a specific, hierarchical order. Such hierarchical models, and thereby their resulting classification of communication effects, are widely disputed. At best, they have not been empirically supported (Moriarty, 1983; Gronhaug and Kvitastein, 1991; 1992; Vakratsas and Ambler, 1999). Current views suggest that a three-dimensional space is a more realistic model of communication effects, where the importance of each dimension (i.e. cognition, experience and affect) varies depending on the communication situation (Vakratsas and Ambler, 1999).

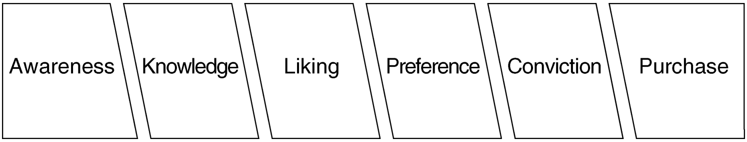

Figure 3.1. Classification of communication effects as a sequence of responses. Source: Lavidge and Steiner (1961, p. 61).

Communication effects can also be classified using more than one criterion simultaneously. One such classification, theoretically less contested than hierarchical orderings, is proposed by Steffenhagen (1996, p. 8). His classification, originally tailored to advertising but applicable to all kinds of persuasive communication, uses two criteria to categorise communication effects: time span and type of response. Time span relates to the temporal interval between exposure to a communication stimulus and individual response, while type of response considers whether the individual reaction is an internal, non-observable change or an external, observable outcome. Considering both criteria simultaneously, he expects three kinds of communication effects to arise, displayed in Figure 3.2.

According to Steffenhagen's classification of communication effects, individual responses to communication are various and range from immediate outcomes to enduring memory effects to actual observable behaviour. Immediate effects are those observable and non-observable individual responses that occur immediately after exposure to a communication stimulus. Immediate internal effects include psychological processes such as attention and processing as well as cognitive and emotional responses (i.e. thoughts and feelings respectively) elicited during exposure to a stimulus (MacInnis and Jaworski, 1989). Less common, immediate effects of an external nature refer to observable individual responses such as impulsive acts.

Enduring memory effects refer to those psychological responses to communication still present in an individual's mind after a certain time span. Lasting mental associations in the mind of the exposed individual include brand awareness, brand comprehension, brand image or personality, brand attitude, perceptions related to reference groups and association of desired feelings (see Batra, Myers and Aaker, 1996, p. 124 ff.).

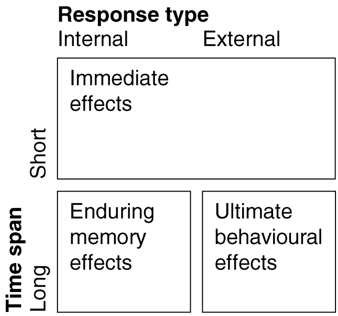

Figure 3.2. Classification of communication effects considering time span and type of response. Source: Steffenhagen (1996, p. 9).

Ultimate behavioural effects consist of all the external responses to a communication stimulus that happen after a certain time span. They refer to ultimate actions by a target audience such as interest in the brand, trial, increased share of requirements, increased brand loyalty, reduced attrition or price elasticity and increased usage (see Batra, Myers and Aaker, 1996, p. 113 ff.).

Although any one of the communication effects described above may serve as an intervening construct for understanding behavioural responses to communication, enduring memory effects seem more appropriate for this task for three main reasons (see Bruhn, 1997, p. 26 ff.). Firstly, they are strongly affected by communication stimuli and, in turn, strongly affect individual behaviour, both effects being relatively foreseeable (Batra, Myers and Aaker, 1996, p. 49). Secondly, they have been successfully operationalised and are relatively easy to measure. Indeed, many well-developed and extensively validated measurement techniques are available, some of them presented in subsection 3.2.2. Thirdly, and more importantly, enduring memory effects are consistent with the increased significance placed on branding in recent years. Indeed, they are strongly related to current representations of brands in individuals' minds (see subsection 3.2.2) and to current views on the true 'value' of a brand (see subsection 4.1.2). They are thus useful for understanding communication effects from a branding perspective.

In contrast, immediate effects fail to provide a good basis for understanding how communication works. By being measurable only during or immediately after exposure to a communication stimulus, they pose serious difficulties in their assessment. Their most serious shortcoming, however, relates to their inability to explain ultimate individual behaviour. The relationship between communication stimuli and immediate psychological effects is well understood; the relationship between these immediate psychological effects and individual behaviour, however, is less well understood. Yet these behavioural responses are what companies ultimately seek. Consider, for example, an immediate effect such as attention. Attention is attained by stimulus characteristics such as sexual imagery, loud music and other executional appeals of the stimulus, all being extensively documented in advertising research literature (see MacInnis, Moorman and Jaworski, 1991, for a review). How attention affects behaviour is, however, not conclusive. In fact, the relationship between immediate effects and individual behaviour is often explained with the help of enduring memory effects as intervening variables. Indeed, most conceptual analyses of how a particular form of communication works consider the relationship between immediate effects and individual actions mediated by enduring memory effects (e.g. see Glogger, 1999; Nufer, 2002).[13]

Neither ultimate behavioural effect constitutes a good basis for explaining how communication works. Despite being easily measurable, they can not fully reflect communication outcomes because, as discussed in subsection 3.1.1, communication also has long-term effects. Their most serious drawback, however, is their dependence on variables other than communication. Isolating communication effects from situational factors, for example, is a difficult, if not impossible, task.

In summary, enduring memory effects seem to be the most appropriate way for explaining communication outcomes. They mediate behavioural responses to communication in a foreseeable way, are measurable, and are useful from a branding perspective. Besides, they provide some guidance for making managerial decisions, as argued in chapter 4. Therefore, from both a branding and a decision-making perspective, enduring memory effects are the most appropriate response to communication for explaining how communication works. In the rest of this thesis, for simplicity's sake, communication effects will exclusively refer to those long-lasting memory outcomes resulting from communication exposure.

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13 See also the attitude formation frameworks reviewed in section 3.3 for additional examples of models that explain behavioural effects from information processing with the help of enduring memory effects.

3.2. Behavioural Framework

Following an S-O-R paradigm, this section explains how corporate communication works. Specifically, this section develops a behavioural framework and a set of related conclusions that relate a communication stimulus to constituencies' psychological and behavioural responses. This framework, shown in Figure 3.3, is set out in four subsections. Firstly, corporate communication stimuli capable of creating corporate communication effects are reviewed. Secondly, based on an associative network memory model, this section presents a useful way of representing corporate communication effects. The corporate brand knowledge construct is presented and its dimensions, namely corporate brand awareness and corporate image, are then discussed in detail. Both dimensions are defined and classified, their properties assessed and available measurement methods briefly presented. Thirdly, this section discusses constituency behaviour to the communication of a corporate brand. It essentially reviews and synthesises empirical studies that show the possible positive consequences of corporate brand knowledge on consumers, investors, employees and community members. Finally, this section establishes and reviews factors that have a demonstrable and systematic impact on corporate communication effects. Constituency characteristics that moderate corporate communication effects are identified and their moderating effect on corporate brand knowledge evaluated. Stimulus characteristics that moderate corporate communication effects are then identified and evaluated. Collectively, this section suggests that corporate communication stimuli affect brand-knowledge structures in constituencies' minds. These corporate communication effects are moderated by both constituency-related factors (i.e. prior knowledge and processing goals) as well as stimulus-related factors (i.e. modality, message, execution, time and place). In turn, corporate brand knowledge may affect constituency behaviour.

3.2.1. Corporate communication stimulus

A **corporate communication stimulus** is any form of communication identified with a corporate brand that influences constituencies' beliefs and feelings about a company. From a constituency's point of view, a corporate communication programme is thus no more than a set of stimuli placed in a constituency's environment, designed to influence their affects, cognitions and behaviour (Peter and Olson, 2005, p. 28). Corporate communication stimuli refer to a company's corporate communications and to third-party communications about the company. These stimuli may thus emanate from the company directly but also from third parties such as the press. Examples of corporate communication stimuli include adverts, events, exhibition booths, sponsored properties, corporate websites, but also news articles, editorials and public service contents, all portraying the corporate brand.

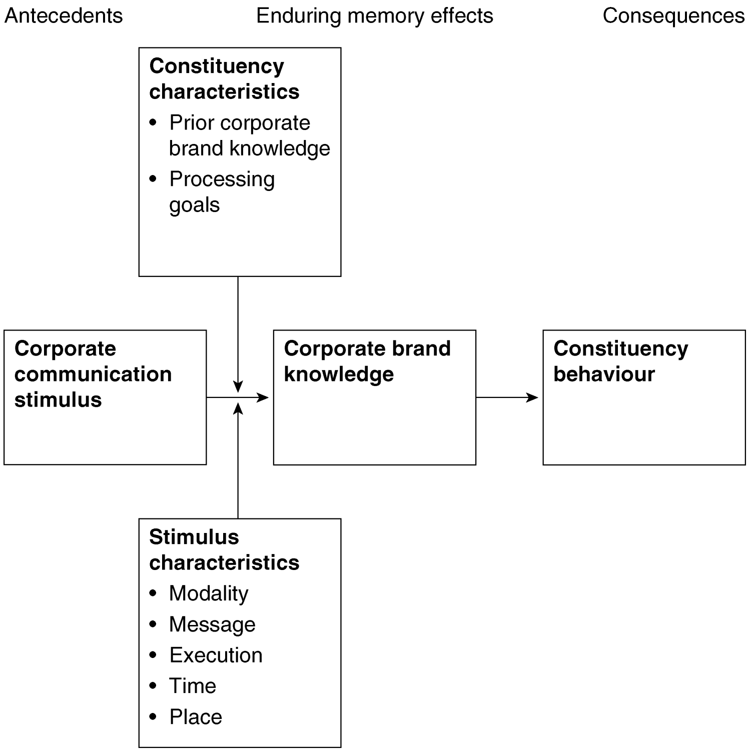

Figure 3.3. Behavioural framework explaining how corporate communication works.

Apart from corporate communication stimuli, enduring memory effects in constituencies' minds are created in many other ways. Basically, three factors affect the way brands are perceived: direct experience, communications from the company or any third party and inferences from some other sources of information (Keller, 1993). At least four factors affect the way corporate brands are perceived: characteristics of the company's products, company communications, third-party communications and a general business stereotype (Brown, 1998). In fact, any encounter between a company and its constituencies may affect the way constituencies think or feel about the company (Schultz, Tannenbaum and Lauterborn, 1994, p. 51; see also Aaker and Joachimsthaler, 2000, p. 42; Kotler, 2000, p. 550). These ‘points of contact’ range from the company’s headquarters to the CEO’s reported opinion on important issues.

From the multiple ways enduring memory effects can be created, corporate communication activities have long been regarded as fundamental for shaping beliefs and feelings about a company (Martineau, 1958b; Christian, 1959; Eells, 1959; Easton, 1966; Levitt, 1967; Britt, 1971; Grass, Bartges and Piech, 1972; Bernstein, 1986; Gregory, 1991; Schultz and Kitchen, 2004). Stimuli resulting from these activities are primary antecedents of enduring memory effects due to their proven ability to create lasting memory associations. As defined in chapter 2, a corporate communication activity is identified with a corporate brand or, in some rare cases, with more than one single product brand. Hence, because the stimulus’s presenter is mostly a corporate brand, the effects of these activities on constituencies’ beliefs and feelings about the company are relatively straightforward.

Corporate communication activities are also considered a strong influence on constituencies’ perceptions about a company because these activities explicitly aim at creating enduring memory effects in constituencies’ minds. As defined in chapter 2, a corporate communication activity is employed to elicit responses from a company’s constituencies. Thus, because the overt purpose is to create these responses they are, if effective, likely to profoundly shape beliefs and feelings about a company.

3.2.2. Corporate brand knowledge

Subsection 3.1.3 argued that communication responses are better understood by analysing communication’s enduring memory effects in individuals’ minds — the lasting psychological responses to communication that have simply been termed communication effects. This subsection provides a useful representation of corporate communication effects through a psychological construct called corporate brand knowledge. The corporate brand knowledge construct is examined and then operationalised by identifying its constitutive dimensions that affect constituency response most, that is, awareness and image. These dimensions are conceptualised, and their components, properties, and measurement methods discussed. By being a useful representation of corporate communication effects, corporate brand knowledge is a good intervening construct for explaining a constituency’s behavioural responses to corporate communication stimuli.

3.2.2.1. Representing corporate communication effects as corporate brand knowledge

Communication effects can be better understood with the help of some basic memory principles. Specifically, memory can be explained using a widely used psychological model known as an **associative network memory model** (Anderson, 1983; Wyer and Srull, 1989). According to this model, memory consists of a network of nodes and connecting links. Nodes represent information or concepts of any kind (i.e. visual, verbal, abstract or contextual); links represent the strength of association between these concepts.

Recall or retrieval of information occurs in an associative memory model via **spreading activation**. Once a node is activated either externally (by sensorial stimuli such as seeing, smelling or tasting), or internally (through thought), this activation spreads to other connected nodes. However, not all connected nodes will be activated and some nodes are more likely to be activated than others, depending on the strength of association among them. For example, using an illustrative memory model provided by Esch and Wicke (2001, p. 48), by thinking of 'Milka', some concepts may immediately spring to mind, such as the lilac colour, a lilac cow, chocolate and the Alps. In line with an associative network memory model, these concepts are strongly linked to the 'Milka' concept, while other concepts (e.g. the brown colour, fattening or cocoa) may not be linked strongly enough to 'Milka' to become activated. A linked node is thus activated when a threshold level is exceeded, depending on the strength of the association among these nodes.

According to an associative network memory model, an individual's knowledge of a brand is depicted as brand knowledge, which consists of a brand node and a number of associations linked to it (Farquhar, 1989; Aaker, 1991, p. 15 f.; Esch, 1993, 1999, p. 43; Keller, 1993, 1998, p. 46; Mitchell and Dacin, 1996).[14] As a consequence, a constituency's knowledge of a company can be represented as *corporate* brand knowledge in constituencies' minds. **Corporate brand knowledge** is conceptualised in terms of a corporate brand node in a constituency's memory, linked to a variety of associations (Brown and Dacin, 1997; Brown, 1998; Keller, 2000). These associations include cognitions, affects (i.e. moods and emotions), evaluations (attached to specific cognitions or affects), summary

14 By representing brand knowledge structures through an associative network memory model, researchers agree that brand knowledge is organised around the brand name that identifies the product, which has indeed been empirically demonstrated. See Alba and Hutchinson (1987) for a review of the psychological literature on brand knowledge.

evaluations, and patterns of associations (e.g. schemata or scripts) (Brown, 1998). In fact, all kinds of information may become linked to a brand node (Keller, 2003), or to a corporate brand node (Brown, 1998).

Corporate brand knowledge is appropriate for explaining corporate communication effects because it is a good representation of enduring memory effects. In fact, the corporate brand knowledge construct represents everything that a constituency knows and feels about a corporate brand, encompassing not only corporate communication effects but all information about the brand.

Moreover, corporate brand knowledge helps to understand behavioural responses to communication. Corporate brand knowledge is strongly affected by corporate communication stimuli from a company and, in turn, strongly affects constituency behaviour (Brown, 1998; Keller, 2000). Furthermore, it has been successfully operationalised according to two dimensions: corporate brand awareness and corporate image, which, as discussed below, have proved necessary and adequate for understanding corporate communication effects. Hence, corporate brand knowledge is a good intervening construct for understanding behavioural responses to communication (see subsection 3.1.3). In other words, the corporate brand knowledge construct may serve as a basis for explaining how corporate communication works.

In short, corporate brand knowledge, understood as the relatively enduring mental associations connected to a corporate brand node in constituencies' minds, is a good representation of corporate communication effects and a good intervening construct between corporate communication and constituency behaviour. This results in the following conclusion:

1. A corporate communication stimulus affects corporate brand knowledge in constituencies' minds.

3.2.2.2. Dimensions of corporate brand knowledge

Corporate brand knowledge — that is, all associations with a company stored in constituencies' minds — can be made operational by being related to different dimensions. These **dimensions** refer to the necessary and sufficient criteria that uniquely determine each brand-knowledge structure and that distinguish it from others. As well as considering associations' substantive content per se, dimensions can be defined from a behavioural perspective.[15] Behavioural science the-

15 Dimensions can be defined according to the substantive content of the corporate brand knowledge in constituencies' minds. In fact, much of the early empirical work on corporate brand

ory indeed provides a useful basis for identifying dimensions that distinguish brand-knowledge structures and that strongly relate to individual behaviour (Keller, 1993; Rossiter and Percy, 1997, p. 109).

Corporate brand knowledge may be related to any number of dimensions, ranging from one dimension to several dimensions. The construct can be operationalised through a single dimension, that is, all brand associations in constituencies' minds are summarised into one dimension. Probably the best-known single brand-knowledge dimension has been proposed by social psychologists Fishbein and Ajzen (1975). According to their influential multiattribute attitude model, all information about a brand is reduced to an overall brand attitude, which is a function of the beliefs about a brand and the evaluative judgment of those beliefs. More specifically, this overall brand attitude is the sum of each belief multiplied by its favourability. In turn, this summary evaluation may affect brand-related behaviour.

Despite their intuitive appeal, the above model and similar attitude formation models have encountered much criticism (see Berndt, 1996, p. 65 f.). They are mostly criticised for the way in which beliefs and evaluations are combined to reach a summary evaluation, which is, at best, arbitrary and cannot be empirically proved. Moreover, attitude models are not consistent with an associative network model, as the latter considers attitudes to be one of the many associations that may become linked to a brand node and one of the many brand associations that may directly affect individual behaviour (see Keller, 2003).

Corporate brand knowledge can also be related to a relatively large number of dimensions. For example, Rossiter and Percy (1997) propose five brand-knowledge dimensions: category need, brand awareness, brand attitude, brand purchase intention and purchase facilitation. Similarly, Keller (2003) also proposes a large number of dimensions and suggests awareness, attributes, benefits, images, thoughts, feelings, attitudes and experiences as some of the 'key dimensions' of brand knowledge.

There are some disadvantages to having a large number of brand-knowledge dimensions. First of all, the number and content of these dimensions diverge from

knowledge focused on developing measures based on its descriptive beliefs (Brown and Dacin, 1997). A recent example includes the set of dimensions proposed by Aaker (2004a, p. 264 ff.; 2004b): heritage, assets and capabilities, people, values and priorities, a local or global frame of reference, citizenship programmes and a performance record. See also Westberg (1994, p. 12 ff.), Aaker (1996, p. 118 ff.), Brown (1998, p. 217 ff.) and Keller (1998, p. 416 ff.; 2000, p. 119 ff.) for similar substantive classifications.

author to author. Also, a large set of dimensions is difficult to define and some overlap can be expected. That is, these dimensions are likely to be dependent on each other. Moreover, having to take too many dimensions into consideration would make their analysis too complex. In the extreme, each dimension may become related to a single brand association stored in constituencies' minds. And, because each dimension within a large set would relate to a certain brand association or a very specific type of associations, advances in consumer research would result in 'new' dimensions. Indeed, recent research methods in marketing, such as ethnology or sociology, help uncover overlooked or neglected facets of brand knowledge that may have significant implications on the operationalisation of corporate brand knowledge where a set of very specific dimensions are used to operationalise the construct (Keller, 2003).

Corporate brand knowledge can also relate to a few dimensions. Perhaps the most extensively cited brand-knowledge operationalisation found in marketing literature views brand knowledge as consisting of two dimensions: brand awareness and brand image (Esch, 1993, 1999; Keller, 1993, 1998). Consistent with this set of dimensions, corporate brand knowledge relates to corporate brand awareness (i.e. the likelihood that a corporate brand can be recognized or recalled); and corporate image (i.e. a set of associations linked to a corporate brand node).

Corporate brand awareness and corporate image seems to be an appropriate set of dimensions for operationalising corporate brand knowledge for a number of reasons. Firstly, this set of dimensions is consistent with an associative memory model, as discussed below. Secondly, both dimensions have been attributed with validated measurement instruments. Thirdly, these dimensions are independent of one another. Brand awareness is considered a separate dimension from brand image as it has its 'own equity' that precedes image in building brand value (see Rossiter and Percy, 1997, p. 114, 134 nt. 13; Esch, Hardiman and Mundt, 2004, p. 225 f.). In fact, a high level of corporate brand awareness is necessary, yet a positive corporate image is sufficient when referring to a strong brand (Kernstock et al., 2004, p. 17). In short, corporate brand awareness and corporate image seem to be the two dimensions that best operationalise corporate brand knowledge. Hence:

2. The higher (lower) the level corporate brand awareness, the more positive (negative) the corporate brand knowledge in constituencies' minds.
3. The more positive (negative) the corporate image, the more positive (negative) the corporate brand knowledge in constituencies' minds.

Corporate brand awareness

The first dimension of corporate brand knowledge is corporate brand awareness. *Corporate* brand awareness is usually not explicitly defined in branding literature, but implicitly considered when it is said that a branded product may also be a company (e.g. Aaker, 1991; Esch, 1993; Kapferer, 1997; de Chernatony and McDonald, 1998; Keller, 1998). In branding literature, brand awareness consistently refers to a brand's quality or state of familiarity. More consistent with an associative network memory model, **corporate brand awareness** can be defined as the strength of the corporate brand node or trace in memory, as reflected by the ability of a constituency to recognise or recall the corporate brand under different conditions (see Keller, 1993). Brand awareness depends on the link between the brand node and the category need (Rossiter and Percy, 1997, p. 115). Corporate brand awareness thus occurs when constituencies recognise the company name or other corporate brand elements, or when they recall that a company is a member of a certain industry or that a company is active in a certain business.

Brand awareness is formed by brand recognition and brand recall (Bettman, 1979b; Esch, 1993, 1999, p. 44 f.; Keller, 1993, 1998, p. 50). **Corporate brand recognition** relates to a constituency's ability to confirm prior exposure to a corporate brand when the corporate name or other corporate brand element is given as a cue. Brand recognition occurs when industrial consumers recognise a company name when getting a sales call, for example. **Corporate brand recall**, on the other hand, consists of a constituency's ability to retrieve a corporate brand when industry or business nature, needs to be fulfilled or usage situation is given as a cue. For example, it occurs when graduate students are looking for a job and a company name comes to their minds. The level of brand awareness is believed to be strongly dependent on both these types of awareness performance (Keller, 1993, 1998, p. 50 f.; Rossiter and Percy, 1997, p. 113 ff.). Therefore:

4. The higher (lower) the level of corporate brand recognition, and the higher (lower) the level of corporate brand recall, the higher (lower) the level of corporate brand awareness.

Two properties of brand awareness determine its level and are thereby relevant for understanding constituency behaviour to a corporate brand: depth and breadth (Keller, 1998, p. 88). **Depth** of brand awareness refers to the likelihood that a brand element will come to mind and the ease with which it does so. Depth of corporate brand awareness depends on corporate brand visibility, which, in turn is affected by the branding strategy pursued by a company. According to the branding strategy, depth of awareness is likely to be higher in a 'branded house' than in a 'house of brands' (Aaker and Joachimsthaler, 2000, p. 104 ff.; see also van Riel, 1995, p. 41 ff.). On the other hand, **breadth** of awareness refers to the range of situations where the corporate brand will come to mind. The level of corporate brand awareness and, in turn, the 'equity' of a corporate brand depends on both properties.

Corporate brand awareness can be measured in various ways (Srull, 1984). Primary data on brand awareness is obtained on the basis of communication, particularly structured questionnaires, rather than observation (Churchill and Iacobucci, 2002). Illustrative measurement approaches to corporate brand awareness are shown in Table 3.2.

Table 3.2. Examples of direct measures for assessing corporate brand awareness. Based on Keller (1998, ch. 8).

	Depth	**Breadth**
Recognition	'Have you previously heard of these companies? BMW, DaimlerChrysler, Fiat, United Car, PSA, Toyota'	Combined measures of recognition depth
Recall	Unaided: 'If you were thinking of applying for a job, which companies come to mind?' Aided: 'When you think of carmakers, which companies come to mind?'	Combined measures of recall depth

Several measures of awareness can be employed to assess the depth of corporate brand recognition, either directly or indirectly. Direct measures consist of showing constituencies, or reading out, a set of single items or perceptually degraded versions of them, and asking them if they thought they had previously seen or heard of these items. Indirect approaches employ tachistoscopes, eye tracking techniques, pupilometrics and other equipment to test the effectiveness, say, of alternative package designs in terms of brand awareness (see Churchill and Iacobucci, 2002, p. 306 ff.). For measuring breadth of corporate brand recognition, the approach consists of combining measures of recognition based on the number of categories that come to an individual's mind when the corporate brand is identified.

Recall can be assessed using aided and unaided measures. Unaided recall is measured without giving constituencies any cues, that is, on the basis of 'all companies'. Aided recall uses various types of cues such as industry, business nature or company attributes to assist recall. Similar to brand recognition, breadth of corporate brand recall requires combined measures of recall based on industry or business nature.

Corporate image

The second dimension of corporate brand knowledge is termed corporate image.[16] Brand and corporate image are, by most marketing theorists, assumed to be similar in their conceptual development and operationalisation (van Riel, 1995, p. 74; Dacin and Brown, 2002). Nevertheless, theory and research on corporate image has a long tradition in the marketing field, ever since the publication of Martineau's seminal articles on corporate and retailer image in 1958.[17] Corporate image has generally been considered the mental picture or impression of a company, as observed by Brown (1998) in his review of conceptualisations of corporate image published in marketing and consumer research literature between 1958 and 1997.[18] More consistent with an associative memory formation, **corporate image** can be defined as the set of associations held in constituencies' minds linked to a corporate brand node (Keller, 2000).

Corporate image is made up of the different associations linked to a corporate brand node in constituencies' minds. These associations can be classified according to their level of abstraction, where abstract associations include more information than more concrete ones (Johnson and Fornell, 1987). Depending on how much information is summarised in an association, three major categories of increasing abstractness arise: attributes, benefits, and attitudes (Keller, 1993; see also Aaker, 1991, ch. 5, for a similar classification). **Attributes** consist of non-product-related associations such as price, user or usage situation, feelings, experiences or a corporate personality that characterises the company (Keller, 2000). **Benefits** refer to the functional, symbolic or experiential subjective value that constituencies attach to the attributes (Keller, 1993). In a corporate branding context, **attitudes** refer to the overall evaluations of the corporate brand (see

16 The term *corporate image* is preferred to *corporate brand image* because the former has long been widely employed to denote the set of associations linked to a corporate brand node. See Maathuis (1999) for a similar reasoning.

17 See subsection 4.1.2 for a historical review of the notion of corporate brand management which also considers the development of the corporate image concept.

18 Other disciplines have also provided conceptualisations of corporate image, including economics, Gestalt psychology, sociology and organisational behaviour (van Riel, 1995, p. 79 ff.). Nevertheless, these conceptualisations are not useful from a behavioural perspective because they neither offer a consumer behaviour application nor a measurement method for the corporate image construct (Nufer, 2002, p. 145). Thus, this thesis follows a socio-psychological perspective to the concept, perhaps the approach most commonly found in marketing literature.

Berndt, 1996, p. 61 ff.). The equity of corporate image is believed to strongly depend on these three types of corporate associations (Keller, 1993, 1998).

Apart from their degree of abstractness, corporate associations vary in a number of other properties. Three of these properties determine how positive a corporate image is and have thereby proved useful for explaining constituency response to communication: strength, favourability and uniqueness of corporate associations (see Keller, 1993, 1998, p. 93). Association **strength** depends on the strength of its links to the corporate brand node, which, in turn, depends on encoding and storage of information in memory, with the former as a function of quantity and quality of processing and the latter as a function of, among others, the number of cues that link the corporate brand node and the association (see Aaker, 1991, p. 109; Keller, 1993).

Associations also differ in how constituencies evaluate their **favourability**. Favourability depends on three factors: desirability to constituencies, successful deliverability by the company and conveyance by a company's communication programmes (Keller, 1998, p. 106 ff.). Interestingly, a corporate association may be evaluated favourably in one situation but not in another (Day, Shocker and Srivastava, 1979). Thus, not all important and favourable corporate associations are relevant to *all* constituencies in *all* decision settings.

Finally, associations differ in their grade of **uniqueness**, that is, whether they are shared with competing companies or not. Those unique associations linked to a corporate brand node have been termed 'unique organisation value proposition' (Knox, Maklan and Thompson, 2000), drawing an analogy to the 'unique selling proposition' discussed in marketing literature (see Ries and Trout, 1981). These three properties of the corporate associations that make up a corporate image determine how positive the corporate image is. Therefore:

5. The stronger (weaker), more (less) favourable, and more (less) unique the attributes, benefits and attitudes linked to the corporate brand node in constituencies' minds, the more positive (negative) the corporate image.

Strength, favourability and uniqueness of corporate associations can be measured using qualitative or quantitative measurement methods (van Riel, 1995, p. 84 ff.). Qualitative techniques, originally known as motivation research, serve to identify the associations making up the corporate image. Unstructured questionnaires are particularly useful for identifying these associations (Churchill and Iacobucci, 2002, p. 273 ff.). Some other common qualitative techniques include free association, adjective ratings and checklists, projective techniques, photo sorting, bubble drawings, storytelling, personification exercises and role-playing (Keller, 1998, p. 340; see also Churchill and Iacobucci, 2002, p. 275 ff.).

Quantitative techniques, on the other hand, serve to assess strength, favourability and uniqueness of corporate associations. Most of these techniques employ scale measures and are administered through structured questionnaires (Churchill and Iacobucci, 2002, p. 271 f.). Some questions for assessing levels of strength, favourability and uniqueness of corporate associations are illustrated in Table 3.3. Other lesser known techniques, however, are also useful quantitative techniques, including attitude accessibility measures (i.e. response time measures) for assessing the strength of attitudes towards the corporate brand (see Fazio, Powell and Williams, 1989) and multidimensional scaling techniques (MDS) for assessing associations' uniqueness (Keller, 1998, p. 337).

Table 3.3 Examples of direct measures for assessing corporate image. Based on Keller (1998, ch. 8).

	Strength	**Favourability**	**Uniqueness**
Specific attributes and benefits	'To what extent do you feel DaimlerChrysler is a socially responsible company (where 1=strongly disagree, and 7=strongly agree)?'	'How good or bad is it for DaimlerChrysler to be socially responsible (where 1=very bad, and 7=very good)?'	'How unique is DaimlerChrysler in terms of social responsibility (where 1=not at all unique, and 7=highly unique)?'
Overall attitudes	Response time measures	'How good is the overall reputation of DaimlerChrysler (where 1=very bad, and 7=very good)?'	'How good is the overall reputation of DaimlerChrysler compared to Toyota (where 1=very bad, and 7=very good)?'

In summary, corporate brand knowledge is a useful psychological construct for representing corporate communication effects. This construct can be meaningfully operationalised in terms of corporate brand awareness and corporate image. These brand-knowledge dimensions consist of a number of components such as recognition and recall in the case of awareness, and attributes, benefits and attitudes in the case of image. The construct, its dimensions and their components serve to explain memory outcomes from corporate communication. More importantly, corporate brand knowledge is a good intervening construct for explaining constituency's behavioural responses to corporate communication, as discussed in the next subsection.

3.2.3. Constituency behaviour

Corporate brand knowledge may, in turn, lead to constituency behaviour. This behaviour refers to observable, measurable and actual actions by the company's constituencies. This behaviour, however, may not be immediate (i.e. immediately after exposure to a corporate communication stimulus) but a delay in time between exposure and actual behaviour is likely. After all, communication has long-term effects.

Behavioural outcomes from corporate brand knowledge may be advantageous for companies. A company may benefit if its constituencies, due to their beliefs and feelings towards the firm, react more favourably to the marketing of the corporate brand. In fact, by managing their corporate brands, companies deliberately attempt to build advantageous corporate brand knowledge in the minds of their constituencies, as discussed in subsection 4.1.2. If they succeed, companies may be better prepared to face the developments in the business environment discussed in subsection 2.1.3. Nevertheless, the contrary is also true: companies may get into difficulty because of the corporate brand knowledge in constituencies' minds. Oil company Exxon, for example, faced some negative constituency behaviour (e.g. some customers publicly tore up their Exxon credit cards after the Exxon Valdez' oil spilling) because the company was not well-regarded by some of its constituencies (Keller, 1998, p. 543).

Favourable behavioural outcomes resulting from positive corporate brand knowledge are supported by a vast body of literature. Conceptual work on company image, corporate reputation and corporate brand management has long highlighted these favourable outcomes. In addition, a growing number of empirical studies have demonstrated favourable behavioural outcomes due to positive corporate brand knowledge. Some representative research is overviewed in Table 3.4.

As Table 3.4 suggests, positive corporate brand knowledge can demonstrably affect the behaviour of consumers, employees, investors and the general public in an advantageous way for the company. Individual customers are more likely to purchase a company's products because positive corporate brand knowledge enhances perceptions of quality and the attractiveness of a company's products, embellishes the social standing of the company, differentiates a company's products from those of competitors and reduces the risk of trying new products. Also, business customers are more likely to purchase a company's products because positive corporate brand knowledge enhances attitudes towards sales people. In addition, channel members may give more support to a company's offering:

Table 3.4. Favourable behavioural outcomes resulting from positive corporate brand knowledge. Based on Maathuis (1999, p. 26).

Constituency	Outcomes	References
Individual customers	Stimulates buying intentions by enhancing perceptions of product quality and attractiveness	Schmalensee (1978), Shapiro (1982: 1983), Winters (1986), Wansink (1989), Brown and Dacin (1997), Goldsmith, Lafferty and Newell (2000), Lafferty, Goldsmith and Newell (2002)
	Stimulates buying intentions by enhancing the social standing of the company	McGuire, Sundgren and Schneeweis (1988), Winters (1988), Creyer and Ross (1996), Drumwright (1996), Brown and Dacin (1997), Sen and Bhattacharya (2001)
	Stimulates buying intentions by differentiating company's products from those of competitors	Nelson (1974), Dawes, Dowling and Patterson (1992), Dowling (1994), Boyd, Leonard and White (1994), Grönroos (1994), Chajet (1997), Aaker and Joachimsthaler (2000)
	Stimulates buying intentions of brand extensions by reducing the risk of trying new products	Keller and Aaker (1998), Maathuis (1999), Madrigal (2000)
Business customers	Stimulates buying intentions by enhancing attitude towards sales people	Levitt (1967), Panitz (1988), Yoon, Guffey and Kijewski (1993), Brown (1995), Bendapudi and Leone (2002)
Channel members	Enhances support for company products by enhancing the relationship with suppliers and distributors	Montgomery (1975), Narus and Anderson (1988), Anderson and Weitz (1992), Hall (1992), Ganesan (1994), Kumar, Scheer and Steenkamp (1995), Schmleltzer (1997), Banks, Hutchinson and Meyer (2002)
Employees	Increases intention to apply by enhancing company attractiveness as a potential employer	Gatewood, Gowan and Lautenschlager (1993), Turban and Greening (1996), Chambers et al. (1998), Aiman-Smith, Bauer and Cable (2001), Lemmink, Schuijf and Streukens (2003), Cable and Turban (2003), Sovina and Collins (2003), Turban and Cable (2003)
	Stimulates productivity by enhancing employee motivation, employee satisfaction and organisational identification	Ashfort and Mael (1989), Dutton and Dukerich (1991), Dutton, Dukerich and Harquail (1994), Riordan, Gatewood and Barnes Bill (1997), Smidts, Pruyn and van Riel (2001)
	Improves managerial decision-making by providing guidance to managers and employees	Aaker (1996), Maathuis (1999), Weiss, Anderson and MacInnis (1999), Frigge and Houben (2002)

Table 3.4. *Continued*.

Constituency	Outcomes	References
Investors	Increases intention to invest or acceptance of higher risk for same level of return	Fombrun and Shanley (1989), Sobol and Farrlly (1989), Riahi-Belkaoui and Pavlik (1991), Higgens and Bannister (1992), Fombrun (1996), Srivastava et al. (1997), Brown (1998), Kotha, Rajgopal and Rindova (2001), Keller and Lehmann (2003), Pahud de Mortanges and van Riel (2003), Dawar (2004), Gregory and McNaughton (2004)
Community members	Increases acceptation and legitimacy in society and reduces intentions of going to court or boycotting the company	Hannaford (1988), Marcus and Kaufman (1988), Winters (1988), Grunig (1992), Moffit (1994), van Riel and van den Bosch (1997).

positive corporate brand knowledge improves the relationship between a company and its suppliers and distributors. In short, consumers may act more favourably towards the company because of their beliefs and feelings about the firm (see also Brown, 1998, for review).

Positive corporate brand knowledge may also favourably affect the behaviour towards a company of other main constituencies (see Aaker, 2004b, for a review). Prospective employees may be more willing to apply for a job because of enhanced perceptions of a company's attractiveness as a potential employer. And current employees, by being more motivated and satisfied due to their positive beliefs and feelings towards their employer, may work more productively. Also managers, who are likely to make better decisions, behave differently because of positive corporate brand knowledge. Not to mention investors, who are more likely to invest, or may accept higher risk for the same level of return. Finally, community members may accept and legitimise the company in society more easily and may be more unwilling to sue the company or boycott it due to positive corporate brand knowledge. Collectively, the work discussed suggests that:

6. The more positive (negative) the corporate brand knowledge in constituencies' minds, the more (less) favourable the constituency behaviour to stimuli identified with the corporate brand.

3.2.4. Moderators of corporate communication effects

Communication effects depend on a myriad of factors. Particularly in the field of advertising research, many factors have been considered since the 1950s for describing, understanding and predicting psychological responses to communication activities (Cohen and Areni, 1991). Numerous empirical studies have shown that communication effects are moderated by factors such as moods (Gardner, 1985), emotions (Burke and Edell, 1989; Batra and Stephens, 1994), attitude towards the ad (MacKenzie, Lutz and Belch, 1986), individual's motivation and ability to process information (Petty and Cacioppo, 1986; MacInnis and Jaworski, 1989), mere exposure (Mitchell and Olson, 1981), ad appeals (MacInnis, Moorman and Jaworski, 1991) and executional factors such as stimulus length, message and repetition (Singh and Cole, 1993). These and many other factors have been recognised to enhance or lessen communication outcomes on brand knowledge systematically.

The many factors moderating communication effects relate either to the individual or to the stimulus (Berndt, 1996, p. 41 f.). According to this simple classification, factors moderating corporate communication effects are thus both the characteristics of the exposed constituency as well as the characteristics of the corporate communication stimulus itself.[19]

Constituency and stimulus characteristics may help understand corporate communication effects thoroughly. Both broad groups of factors may clearly improve or diminish psychological responses to a communication stimulus. Both categories also seem adequate for explaining psychological responses to communication. Indeed, these two categories have been extensively used in the past to explain communication outcomes, as confirmed by marketing academics Vakratsas and Amber (1999). Together they reviewed 250 books and journal articles on how advertising works and developed an exhaustive classification of moderators, which were considered either as ‘filters’ such as motivation and ability (i.e. individual characteristics) or as ‘components of the advertising input’ such as message content, media scheduling and repetition (i.e. stimulus characteristics). Both categories accommodated the moderators found. Hence, both groups of factors seem necessary and adequate for explaining corporate communication effects, which leads to the following conclusion that:

7. The effects of a corporate communication stimulus on corporate brand knowledge in constituencies’ minds are moderated by constituency characteristics and stimulus characteristics.

3.2.4.1. Constituency characteristics as moderators of corporate communication effects

A constituency’s psychological responses to a corporate communication stimulus do not occur automatically but are moderated by many factors, including several characteristics of the exposed constituency. **Constituency characteristics** refer to the properties of the individual who is exposed to a communication stimulus (Brown, 1998, p. 223). Constituencies obviously differ in a host of properties, which range from demographic and psychographic aspects to behavioural characteristics of the individual. Any one of these characteristics may have an influence on the brand-knowledge structures resulting from communication (Keller, 2001).

19 Communication effects are also moderated by situational variables. They refer to ‘all those factors particular to a time and place of observation which do not follow from a knowledge of personal . . . and stimulus . . . attributes and which have a demonstrable and systematic effect on current behaviour’ (Belk, 1974, p. 157). Situational variables are only partially weighted in this thesis. Non-controllable situational factors are not considered, because they are not manageable, hardly operationalisable, and, on average, they cancel each other out. On the other hand, factors particular to a time and place that are controllable by the company (e.g. stimulus’s reach, frequency and scheduling) are considered here as part of the stimulus characteristics.

Most individual characteristics affecting psychological responses to communication can be related to two broad factors: prior knowledge and processing goals (Petty and Cacioppo, 1986; MacInnis and Jaworski, 1989; Keller, 2001). Prior knowledge refers to that which an individual already knows about a certain action, activity, object or condition. Processing goals refer to the individual's desire to process information from the environment.

Prior corporate brand knowledge and processing goals are the constituency characteristics that most significantly moderate corporate communication effects. Both factors are required for explaining the moderating effects of constituency characteristics on corporate communication effects because these factors are independent from each other. Indeed, although constituencies who know a lot about the company may also be highly involved with it, prior brand knowledge has an effect on evaluation processes independent of processing goals (Sujan, 1985). These factors however, interact with one another (Bettman, Johnson and Payne, 1991). Brand knowledge moderates motivation to process brand information by influencing an individual's ability to interpret this information in a communication stimulus.

Prior knowledge and processing goals also seem adequate for explaining the moderating effects of constituency characteristics on corporate communication effects. Although media habits, demographics, psychographics, personality traits and personality states of the individual may also be useful factors for understanding communication effects, all these factors are already represented in prior knowledge and processing goals (Rossiter and Percy, 1997, p. 102 nt. 18). Other characteristics of the individual are thus irrelevant for understanding his psychological responses to communication.

Prior corporate brand knowledge

Prior corporate brand knowledge refers to that which a constituency already knows about a certain corporate brand. More specifically, it refers to that which a constituency already knows about the company's industry, the company itself, the company's products and the company's past communications (Keller, 2001). As discussed in subsection 3.2.2, corporate brand knowledge is made up of different types of associations (i.e. attributes, benefits and attitudes), which vary in terms of their strength, favourability and uniqueness.

Prior knowledge can be distinguished in terms of amount and nature. The amount depends on how much a constituency knows about the industry, the company, the company's products and the company's communications (Alba and

Hutchinson, 1987). Constituencies may know a little or a lot about a company. The nature depends on a company's overall evaluation, often referred to as corporate reputation (Dowling, 1994; Fombrun, 1996). That which constituencies know may reflect well or badly on the company.

Considerable consumer research has focused on prior knowledge as a moderator of communication effects on attitudes and persuasion (see Biehal and Chakravarti, 1986; Alba, Hutchinson and Lynch, 1991, for a review). Self-schematic requirements that the individual brings to the exposure situation stimulate the type of needs (Bettman, 1979a; Stephens and Russo, 1997). Activated needs in turn stimulate motivation for processing brand information from a communication stimulus (MacInnis and Jaworski, 1989). This motivation then moderates communication effects, as discussed below.

Prior corporate brand knowledge also affects a constituency's ability to interpret information from a corporate communication stimulus. Prior knowledge determines the type of evaluation processes mediating final judgments. In other words, individuals may process communication stimuli qualitatively differently according to the knowledge structures stored in their minds (Anderson and Jolson, 1980; MacKenzie, Lutz and Belch, 1986; Cowley and Mitchell, 2003). Limited prior knowledge reduces processing ability. When knowledge structures, necessary for performing complex mental operations, either do not exist or cannot be accessed, the individual lacks the ability to process company-related information from the stimulus (Sujan, 1985; Alba and Hutchinson, 1987). If ability to process brand information is low, prior brand knowledge cannot be processed and thereby brand information from the stimulus is not interpretable. Collectively, the work cited suggests that:

8. Constituencies' prior corporate brand knowledge moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.

Processing goals

Processing goals, sometimes called involvement or motivation, relate to the inner arousal that drives an individual towards or away from certain actions, activities, objects or conditions (see AMA, 1995). **Processing goals** refer to the desire to process information from the environment (MacInnis and Jaworski, 1989). More specifically, processing goals refer to that which constituencies would want to retain, if anything, from the specific communication stimulus to which they are being exposed (Keller, 2001).

Processing goals may be characterised both by the direction of attention and the intensity of processing (Mitchell, 1981; Petty and Cacioppo, 1986; MacInnis and Jaworski, 1989). Attention may be directed at information about the company, at other information from the stimulus or at information from the environment. In other words, individuals may pay attention to both company-related information and non-company-related information when exposed to a communication stimulus (Mitchell, 1981). Processing goals are also characterised by the intensity of processing, which depends on depth of understanding (MacInnis and Jaworski, 1989). Constituencies may allocate a little or a lot of their processing capacity to the communication stimulus.

Since Krugman's pioneering work (1965), considerable research has suggested that processing goals moderate communication effects on brand-knowledge structures in individuals' minds (e.g. Mitchell, 1981; Greenwald and Leavitt, 1984; Batra and Ray, 1985, 1986; Rossiter and Percy, 1985; Petty and Cacioppo, 1986; MacInnis and Jaworski, 1989). Processing goals affect a constituency's motivation to evaluate the communication stimulus. Specifically, processing goals affect the desire or readiness to process brand information from the stimulus (MacInnis and Jaworski, 1989). In turn, motivation to process brand information from the stimulus moderates communication effects. Therefore:

9. Constituencies' processing goals moderate the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.

3.2.4.2. Stimulus characteristics as moderators of corporate communication effects

Corporate communication effects not only depend on constituency characteristics, but are obviously influenced by several characteristics of the corporate communication stimulus itself. Characteristics of a communication stimulus are innumerable and any of them may moderate communication effects (MacInnis, Moorman and Jaworski, 1991). The study of stimulus-related moderators is indeed a popular field of inquiry, extensively conceptualised and scrutinised in marketing and consumer research literature.

According to Keller (2001), moderators of communication effects that are not derived from knowledge of constituency characteristics can be represented as five broad factors: modality, message, execution, time and place. Modality broadly refers to the main avenues of sensation affected by the stimulus. Message refers to that which is said in the stimulus. Execution, time and place broadly refer to how, when and where the message is conveyed, respectively.

Modality, message, execution, time and place are the stimulus characteristics that most significantly affect corporate communication effects. Each one of these stimulus characteristics, and none other, helps researchers understand the moderating effects of a communication stimulus on brand knowledge in individuals' minds (Keller, 2001). Each of these factors is thus required for understanding the moderating effects of stimulus characteristics, which implies that each of them affects psychological responses to communication independently and distinctively. Moreover, these factors suffice to explain how stimulus characteristics moderate communication effects. Other characteristics of a communication stimulus can either be considered as already represented in one of the five aforementioned factors or left out of the analysis because their moderating effects on brand-knowledge structure are, from a behavioural perspective, negligible.

Modality

Modality broadly refers to one of the main avenues of sensation, namely sight, hearing, smell, taste or touch. More specifically, **modality** refers to the way in which information is presented, which may include, for example, sight, sound, motion and the spoken or the written word.

Modality can be distinguished in terms of number and nature (Wright, 1981; Edell, 1988; Keller, 2001). One or more presentation modalities can be used. With respect to nature, modality can be static, dynamic, interactive or customised, among other.

Modality plays an important role in moderating communication outcomes on brand knowledge. Modality of a communication stimulus is an important contextual feature that influences the encoding and retrieval of information. All stimuli contain contextual features, which are encoded when an individual evaluates information from the stimulus. Modality may thus generate modality-related responses, which reflect either contextual features or the interaction between the contextual features and the communication stimulus, or both (MacInnis and Jaworski, 1989). Moderating effects of stimulus modality can be better understood using the encoding specificity principle, identified by psychologist Tulving (1973). According to this principle, information encoded in memory includes aspects of the stimulus presentation context along with information from the stimulus. Hence, individuals automatically encode modality-related information

(Lehman, 1982; Lehman and Mellinger, 1984; Lehman, Mikesell and Doherty, 1985).

Modality also moderates corporate communication effects by enhancing or detracting a constituency's opportunity to process information from the stimulus. When the presentation of stimulus information is limited, lack of processing opportunity may arise, the contrary also being true (MacInnis, Moorman and Jaworski, 1991). For example, when individuals control the pace at which the message claims are delivered (i.e. they are exposed to self-paced media like magazines), the opportunity to process information from the stimulus is greatly enhanced (Krugman, 1965; Wright, 1974; Chaiken and Eagly, 1976). In turn, processing opportunity affects psychological responses to communication. In addition, modality may improve retrieval of information. The likelihood of retrieval improves as the degree of overlap between the contextual features encoded in the memory trace and those present in the retrieval situation increases. Collectively, the work cited suggests that:

10. Stimulus modality performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.

Message

Message refers to the meaning that a communication stimulus tries to convey. In a marketing context, message is a summary of why a particular target audience, buying in a particular category or for a particular category need should buy a particular brand (Rossiter and Percy, 1997, p. 160).

Messages differ in many ways, including amount and nature (Keller, 2001). The amount refers to how much information, if any, the communication stimulus tries to convey. The nature of the message refers to the kind of information conveyed: tangible information, intangible information or the company name itself. Of course, many other aspects distinguish the nature of the message including order of presentation, existence of a conclusion, message sidedness and existence of a refutation (Belch and Belch, 2004).

Message moderates corporate communication effects in a number of ways. Message claims generate cognitive and emotional responses (i.e. attributes, benefits and attitudes) that become linked to the corporate brand node in constituencies' minds. These responses are generated in reaction to company-related information from the stimulus (Cacioppo and Petty, 1980; Rethans, Swasy and Marks, 1986; MacInnis and Jaworski, 1989).

Message also affects motivation, opportunity and ability to process brand information from the stimulus, which, in turn, affects resulting brand-knowledge structures stored in constituencies' minds. The product category represented in a communication stimulus may stimulate the type of need (Vaughn, 1980). In addition, the message's amount and nature can affect processing opportunity. If, for example, the stimulus contains little information, little information can be processed (MacInnis and Jaworski, 1989). Finally, message difficulty reduces processing ability (Yalch and Elmore-Yalch, 1984). Therefore:

11. Stimulus message performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.

Execution

Execution broadly refers to the act, mode or result of stimulus presentation. More specifically, **execution** refers to the way in which the message is implemented (Belch and Belch, 2004).

Information may be conveyed in virtually an infinite number of ways. Execution, for example, varies in terms of likeability, extremity and its use of colour (Rossiter and Percy, 1997, p. 216 ff.).

Similar to the message, execution moderates communication effects in various ways. Executional appeals generate cognitive and emotional responses that, in turn, affect brand-knowledge structures (Petty and Cacioppo, 1986; MacInnis, Moorman and Jaworski, 1991). These responses arise from non-company related information from the stimulus (Cacioppo and Petty, 1980; Rethans, Swasy and Marks, 1986; MacInnis and Jaworski, 1989).

Execution also affects a constituency's attention to a corporate communication stimulus. Some executional appeals may automatically elicit attention (MacInnis and Jaworski, 1989). For example, the greater the use of executional appeals that stimulate hedonic needs, the greater the individuals' motivation to evaluate the stimulus (MacInnis, Moorman and Jaworski, 1991). Other executional appeals are likely to automatically enhance attention to the stimulus, including novelty, complexity and figurality (Berlyne and Ditkofsky, 1976; Fiske and Taylor, 1991). Attention, in turn, affects intensity of processing, that is, processing goals.

Execution may also affect individuals' motivation, opportunity or ability to process information from the stimulus (MacInnis, Moorman and Jaworski, 1991). Executional appeals may stimulate the type of needs. Specifically, utilitarian or expressive appeals stimulate individuals' utilitarian or expressive needs respectively (MacInnis and Jaworski, 1989). In turn, these activated needs affect individuals' motivation for processing information from the stimulus. Execution may also influence processing ability. A picture alone, for example, without verbal accompaniment, may provide ambiguous information that constrains processing ability. On the other hand, a 'framed' picture, with a verbal label, creates more brand cognitive responses, greater recall of brand information and less response time to questions about brand information (Edell and Staelin, 1983). Execution may also affect processing opportunity by impeding the encoding process or the time spent on processing information from the stimulus. Executional appeals such as music or an attractive source, for example, can distract attention from the message (Chaiken and Eagly, 1983; Park and Young, 1986). Hence:

12. Stimulus execution performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.

Time

Time comprises all temporal variables specific to the exposure situation that the company controls.[20] Time is specified in units ranging from time of day to season of the year, as well as relating to some past or future event (Belk, 1975).

In a marketing context, representative temporal variables include length of exposure, frequency of exposure over a given period of time and time lag between exposures.

Time is an important moderator of communication effects. Temporal aspects of the exposure situation may enhance or hinder information processing (MacInnis and Jaworski, 1989). Temporal factors may thus impede the encoding process or the time spent on processing brand information. More specifically, when the temporal presentation of brand information is limited, there is a lack of processing opportunity. For example, shorter stimuli have been found to have effects that imply limited processing opportunity (LaBarbera and MacLachlan, 1979; Moore, Hausknecht and Thamodaran, 1986). In contrast, increased message repetition facilitates processing because it provides greater encoding opportuni-

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20 The conceptualisation of the 'time' and 'place' moderators in this thesis differ from those offered by Keller (2001), who considers them non-manageable situation-related factors moderating communication effects. In contrast, these factors are here considered manageable stimulus-related moderators. It is thus assumed that some spatial and temporal aspects of the stimulus, such as when and where it occurs, are controllable by the company.

ties (Cacioppo and Petty, 1980, 1985; Obermiller, 1985; Batra and Ray, 1986; Rethans, Swasy and Marks, 1986). Several repetitions of a stimulus are indeed necessary to provide sufficient brand-processing opportunity (Krugman, 1972). Therefore:

13. Stimulus time performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.

Place

Place comprises all spatial factors specific to the exposure situation that the company controls.[21]

A fundamental spatial aspect of the exposure situation is whether its factors make exposure to the communication stimulus possible, that is, whether a stimulus reaches the individual or not. Other representative factors of the exposure situation include physical surroundings and social surroundings (Belk, 1975). Physical surroundings include décor, sounds, aromas, lighting, weather and visible configurations of merchandise or other material surrounding the stimulus. It also includes the extent and nature of competition in the exposure situation. Social surroundings refer to other individuals present, their characteristics, their apparent roles and the interpersonal interactions occurring.

Place moderates communication effects. Similar to temporal variables, spatial aspects of the exposure situation may affect a constituency's opportunity of information processing (MacInnis and Jaworski, 1989). More specifically, spatial factors may impede the encoding process. For example, distraction inherent in the exposure situation has been found to inhibit information processing (Webb, 1979; Mitchell, 1980; MacKenzie, Lutz and Belch, 1986; Lord and Burnkrant, 1993; Elliott and Speck, 1998).

Spatial aspects may also affect an individual's ability to process brand information. The greater the use of message-related context, the greater the individual's ability to process brand information (MacInnis, Moorman and Jaworski, 1991). For example, the type of media vehicle (e.g. a sports magazine) may enhance comprehension of metaphors that may, in other exposure situations, be difficult to process (Ward and Gaidis, 1990). Indeed, the context influences the interpretation of the message. For example, a happy TV programme generates more positive cognitive responses, and, to some extent, better recall, than a sad programme

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21 This conceptualisation differs from that proposed by Keller (2001). See footnote 20 for a brief discussion.

(Goldberg and Gorn, 1987; Broach and Page, 1995; Pelsmacker, Geuens and Anckaert, 2002). Hence:

14. Stimulus place performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.

3.3. Critique of the Behavioural Foundations and the Behavioural Framework

The previous section summarised empirical findings on corporate brand knowledge and developed a behavioural framework for explaining how corporate communication works. This section assesses the relative merits of the proposed framework to explain psychological and behavioural responses to corporate communication stimuli. First, it looks at some similar existing frameworks for explaining how communication works and discusses their similarities and differences with the one proposed here. The proposed framework is first compared with brand equity frameworks and then with attitude formation frameworks, two common models found in marketing and consumer research literature. This section then critically evaluates the behavioural foundations of the research and assesses the significance of the proposed framework for explaining how corporate communication works, concluding that the framework developed here seems more appropriate for this task than previously developed psychological frameworks.

3.3.1. Comparative critique

To assess the relative advantages of the proposed framework, it is compared here with previously developed models that attempt to examine how communication works. This comparison is limited because of space constraints and, in order to conduct a more precise analysis, only to those frameworks that share a number of features with the one proposed here (see Vakratsas and Ambler, 1999, for a similar approach). Firstly, these similar frameworks have to be based on existing theory and research in marketing and consumer behaviour. Therefore, frameworks stemming from public relations literature (e.g. Grunig and Hunt, 1984), which do not always focus on persuasion, cannot be used for comparison. Secondly, these models have to be recent and reflect a systematic approach to understanding how communication works. Thirdly, they have to be based on empirical research and consider psychological responses to communication, that is, they have to follow an S-O-R paradigm for explaining human actions. Fourthly, these similar frameworks have to explicitly consider corporate brands or be applicable to them without any major adaptations. Finally, they have to be applicable to corporate communication in general, that is, they have to be either explicitly applicable to all kinds of corporate communication stimuli or easily extendable to be able to incorporate them. Hence, more specific frameworks that apply to a single communication tool (e.g. Schneider, 1991; Glogger, 1999; Nufer, 2002) are excluded.

Considering the criteria described above, a number of similar frameworks can be found in marketing and consumer research literature, which broadly come from two research streams and reflect a divergent focus of analysis. Brand equity frameworks put their emphasis on predictors and outcomes of information processing, whereas attitude formation frameworks focus on specifying the nature of information processing itself. Some influential frameworks from these research streams are discussed in the remainder of this subsection, particularly their theoretical backgrounds, key features, as well as their similarities and differences with the framework developed here. This comparative critique shows that the proposed framework incorporates many of the features of brand equity frameworks and attitude formation frameworks, but also displays unique features not found in previous models, namely, its applicability to any corporate communication stimuli and its thorough analysis of moderators of corporate communication effects.

3.3.1.1. Brand equity frameworks

The behavioural framework developed here can be meaningfully compared with brand equity frameworks. They are referred to as such because they focus on the value or ‘equity’ of a brand, as well as on its antecedents and consequences. Two extensively cited models are evaluated here: the consumer-based brand equity framework proposed by Keller (1993; 1998; see also Esch, 1993) and the simple corporate associations framework proposed by Brown (1994; 1998). The framework developed here adopts many notions from brand equity frameworks, particularly the focus on enduring memory effects, the representation of brand knowledge in constituencies’ minds and the explicit consideration of behavioural responses, yet it also differs from these frameworks in a number of ways.

Keller’s consumer-based brand equity framework

The brand equity model proposed by Keller, termed the consumer-based brand equity framework, was first presented in an award-winning journal article in

1993 (Keller, 1993) and further elaborated in 1998 (Keller, 1998).[22] This model was later extended to focus on corporate brands explicitly (Keller, 2000). In Aaker's words, this model represents 'real substance' (Keller, 1998, back cover). The main features of this brand equity framework are its strong marketing and consumer research background and its consideration of communication and brands from the perspective of the consumer. It is indeed a comprehensive behavioural and managerial account of brand equity, which covers that which consumers know about brands and that which such knowledge implies for marketing programmes.

According to Keller's framework, constituency responses to corporate communication are explained as follows (see Figure 3.4): a communication stimulus affects knowledge structures in constituencies' minds, namely brand knowledge, which consists of two dimensions, awareness and image, both similarly conceptualised by Keller as in subsection 3.2.2. When a corporate brand is familiar and constituencies hold some strong, favourable and unique corporate associations in their memories, corporate brand equity may occur. Corporate brand equity is defined as 'the differential response by consumers, customers, employees, other firms, or any relevant constituency to the words, actions, communications, products or services provided by an identified corporate brand entity' (Keller, 2000, p. 115). Hence, corporate brand equity occurs when a relevant constituency responds more favourably to a company activity than if the same activity were to be attributed to an unknown or fictitious company. For the company, a number of benefits result from corporate brand equity, including greater loyalty, less vulnerability to competitors' actions and the like.

The consumer-based brand equity framework shares many features with the framework developed here. Both frameworks follow an approach that focuses on predictors and outcomes of information processing instead of on processing itself. They both consider corporate advertising and ad-like communication activities as an antecedent to constituency responses. Moreover, Keller's framework and the framework developed here share a similar view on brand knowledge, which is represented in consistency with the associative network memory model and is similarly operationalised. Both models also recognise that brand knowledge structures may affect actual behaviour and explicitly consider constituency's behavioural responses in the analysis.

22 Keller was selected as the recipient of the Harold H. Maynard Award for the best article on marketing theory and thought among all articles published in the AMA's *Journal of Marketing* in 1993.

Despite these many similarities, Keller's model differs in a number of aspects from the framework developed here. Firstly, his model focuses on various other brand-knowledge antecedents besides corporate communication stimuli. According to Keller's model, antecedents are '(1) the products a company makes, (2) the actions it takes, and (3) the manner with which it communicates' (Keller, 2000, p. 118). The framework proposed here, however, focuses on a single antecedent, corporate communication stimuli, which allows for a more thorough analysis of the communication outcomes and processes.

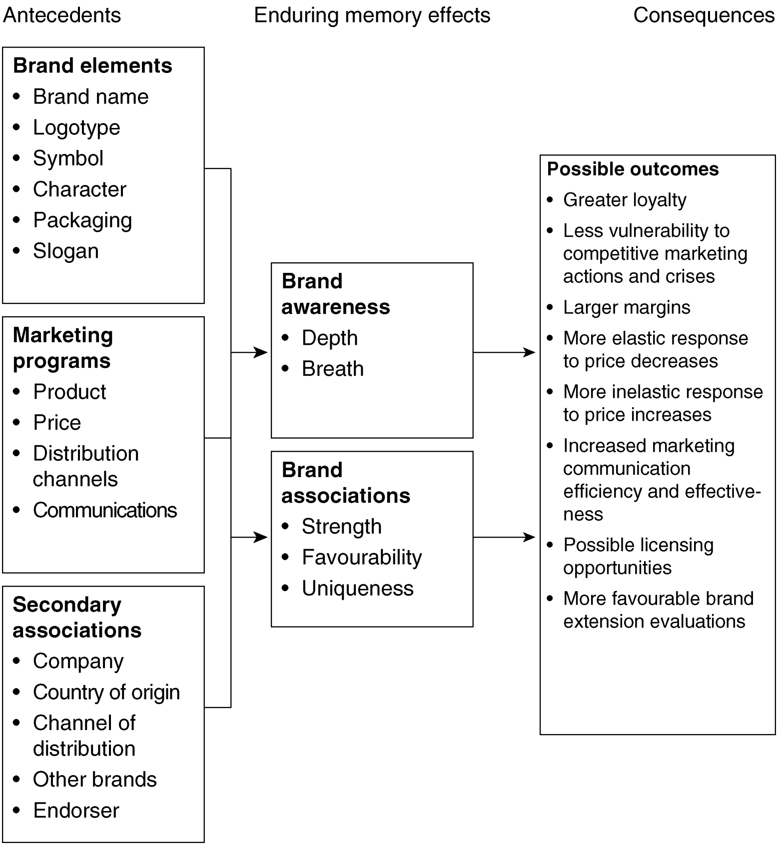

Figure 3.4. Keller's consumer-based brand equity framework. Based on Keller (1998, p. 69).

Secondly, in his model, Keller takes into account the hierarchy of effects as proposed by McGuire (1969). Implicitly, he exclusively considers prior brand knowledge as the constituency-related moderator of communication effects. In contrast, the framework proposed here, consistent with more current views on constituency-related moderators of communication effects, considers prior knowledge *and* processing goals as moderating conditions.

Thirdly, Keller's discussion only tangentially addresses stimulus-related moderators. For example, he provides criteria for choosing brand elements (e.g. memorability, meaningfulness) that implicitly consider moderating conditions (see Keller, 1993, 1998, p. 131 ff.). Nevertheless, his analysis of moderating conditions is implicit and lacks systematism. On the other hand, the framework developed here explicitly identifies and classifies stimulus-related moderators, which are specifically conceptualised and fully operationalised.

Brown's corporate associations framework

The brand equity model proposed by Brown was partially developed in an unpublished Ph.D. dissertation (Brown, 1994) and then later published in a journal article (Brown, 1998). This framework reflects a strong behavioural scientific background, based on direct empirical support. The framework is indeed based on an overview of theory and research in marketing and consumer research.

According to Brown's behavioural framework, constituency responses to corporate communication can be explained as follows (see Figure 3.5): a communication stimulus affects corporate associations in constituencies' minds. These associations are understood as 'the cognitions, affects (i.e. moods and emotions), evaluations (attaching to specific cognitions or affects), summary evaluations, and/or patterns of associations (e.g. schemata, scripts) with respect to a particular company' (Brown, 1998, p. 217). More specifically, these associations refer to corporate abilities and success, interaction with exchange partners, interaction with employees, social responsibility and contributions, specific marketing considerations and product considerations. In turn, these associations may influence consumer behaviour. Two primary consequences of corporate associations may occur: product responses (i.e. beliefs and evaluations related to the product, as well as actual product purchase and use) and responses to the company, mainly trust and commitment towards the firm. These behavioural consequences are in part moderated by various factors (e.g. an individual's product category involvement and company knowledge, a company's diversification and branding strategy), which strengthen or lessen the effects of corporate associations on consumer responses to the product and the company.

Brown's framework shares some features with the framework developed here. Both models focus on predictors and outcomes of information processing rather than processing. Brown's model, as well as the framework proposed here, explicitly considers corporate advertising and ad-like communication activities as an antecedent of corporate brand knowledge. This last psychological construct is represented in both frameworks using an associative memory formulation. Finally, both frameworks explicitly consider a constituency's behavioural responses to communication.

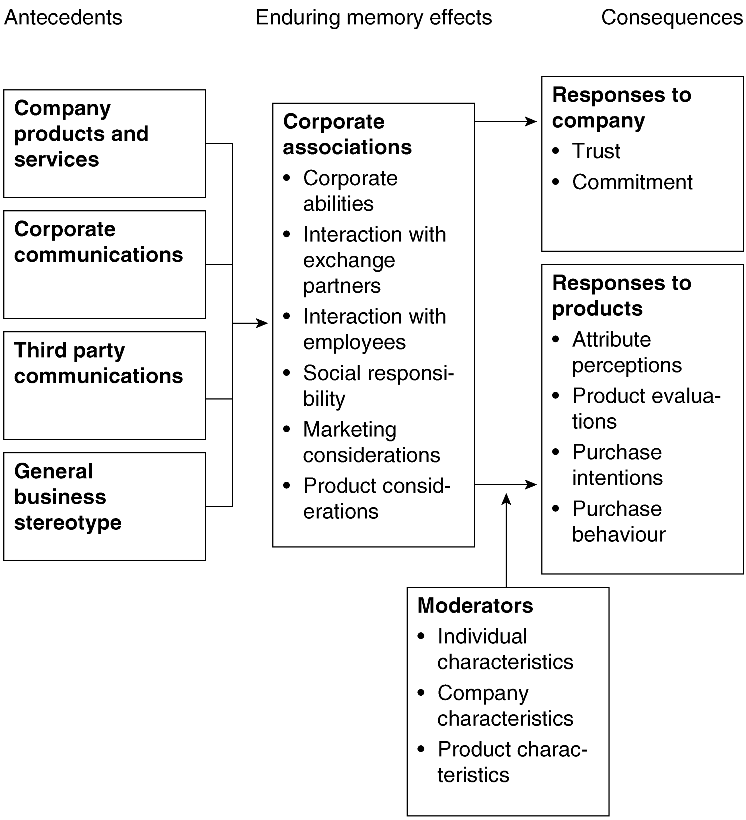

Figure 3.5. Brown's corporate associations framework. Based on Brown (1998, p. 220).

Despite these many similarities, the framework proposed by Brown differs in a number of ways from the framework developed here. First, Brown's model identifies and analyses four antecedents of corporate brand knowledge: characteristics of the company's goods and services, corporate communications, third party communications and a general business stereotype. Brown thus considers diverse antecedents of corporate brand knowledge. The model proposed here, however, focuses exclusively on corporate communications.

Secondly, Brown's framework does not take moderators of communication effects into consideration whereas these moderators are explicitly identified and discussed in the framework developed here.

Thirdly, despite having the same associative memory model foundations, Brown's framework focuses on only one dimension of corporate brand knowledge, namely corporate image. The proposed framework, more consistent with current branding theory, considers two dimensions of the corporate brand knowledge construct.

Finally, Brown's model discusses outcomes of corporate brand knowledge related to marketing audiences alone (i.e. consumers, business customers and channel intermediaries). The framework developed here considers other company constituencies as well.

In short, the framework developed here adopts many notions, yet differs from both influential brand equity frameworks in a number of ways. Many features of brand equity frameworks have been incorporated into the model developed here:

- Focus of the analysis on mental states (i.e. enduring memory effects from a corporate communication stimulus).
- Representation of corporate communication effects as brand-knowledge structures stored in constituencies' minds, which is consistent with memory research, most branding literature and recent developments in marketing communication literature.
- Explicit consideration of behavioural responses to corporate brand knowledge.

However, the proposed framework differs from brand equity frameworks in two important aspects:

- Focus on a single antecedent of corporate brand knowledge, namely corporate advertising and ad-like communication activities, rather than on numerous and disparate brand-knowledge influences.
- A more detailed analysis of the factors which moderate corporate communication effects, partly as a consequence of the focus on a single antecedent.

3.3.1.2. Attitude formation frameworks

There is a second group of models, generically termed attitude formation frameworks, similar to the one developed in last section. This name reflects the focus of study of these models, which analyse in detail the process of how attitudes towards a brand are created, increased, maintained or modified. Two influential frameworks are evaluated here: the elaboration likelihood model by Petty and Cacioppo (1981; 1986) and the integrative attitude-formation framework proposed by MacInnis and Jaworski (1989; MacInnis, Moorman and Jaworski, 1991).[23] The framework developed here shares a number of similarities, such as the focus on a single brand-knowledge antecedent and the extensive examination of communication moderating conditions, yet it is different to the most influential attitude formation frameworks found in marketing and consumer research literature.

Petty and Cacioppo's elaboration likelihood model

The widely-popular attitude formation model proposed by social psychologists Petty and Cacioppo, known as the elaboration likelihood model (ELM), was originally presented in 1981 (Petty and Cacioppo, 1981). It was substantially extended in 1986 (Petty and Cacioppo, 1986) to address a number of issues and better account for factors moderating communication effects. The ELM represents a general theory of attitude change that applies to all kinds of persuasive communication (i.e. stimuli that directly attempt to change attitudes). Its greatest strength was that it brought parsimony to attitude research by introducing involvement as a variable moderating communication effects (MacInnis and Jaworski, 1989).

According to the ELM, corporate communication effects occur as follows (see Figure 3.6): when exposed to a persuasive communication (e.g. corporate advert), a constituency elaborates on this stimulus. Constituency, stimulus and situational characteristics affect the amount and nature of issue-relevant elaboration in which the exposed constituency is willing or able to engage to evaluate a message. Variables affecting motivation or ability for processing a message in a relatively objective manner can affect communication outcomes by enhancing or reducing argument scrutiny. As motivation or ability to process message arguments

23 It should be noted that many other attitude formation frameworks (e.g. Mitchell, 1981; Greenwald and Leavitt, 1984) fulfill the five criteria mentioned above. These other models however, are not evaluated here because many of their features have been incorporated in more recent ones. See MacInnis and Jaworski (1989) for a review on some of these earlier attitude formation models.

is decreased, peripheral cues become relatively more important determinants of persuasion. Conversely, as argument scrutiny is increased, peripheral cues become relatively less important determinants of persuasion.

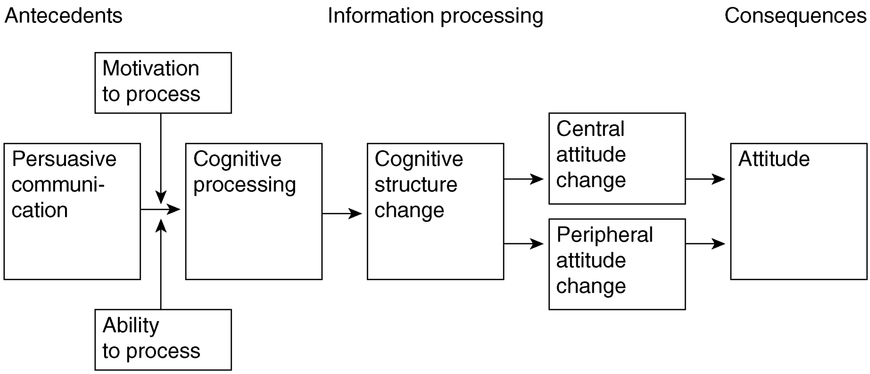

Figure 3.6. Petty and Cacioppo's elaboration likelihood model. Based on Petty and Cacioppo (1986, p. 4).

The attitude formation process emphasises one of two distinct routes to attitude change. The 'central route' is followed when the constituency carefully and thoughtfully evaluates the information that is central to the true merits of the issue. Attitude is the result of this process. When a 'peripheral route' to persuasion is followed, however, the attitude towards the company results from the presence of simple positive or negative cues in the exposure situation. Processing the issue-relevant arguments requires less effort from the constituency. Therefore, different characteristics of the communication may be more or less effective, depending on the constituency's motivation and ability goal. Attitudes that result mostly from a central route are more enduring, affect constituency behaviour more predictably and are more resistant to counter persuasion than attitudes resulting mostly from peripheral cues.

The ELM shares some important notions with the framework proposed here. Both frameworks attempt to explain constituency responses to persuasive communication alone. The ELM, as well as the framework developed here, explicitly assesses the conditions inherent in the stimulus, the individual or the viewing context, which moderate psychological responses to communication. Both frameworks recognise the moderating effects of prior knowledge and processing goals. Prior knowledge represents those moderating factors that affect the intensity of processing and direction of attention without the necessary intervention of conscious intent; processing goals refer to those factors that affect an individual's conscious intentions of evaluating information from the stimulus. These factors affect the likelihood of processing resources being allocated to the stimulus. Finally, both frameworks agree that exposure to persuasive communication may produce an attitude change, that is, communication effects.

Despite these many commonalities, the ELM is different from the framework developed here in a number of ways. Firstly, the ELM, like any other attitude formation framework, focuses on the nature of information processing, whereas the proposed model concentrates more on predictors and outcomes of information processing.

Secondly, the ELM is a general attitude change model which has reportedly been applied in fields such as psychotherapy and counselling, as well as in commercial persuasive communication such as mass media advertising and personal selling. In contrast, the model developed here only applies to corporate advertising and ad-like communication activities.

Thirdly, the ELM considers individual responses to communication solely in terms of their favourability. The model proposed here, on the other hand, explicitly takes note of psychological responses beyond attitude. Indeed, all kinds of associations may become linked to the corporate brand as a result of exposure to persuasive communication, and all these associations are taken into account in the proposed model.

Fourthly, the ELM, while identifying and evaluating moderators of communication effects, does not classify or analyse them further. The model proposed here, however, provides a more detailed analysis of these moderators.

Lastly, contrary to the ELM, potential behavioural outcomes are explicitly considered in the framework developed here.

MacInnis and Jaworski's integrative attitude formation framework

The attitude formation model proposed by MacInnis and Jaworski was initially presented in 1989 (MacInnis and Jaworski, 1989) and promptly extended to identify and evaluate stimulus characteristics that moderate information processing (MacInnis, Moorman and Jaworski, 1991). This integrative framework, more strongly grounded in theories of consumer psychology, explicitly accommodates various brand attitude formation processes into one single framework. It goes beyond the two-route paradigm of persuasion by proposing six attitude formation processes. More specifically, it extends the ELM to include processing operations and attitude formation processes at higher and lower levels of processing. Its main features include a very detailed discussion of processes under various motivation levels, a detailed explanation of major psychological constructs such as attention, capacity, mental operations, cognitive and emotional responses and their explicit link to brand attitudes, as well as a thorough treatment of constituency-related moderators and (incorporating the 1991's follow-on article) stimulus-related moderators.

This framework explains corporate communication effects as follows (see Figure 3.7): exposure to a corporate communication stimulus triggers a series of psychological processes, whose nature depends on the constituency motivation, opportunity and ability to process brand information from the stimulus. Motivation, that is, the desire to process brand information in the stimulus, depends on the constituency needs — either utilitarian or expressive — and is moderated by ability and opportunity. Motivation for processing brand information ranges from very low to very high, which affects the direction of attention and intensity of processing and, in turn, the level of brand processing. According to the motivation for processing brand information, different cues of the communication stimulus are evaluated. Also depending on motivation, quantitatively different processing mechanisms take place: from simple feature analysis to role taking and other constructive processes. Results of these processing mechanisms are cognitive and emotional responses. Finally, depending on the level of brand processing, alternative attitude formation models occur — from mood-generated effects to self-generated persuasion. Brand attitude is thus the result of message-related or execution-related responses.

This integrative framework lends many notions to the model developed here. Both frameworks consider the stimulus as 'advertising' in a broad sense (see Rossiter and Percy, 1997, p. 3 f.), which, other than adverts in a mass medium, refers to events, exhibitions, sponsorships and the like. In addition, both frameworks recognise that conditions inherent in the stimulus, the individual or the exposure situation may affect motivation, ability and opportunity to process information from the communication stimulus. In the framework developed here, ability and needs relate to the prior knowledge construct, motivation relates to the processing goal construct and opportunity is partially represented here by the time and place moderators. In turn, these constituency-related and stimulus-related factors are considered by both models to moderate corporate communication effects. Finally, MacInnis and Jaworski's framework, as well as the framework developed here, considers outcomes of communication exposure to represent all kinds of cognitive and emotional responses as well as attitudes.

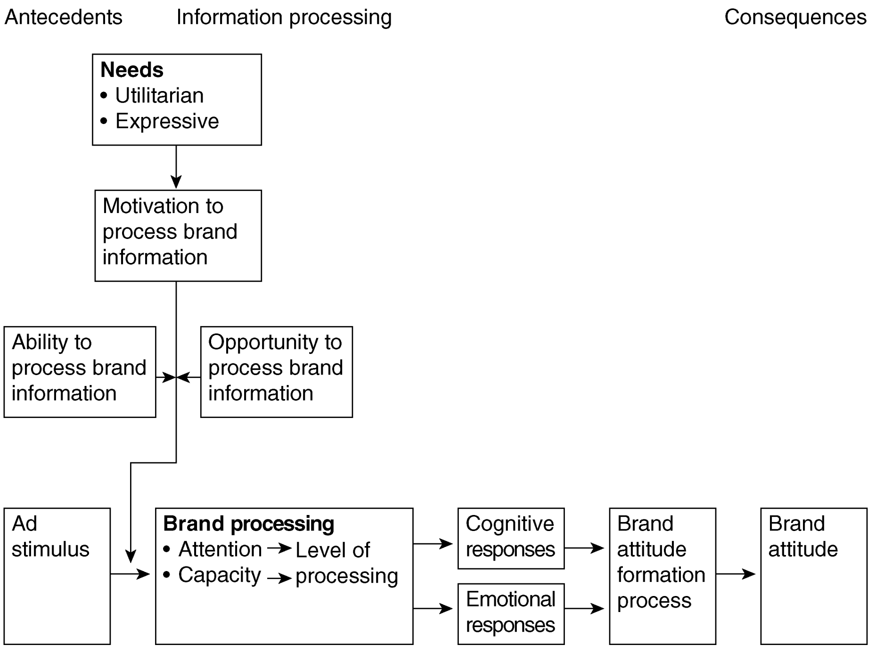

Figure 3.7. MacInnis and Jaworski's integrative attitude formation framework. Based on MacInnis and Jaworski (1989, p. 3).

The framework by MacInnis and Jaworski differs in a number of points from the model developed here. First of all, the focus of analysis of their attitude formation model is information processing, whereas the proposed framework focuses on predictors and outcomes of this processing.

Secondly, their attitude formation model, as its name suggests, focuses mostly on attitudes and the way they are formed from beliefs, evaluations and other associations, whereas the proposed framework follows an associative memory formulation.

Thirdly, while both models exhaustively identify and classify the moderators of communication effects, MacInnis and Jaworski's model does it from a strong information processing perspective, considering motivation, opportunity and ability, whereas the model developed here classifies moderators in a way useful for making managerial decisions (i.e. from a managerial perspective), as shown in the next chapter.

Finally, in addition to the psychological responses to communication considered by MacInnis and Jaworski, the framework developed here also explicitly explores actual constituency behaviour.

In short, the proposed framework shares a number of features, yet is different to the most influential attitude formation frameworks found in marketing and consumer research literature. Some notions from attitude formation frameworks that have been considered in the framework developed here include:

- Focus on persuasive communication as the sole antecedent to corporate brand knowledge.
- Explicit and systematic analysis of constituency-related and stimulus-related factors that moderate the relationship between a corporate communication stimulus and the resulting corporate brand knowledge in constituencies' minds.

However, the framework proposed here differs from attitude formation models in a number of ways, including:

- Analysis of psychological responses to communication based on enduring memory effects rather than immediate psychological outcomes, the latter being more difficult to conceptualise, operationalise, measure and empirically assess (see subsection 3.1.3).
- Representation of corporate communication effects consistent with an associative memory formulation, rather than concentrating on attitude towards the company and neglecting other types of corporate associations. In addition to attitudes, these other associations may also affect constituency behaviour to the marketing of the corporate brand and are, for that reason, explicitly taken into account in the proposed framework.
- Explicit consideration of constituency behaviour in the analysis, rather than concentrating on psychological responses to communication.

3.3.2. Discussion of the framework

The framework developed in this chapter is a new attempt to explain how a certain communication stimulus creates psychological and behavioural responses. As such, the framework is strongly grounded in behavioural science theory, particularly as it is currently applied to brands. The framework attempts to explain the link between communication stimulus and behavioural responses rather than replacing the link with a probabilistic mechanism. Specifically, it structures the non-observable elements of the communication process. By reconstructing and representing constituency responses to communication, the framework can thus be considered a structural model for explaining individual behaviour (Berndt, 1996, p. 42 f.). More specifically, the proposed framework represents a total model of individual behaviour because it considers all factors affecting individual responses as well as their interactions (Berndt, 1996, p. 54).

The behavioural framework proposed in this chapter can be classified as 'integrative' in the typology developed by Vakratsas and Ambler (1999). Their comprehensive typology considers the theoretical assumptions of frameworks developed for understanding how communication works, paying special attention to the framework's underlying sequence of communication effects, if any. The framework proposed here integrates various theoretical assumptions on the hierarchy of communication effects and assumes that the sequence of particular psychological and behavioural effects depends on 'filters' such as prior corporate brand knowledge and processing goals. In other words, the hierarchy of effects is not fixed in the framework developed here, but depends on the constituency's environment.

The behavioural framework developed here assumes that a change in the environment leads to a change in affects and cognitions, which subsequently leads to a change in behaviour. However, it is important to recognise that the S-O-R framework proposed here is a reciprocal system. Any of the three major framework constructs can be either a cause or an effect of a change in one or more of the other elements (see Peter and Olson, 2005, p. 25 ff.). For example, suppose that a student has no formed opinion about tobacco companies. On the street, and almost without thinking, she signs a petition against 'big tobacco'. Now, as a result of this action, she dislikes tobacco companies. In this case, a change in the environment (being asked to sign a petition) led to a change in behaviour (signing the petition), which led to a change in her affects (realising that tobacco companies are evil). Another possibility is that an employee becomes dissatisfied with his employer and, as a result, he visits the corporate websites of his employer's competitors and applies for a job at the competition. Here, a change in affects (dissatisfaction) led to a change in the employee's environment (visiting competitors' websites), which led to a change in his behaviour (applying for an job at a competitor). Hence, it is not always the placement of a communication stimulus in the environment which changes how constituencies think and feel about a corporate brand, which in turn changes constituency behaviour. The chain of change could start with any of the three major framework constructs.

The use of behavioural science theory for model-building exposes the analysis to potential flaws. The main criticism relates to the use of theoretical constructs to explain inner mental processes. These theoretical constructs are difficult to define, operationalise, measure and empirically assess (Bruhn, 1997, p. 26 ff.; see also Churchill and Iacobucci, 2002, p. 400 ff.). Nevertheless, behavioural science theory is hitherto the most widely accepted basis for explaining how communication works, as confirmed by the amount of theoretical and empirical research of a behavioural nature published in recent years.

As well as behavioural science theory, the proposed framework uses concepts and employs research findings from other academic disciplines such as public relations and the emerging fields of corporate brand management and corporate communication. Influences of these disciplines are particularly manifest in the conceptualisation of communication stimuli and communication receivers, as well as in the identification and discussion of antecedents and consequences of corporate brand knowledge.

The framework and the set of related conclusions were developed following a hypothetico-deductive method. Similar to the work of other researchers seeking to develop new study areas in the advertising and communication field (e.g. Bloch, 1995; Biehal and Sheinin, 1998; Glogger, 1999), this research captures current theory on information processing from communication stimuli and extends it to encompass a new aspect (i.e. *corporate* communication stimuli) affecting memory structures. The resulting framework can thus be considered a systemic model because it represents an ideal model of constituency behaviour built on relevant general knowledge about individual behaviour (Berndt, 1996, p. 92 ff.).

This research draws fourteen conclusions which relate a corporate advert or any ad-like communication stimuli to their psychological and behavioural responses. These empirical findings, summarised in Table 3.5, draw on communication and information-processing theory. The conclusions drawn consider the direction of the relationships among the different constructs of the framework. However, they do not provide any information about the strength of these relationships. Hence, these conclusions are to be seen as a starting point for developing precise research propositions and hypotheses. Their usefulness as a starting point is shown in the illustrative example in the next chapter. Moreover, these conclusions, although derived from robust empirical findings, are in need of empirical confirmation. It is necessary to test their acceptability or falsity by determining whether their logical consequences are consistent with observed communication phenomena. In short, the value of these conclusions lies in stimulating future research and in providing specific directions for empirical inquiry.

Table 3.5. Theoretical principles for the proposed behavioural framework and its most robust empirical findings summarised in fourteen conclusions.

Conclusions
1. A corporate communication stimulus affects corporate brand knowledge in constituencies' minds.
2. The higher (lower) the level of corporate brand awareness, the more positive (negative) the corporate brand knowledge in constituencies' minds.
3. The more positive (negative) the corporate image, the more positive (negative) the corporate brand knowledge in constituencies' minds.
4. The higher (lower) the level of corporate brand recognition and the higher (lower) the level of corporate brand recall, the higher (lower) the level of corporate brand awareness.
5. The stronger (weaker), more (less) favourable and more (less) unique the attributes, benefits and attitudes linked to the corporate brand node in constituencies' minds, the more positive (negative) the corporate image.
6. The more positive (negative) the corporate brand knowledge in constituencies' minds, the more (less) favourable the constituency behaviour to stimuli identified with the corporate brand.
7. The effects of a corporate communication stimulus on corporate brand knowledge in constituencies' minds are moderated by constituency characteristics and stimulus characteristics.
8. Constituencies' prior corporate brand knowledge moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.
9. Constituencies' processing goals moderate the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.
10. Stimulus modality performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.
11. Stimulus message performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.
12. Stimulus execution performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.
13. Stimulus time performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.
14. Stimulus place performance moderates the effect of a corporate communication stimulus on corporate brand knowledge in constituencies' minds.

Despite being the most widely accepted method for scientific inquiry, the hypothetic-deductive method has some drawbacks. Related to its application to psychological phenomena, these drawbacks concern the subjective decisions in developing the propositions, in collecting data and in proving causal relationships among the hypothesised constructs (Nufer, 2002, p. 163).

The proposed framework incorporates features from several previously developed frameworks. Similar to other behavioural models found in marketing and consumer research literature, the framework developed in this chapter focuses on persuasive communication from the company as the sole antecedent to brand-knowledge structures stored in constituencies' minds. The framework explicitly and systematically analyses both constituency-related and stimulus-related factors that moderate psychological responses to communication; it focuses the analysis on enduring memory effects, represents these psychological responses consistent with an associative network memory model and explicitly considers behavioural responses to communication. While many of these notions stem from different previously developed models, the value of this framework lies in their integration.

Apart from integrating features from previously developed models, the framework proposed here bears some unique features, not found in extant theoretical expositions of how communication works. The proposed framework applies to the whole array of a company's corporate communications. In the proposed framework, a corporate communication stimulus is not restricted to a particular medium or form of communication, but includes any activity that directly reaches the company's ultimate constituencies, including mass media advertising, corporate design, events and exhibitions. The conceptualisation of stimulus is not as broad as that suggested by brand equity frameworks (which consider many disparate antecedents) yet is not as narrow as that proposed by attitude formation frameworks, which often consists of a particular form of communication such as mass media advertising or events or sponsorship. The value of this framework thus resides in its unique ability to interpret and compare the effect of any corporate communication stimuli from the company.

In addition, the proposed framework thoroughly considers constituency-related and stimulus-related moderators of corporate communication effects. Specifically, it provides a sound theoretical basis for identifying and classifying these moderating factors. These factors are identified according to their information-processing outcomes. These moderators are then classified, not according to behavioural aspects, but according to aspects related to their manageability.

Indeed, from a managerial perspective, the classification proposed here seems to be more useful than those previously offered in marketing and consumer research literature. This classification is more adequate for managerial decision-making than that proposed by Keller (2001), which, despite being useful from a research viewpoint, does not consider manageability aspects. The classification proposed here, on the other hand, distinguishes situational variables that are manageable from those not controllable by the manager. This classification is also more adequate for making communication decisions than the ability-motivation-opportunity classification discussed by MacInnis, Moorman and Jaworski (1991), which, despite being strongly grounded in theories of consumer psychology, does not consider managerial aspects. The proposed classification of stimulus-related moderators, on the other hand, better reflects the communication planning process (i.e. audience selection, creative selection and tool selection). As a result, moderators and the knowledge derived from them can be usefully applied to making managerial decisions.

3.4. Summary

The purpose of this chapter has been to explain how corporate communication works. Corporate communication outcomes are better understood following a behavioural approach to communication, that is, considering how corporate advertising and ad-like communication activities might affect constituency behaviour. These effects can be explained using a neo-behavioural paradigm (S-O-R) to human actions. Communication activities lead to psychological responses, which in turn may lead to behavioural responses. Potential constituency responses to corporate communication are thus various and range from immediate effects, to enduring memory effects, to actual observable behaviour.

How corporate communication, such as corporate advertising and the like, works can be better understood using the behavioural framework developed in this chapter. This framework relates corporate communication activities to constituencies' psychological and behavioural responses. Basic constructs of the framework are corporate communication stimulus, constituency-related moderators, stimulus-related moderators, corporate brand knowledge and constituency behaviour.

Following the progression of Figure 3.3, this framework reads as follows: a corporate communication stimulus results from corporate advertising or any kind of ad-like communication activity and consists, for example, of an event, a brochure, an advert or a web page, all identified with a corporate brand. When a constituency is exposed to any of these stimuli, a series of psychological responses arise, that is, the constituency performs mental processes on the stimulus.

Psychological responses to communication are affected by many factors that can be related either to the constituency or the stimulus itself. A review of marketing and consumer research literature allows for two constituency-related characteristics to be identified, which strongly moderate corporate communication effects: prior corporate brand knowledge and processing goals. A similar analysis revealed five broad factors of the corporate communication stimulus that moderate corporate communication effects: modality, message, execution, time and place. Empirical research supports all these moderating factors.

Psychological responses to communication can be understood in terms of resulting enduring memory effects, which are generally represented following an associative memory formulation. The corporate brand name is a node in a constituency's memory linked to other nodes, termed corporate associations. The totality of these memory structures is known as corporate brand knowledge. This construct is made operational using two dimensions: corporate brand awareness and corporate image. Each dimension has consistently been found to affect constituency behaviour.

Under certain circumstances, corporate brand knowledge affects actual behaviour, sometimes in an advantageous way for the company. The benefits of 'strong' corporate brands may be particularly evident among the four most important company constituencies: stimulation of consumer buying intentions, better relationships with suppliers and distributors, acceptation and legitimacy in society, improved employee motivation and greater support from investors. In short, corporate communication builds the corporate brand, with potential advantages for the company and all its constituencies.

While many of the features of the framework proposed here are common to previously developed frameworks found in marketing and consumer research literature, its significance lies in

1. its integrative value,
2. its unique capacity to consider the whole array of a company's corporate communication activities, and
3. its innovative and comprehensive treatment of moderating factors,

features that allow for a detailed analysis of psychological and behavioural responses to corporate communication stimuli from the company, and that thereby make the framework developed here better suited than previously developed models for explaining how corporate communication works. In addition, this set of unique features helps managers improve corporate communication effectiveness, as shown in the following chapter.

Despite the important role of corporate advertising and ad-like communication activities in creating positive brand-knowledge structures in constituencies' minds and in positively affecting constituency behaviour, and despite the large amounts spent yearly on these communication activities, it is not clear how managers should design well-reasoned corporate communication programmes. In the words of Schultz (2004, p. 11), a well-regarded marketing theorist, 'if you don't know whether corporate brand value is being added or subtracted as a result of your marketing and communication programmes, you simply can't manage corporate brand value'. More specifically, it is not clear how managers should make decisions on which communication options to use when building a corporate brand. A new managerial decision-making model that considers how corporate communication works is needed to advance the practice of corporate brand management using corporate communication.

Chapter 4: Managerial perspective

This chapter provides some guidance for designing corporate communication programmes using corporate advertising and ad-like communication activities. It develops a decision-making model to assist managers select which corporate communication tools to use. The model considers corporate brands and corporate communication from a company's point of view. Specifically, the model prescribes how managers should select among the various means of communicating about the corporate brand. The analysis is thus carried out from a managerial perspective and results in a theoretically sound and practically applicable decision-making model, which seems to be superior to previous approaches to selecting qualitatively different communication tools, particularly among the range of broad corporate communication tools.

This chapter consists of three sections. The first section presents the theoretical background for designing corporate communication programmes. Firstly, a managerial approach to brands, to which this chapter adheres, is briefly introduced. Secondly, corporate brand management is discussed. Extant theory on corporate brand management is overviewed and key theoretical perspectives on the subject are explored. Following the most recent of these perspectives, corporate brand management is then defined. Lastly, this section explores corporate brand management based on the use of corporate advertising and ad-like communication activities: the importance of these communication activities as a brand-building tool is discussed and the broad decision situations facing corporate brand managers using corporate communication are then overviewed.

The second section constructs a managerial model for selecting corporate communication tools, broadly following the steps of decision analysis. First, the decision situation is identified by defining the goals and alternatives of tool selection. The problem structure is then modelled by specifying objectives and attributes upon which alternative communication tools are evaluated. The best alternative is then singled out by assessing the decision maker's preferences. This section proceeds by exploring the interaction involved in the corporate communication tool selection decision and proposes an analytical way for modelling this interaction. Finally, the proposed decision-making model is appraised.

The third section illustrates the application of the decision-making model developed here. Using an example, it shows how a manager can select among the major broad corporate communication tools. The section concludes with a comparative critique of the illustrative model.

4.1. Managerial Foundations

4.1.1. Managerial approach

The last chapter approached corporate brands and corporate communication from a behavioural perspective, aiming to describe and explain how corporate communication works. This section introduces a different yet complementary approach to corporate communication effects, which aims to prescribe how managers should design corporate advertising programmes. This chapter's approach to communication is a relatively recent one (see Batra, Myers and Aaker, 1996, p. 33). It provides guidance for communication managers, keen to contribute to company goals. Corporate brands and corporate communication are thus examined here from a manager's viewpoint.

Among the various functions that managers fulfil, planning is of a particular concern. Planning is indeed the first and most important task among managerial functions. Planning is about the development, implementation and evaluation of programmes for achieving company goals.

From a manager's viewpoint, planning is all about decision making. Managers are in fact decision makers. In its broadest sense, decision making consists of finding out available alternatives and choosing among these alternatives. Therefore, communication management essentially requires the generation of alternatives and the selection among them (Berndt, 1995c, p. 3; Batra, Myers and Aaker, 1996, p. 33). Indeed, managers responsible for a corporate communication programme face many decisions: What is the positioning of the corporate brand? Should the corporate brand be actively communicated to consumers? Is the corporate brand's positioning different for investors than for consumers? In addition to press relations, should corporate advertising be employed to shape constituencies' beliefs about the corporate brand? Should the company be promoted by TV or newspaper advertising? These and many other complex decisions require answers. Perhaps the most fundamental of these decisions, that is, the objective towards which corporate communication managers' efforts are directed, is discussed in the next subsection.

4.1.2. Corporate brand management

4.1.2.1. Review of extant perspectives on corporate brand management

Corporate brand management has received numerous denominations in recent years. Terms like impression management (Schlenker, 1980; Gardner and Martinko, 1988), corporate image management (Abratt, 1989; Gregory, 1991), reputation management (Fombrun, 1996, 2001), corporate identity management (van Riel and Balmer, 1997; Markwick and Fill, 1997), corporate marketing (Balmer, 1998), corporate branding (Maathuis, 1999), corporate brand-equity management (Keller, 2000), corporate branding management (van Riel, 2001) and corporate level marketing (Balmer and Gray, 2003) have been used in literature to designate the notion of handling the corporate brand in a way that is advantageous for the company, that creates value for the firm.

In addition to this semantic diversity, there are also many different perspectives on corporate brand management in practice and theory (Ind, 1997, p. 2; Hatch and Schultz, 2000, p. 11). In fact, practitioners do not even agree on what a corporate brand represents, not to mention its management. They sometimes regard the term as image, sometimes as culture, with some geographical peculiarities. For example, a survey among managers in different European countries showed that, in the United Kingdom, the term *corporate identity* (concept closely related to corporate brands) often denotes corporate communication or corporate design, in Germany and Austria it refers to the total internal and external image of the organisation and in Spain and Scandinavia, it relates to a company's external image and corporate culture (van Riel, 1995, p. 29). Clearly, managers have diverse views on the corporate brand and are thereby likely to have different perspectives on its management.

Also, researchers follow different perspectives in their studies of corporate brand management, which are crystallised in the varied definitions of the subject these academics provide. Indeed, researchers define corporate brand management in many ways, as shown by an overview of the relevant literature — mostly stemming from the fields of marketing, organisation studies, strategy, communication and corporate design. A sample of these conceptualisations, provided by both academics and consultants, is shown in Table 4.1.

Although research perspectives on corporate brand management differ in many aspects, two criteria seem useful for describing these many views.[24] Firstly, perspectives on the subject differ in the assumed source of corporate brand value, whether internal or external. Secondly, perspectives on corporate brand management differ in the scope of the antecedents to the corporate brand value. Generally speaking, researchers pursue either a narrow or a broad perspective on the

24 See also Louro and Cunha da Vieira (2001) for a related classification of brand management paradigms according to two analytical dimensions, one concerned with the extent to which brands constitute the core elements guiding and configuring a company's strategy, the other concerned with the nature of consumer involvement in the process of value creation.

subject, depending on whether they explicitly consider that few or many activities build the corporate brand. Both criteria, according to which research perspectives on corporate brand management can be classified, are further discussed below.

Table 4.1. Some conceptualisations of corporate brand management.

Author	**Definition**
Margulies (1977, p. 66)	To manage the sum of all the ways a company chooses to identify itself (i.e. company name, logotype, graphic system) to all its publics.
Gregory (1991, p. xv)	To use corporate image advertising to solve certain corporate problems like mergers, acquisitions and takeovers, deregulation and overseas competition.
Fombrun (1996, p. 57)	To acquire a reputation that is positive, enduring and resilient.
van Riel and Balmer (1997, p. 341 f.)	To establish a favourable reputation with an organisation's stakeholders which is hoped will be translated by such stakeholders into a propensity to buy that organisation's products and services, to work for or to invest in the organisation.
Balmer (1998, p. 988)	To acquire a favourable image and reputation through the management of philosophy and ethos, personality, people, product, price, place, promotion, performance, perception and positioning.
Maathuis (1999, p. 5)	To create and maintain a favourable reputation of the company and its constituent elements, by sending signals to stakeholders using the corporate brand.
Keller (2000, p. 115)	To build strong, favourable, and unique associations about the corporate brand in memory of consumers, customers, employees, other firms or any relevant constituency to the corporate brand entity.
Hatch and Schultz (2001, p. 130)	To align vision (i.e. top management's aspirations for the company), culture (i.e. the organization's values, behaviours, and attitudes), and image (i.e. the outside world's overall impression of a company).
Kernstock et al. (2004, p. 13)	To establish, build and manage the corporate brand, to design the brand architecture, as well as to manage the company's brand portfolio.
Landor Associates (2004)	To develop both a corporate brand (all the characteristics of a company, tangible and intangible, that make the offer unique) and a brand identity (its outward manifestation).

Internal and external perspectives on corporate brand management

The first criterion that characterises research perspectives on corporate brand management relates to the assumed nature of corporate brand value. Some researchers consider the source of corporate brand value to be the culture, identity or personality of the company, whereas others believe this source of value to be represented in constituencies' perceptions about the company. The source of corporate brand value is thus either internal or external, depending on whether corporate brand equity resides within the company or outside it (Balmer, 1995; Hatch and Schultz, 1997; Rindova and Schultz, 1998; Hatch and Schultz, 2000; Urde, 2003).

An internal perspective on the study of corporate brand management assumes that the source of corporate brand value exists within the company. This source resides, at most, in a company's corporate culture, which refers to 'a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to these problems' (Schein, 1992, p. 12; see also König, 2001). The source of corporate brand value is thus singular because the company as a whole has a single corporate culture.

Consistent with this view, the company's brand-building effort is targeted at internal constituencies such as employees and sales representatives. Its aim is to increase employees' identification with the company (Dutton, Dukerich and Harquail, 1994). As such, this effort necessarily employs personal communication given that everyday behaviour and language are two prime ways that organisation members experience the corporate culture. A typical activity for building the corporate brand is, for example, storytelling, which through stories attempts to strengthen the corporate culture, and therefore the corporate brand (Czarniawska-Joerges, 1994; Czarniawska, 1997; Shaw, 2000; van Riel, 2000). Corporate brand management is thus seen as a strategic and long-term effort, which can be difficult to manage.

In contrast, an external perspective on corporate brand management assumes corporate brand value to reside outside the company, often in that which constituencies know and feel about a particular organisation. Thus, there are multiple sources of brand value because of the multiplicity of a company's constituencies, each of which perceives the company in a potentially different way.

As a result of an external perspective on the subject, the company's brand-building effort targets its full set of constituencies, mostly external constituencies such as consumers, investors, and community members, but also employees. The aim of this effort is to project a positive meaning. To do this, mostly non-personal means of communication, particularly mass media, are employed. A common brand-building tool is, for example, corporate mass media advertising, which attempts to promote the company as a whole in any of the mass media (see subsection 2.2.3). Corporate brand management is thus seen as a tactical, short- to middle-term effort, which is easy to manage.

Narrow and broad perspectives on corporate brand management

The second criterion useful for classifying research perspectives on corporate brand management relates to the scope of activities believed to build the corporate brand. Perspectives on the subject vary according to the number and variety of brand-building antecedents examined (van Riel and Balmer, 1997; see also Dowling, 2004). More specifically, these research perspectives are narrow or broad, depending on whether few or many activities are explicitly considered to be part of the brand-building effort.

A narrow perspective on the study of corporate brand management considers one or only a few antecedents to corporate brand value in the analysis, where the kind of antecedents analysed is determined by the discipline involved in the analysis. Antecedents commonly studied include corporate advertising in the marketing field, corporate brand elements by the graphic design community or employee behaviour within organisation studies, while other antecedents in each field are not explicitly examined. As a result, each of these perspectives on the subject is partial, not integrative, and corporate brand management is seen as a functional effort, reserved for a certain area of the company, mostly corporate communication or employee relations.

In contrast, a broad perspective on corporate brand management studies considers many antecedents to corporate brand value, most of which have previously been studied in isolation as part of the narrow perspective on the subject. In the extreme, a broad perspective considers everything that the company or its members say or do to be part of the brand-building effort. Thus, compared with a narrow approach, this perspective is more comprehensive, interdisciplinary and integrative. Corporate brand management is seen as the responsibility of senior management, particularly of the CEO.

Classification of theoretical perspectives on corporate brand management

When both of the above criteria, sources of corporate brand value and scope of its antecedents, are simultaneously considered, four theoretical perspectives on the management of the corporate brand arise.[25] Figure 4.1 highlights the main features of these perspectives which are discussed in detail below.

Antecedents of corporate brand value

Source of corporate brand value	Narrow	Broad
External	1950s–1970s Roots: Marketing field and US graphic design consultancies Source: Corporate image Antecedents: Either corporate advertising or corporate brand elements	1980s–early 1990s Roots: Strategy field and European management consultancies Source: Corporate identity Antecedents: Corporate design, corporate communication and corporate behaviour
Internal	Late 1970s–early 1980s Roots: Organisation studies Source: Corporate personality Antecedents: Either employee behaviour or corporate brand elements	1990s–present Roots: Multidisciplinary Source: Corporate reputation Antecedents: All points of contact between the company and its constituencies

Figure 4.1. Broad perspectives on the study of corporate brand management.

The first perspective represents an **external narrow approach** to the study of corporate brand management. This perspective, particularly popular between the 1950s and the 1970s (Balmer, 1998), traces its disciplinary roots within the marketing field and the US graphic design consultancy practice (Hatch and Schultz, 2000). Particularly influential in its development were the graphic design consultancies Lippincott and Margulies (now Lippincott Mercer) and Landor Associates, as well as the works by sociologist Martineau (1958a; 1958b), research director of the *Chicago Tribune* newspaper and one of the pioneers of motivation research.

25 See Kernstock et al. (2004) for a competing classification of perspectives on corporate brand management.

Characteristic of this perspective is the external view on the source of brand value. According to Martineau (1958b, p. 51), people behave towards the company on the basis of its image, understood as the 'vague part, the set of many associations and meanings'.

Also characteristic of this approach is the narrow view on the determinants of corporate brand value. Martineau (1958b, p. 49), for example, considered 'institutional advertising' as one of the 'most powerful channels of communication' for promoting the corporate image. Other authors, depending on their disciplinary roots, considered different antecedents. US design consultant Margulies (1977, p. 66), for example, considered corporate brand elements (i.e. 'the sum of all the ways a company chooses to identify itself to all its publics') to 'reposition a company so as to improve its ability to obtain financing, attract new customers, protect it against tender offers, and help in its executive recruitment — all in addition to serving as a marketing stimulus.' Each of these authors, and others following an external narrow approach, considered other determinants of corporate brand value only superficially, or not at all.

The second perspective on corporate brand management, popular in literature in the late 1970s and early 1980s, takes an **internal narrow approach** to the subject (Balmer, 1998; Hatch and Schultz, 2000). Its roots lie in organisation studies, and its seminal work is considered to be the journal article by Kennedy (1977). His empirical findings recognised the importance of internal constituencies in creating corporate brand value, findings that resulted in the incorporation of employees into the analysis of corporate brand management. Also very influential was the book *Corporate Personality* by British design consultant Olins (1978).

This perspective is characterised by an internal view on the source of brand value. Olins (1978, p. 212), for example, argues that the corporate personality, understood as 'the soul, the persona, the spirit, the culture of the organization manifested in some way', is the key for favourable constituency responses.

Also characteristic of this approach is the narrow view on the antecedents of corporate brand value and thereby on the source of constituencies' perceptions about the company. Some authors considered that employees portray the meaning of a company and should thereby constitute the focus of attention (Kennedy, 1977), while others focused on corporate brand elements, that is, 'the tangible manifestation of the corporate personality', as the main determinant of constituencies' perceptions (Olins, 1978, p. 212). Thus, depending on the disciplinary discourse of the writer, single antecedents are studied and all others either only implicitly considered in the analysis or not at all.

The third perspective follows an **internal broad approach** to the study of corporate brand management, which prevailed in the 1980s and early 1990s (Balmer, 1998). Its theoretical roots come from the strategy field and the management consultancy practice (Hatch and Schultz, 2000). The book *Corporate Identity* by German management consultants Birkigt and Stadler (1980) and the notions of coherence and unity of all forms of communication (i.e. integrated communication), proposed by German marketing academic Meffert (1979), are considered seminal in its development. Recognising the narrow view of previous theoretical accounts on the subject, this perspective considers a broader scope of brand-building activities.

Similar to the internal narrow approach, the source of brand value is believed to lie within the company and is usually termed corporate identity, understood as ‘the manifested self-conception of the company’ (Birkigt and Stadler, 1980, p. 21).

Different from its predecessor, this approach considers many antecedents to corporate brand value, all of which are believed to have a profound impact on the way constituencies perceive the company. For example, Birkigt and Stadler (1980, p. 21) consider ‘the coherent combination of corporate behaviour, corporate design and corporate communication with the hypostatized corporate personality’ to affect the ‘external perception’ of the company. Clearly, many diverse antecedents started to be considered in the analysis.

The last perspective takes an **external broad approach** to the study of the subject. This perspective, common since the early 1990s, is characterised by its international and interdisciplinary roots (Balmer, 1998). Corporate brand management indeed became a concern for academics from all over the world and from diverse disciplines such as accountancy, economics, marketing, organisational behaviour, sociology and strategy (Fombrun and van Riel, 1997).

The external broad perspective on the subject took off when academics started applying marketing and branding principles to the organisation as a whole. Marketing, which had become less important since the 1970s in corporate brand management studies, re-emerged as one of the main disciplines involved. The seminal work on this perspective is considered to be the journal article by British advertising consultant King (1991), who recognised the value of corporate brands for consumers (Balmer, 2002). Also very influential was the book *Reputation* by management theorist Fombrun (1996), who clearly articulated the value of corporate brands for investors, employees and the general public, but more importantly for the company itself in the form of increased market value.

This perspective assumes the value of the corporate brand to lie outside the company. Fombrun (1996, p. 57), for example, argues that corporate reputation, understood as the 'perceptions held by people inside and outside a company', is the key to 'reputational capital'.

Also characteristic of this perspective are the many antecedents to corporate brand value that are taken into consideration. Keller (2000, p. 118), for example, argues that 'corporate brand equity' depends on factors such as 'the products a company makes, the action it takes, the manner with which it communicates'.

In short, different research perspectives have been advanced in the last 50 years or so of serious academic interest on corporate brand management. The four identified perspectives, as well as the seminal works in their development, are shown schematically in Figure 4.2. Apart from stressing the different views on the subject, the discussion above has also shown that researchers from different parts of the world and from different disciplines, have advanced the theory of corporate brand management in different stages of its development. Recently, this discussion has again turned to a marketing-rooted broad external perspective on corporate brand management, which is adopted in this thesis and further examined below.

4.1.2.2. Working definition

Consistent with marketing theory and recent advances in the remaining corporate brand management literature, this thesis adopts an external broad approach for conceptualising the management of the corporate brand. **Corporate brand management** is defined as the process of planning and executing the activities that build a strong corporate brand. A corporate brand is said to be strong if its constituencies hold brand-knowledge structures in memory that produce a positive response to stimuli identified with the corporate brand (Keller, 2000). In other words, a corporate brand is strong if its constituencies, due to the brand-knowledge structures stored in their minds, react more favourably to products, actions and communications identified with the corporate brand than they would do if these stimuli were attributed to an unknown or fictitious company.

A review of this definition yields four important observations. Firstly, corporate brand management is a process. It is an iterative and ongoing series of managerial functions such as planning, executing and evaluating, which, from a manager's viewpoint, mainly consist of making decisions, as discussed in subsection 4.1.1.

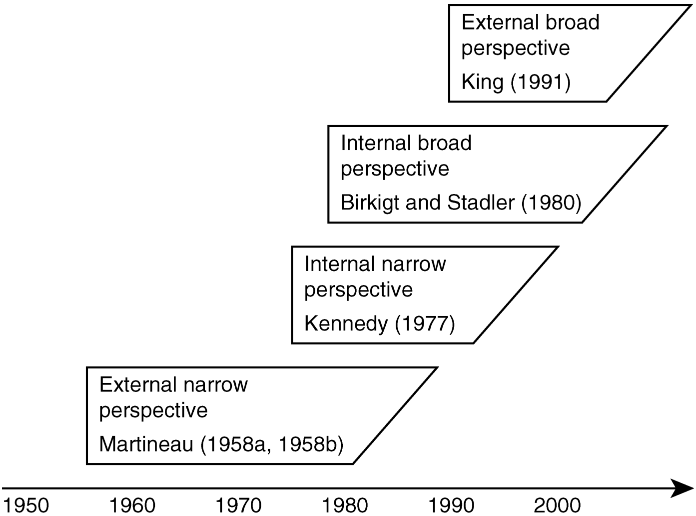

Figure 4.2. Stages in the development of corporate brand management theory, including the seminal work at each stage. Based on Balmer (1998).

Secondly, corporate brand management is about creating positive brand-knowledge structures in constituencies' minds. Corporate brand value thus lies outside the company, in the memory of its consumers, investors, employees, community members and any other relevant constituencies. More specifically, as argued in subsection 3.2.2, the value of a corporate brand resides in its constituencies' ability to recognise or recall the corporate brand under different conditions and in the strength, favourability and uniqueness of corporate associations held in constituencies' minds.

Thirdly, the proposed definition considers a broad set of brand-building activities, which include all company-initiated activities that can potentially shape constituencies' perceptions of the corporate brand. These activities have to meet two conditions to be considered part of a company's brand-building effort: they have to be capable of affecting corporate brand knowledge in constituencies' minds and they have to be manageable. Brand-building activities should be able to affect that which constituencies think or feel about the company. In other words, these activities should be able to affect brand-knowledge structures stored in constituencies' minds, regardless of whether these memory effects are explicitly pursued or not. Interestingly, brand-building activities do not necessarily portray the corporate brand, but they should have some kind of impact on corporate brand knowledge in constituencies' minds.[26]

Brand-building activities should also be manageable, which means that a manager should be able to plan and execute them. More specifically, an activity is manageable if its resulting stimuli are controllable. Manageable stimuli include a company's products, actions and communications. It should be noted, however, that the manageability of stimuli is not determinable by any absolute means. Rumours, for example, are generally considered non-manageable stimuli. A growing body of literature, however, discusses strategies for 'managing' hearsay (e.g. DiFonzo and Bordia, 2000; Frost, 2004; Sauer, 2004). Whether an activity is manageable or not is thus highly subjective.[27]

Finally, corporate brand management is characterised by the attempt to create positive responses to stimuli identified with the corporate brand. In fact, the ultimate goal of corporate brand management is to create positive behavioural outcomes among company's constituencies, such as buying a company's products, working harder for the company, investing more in the company, supporting the company and other outcomes typically associated with strong corporate brands (see subsection 3.2.3). These positive responses derived from constituencies' beliefs and feelings about the company have taken many names in corporate brand management literature, including favourable reputation (Fombrun, 1996), positive corporate brand equity (Bender and Farquhar, 1996; Keller, 2000; see also Keller, 1993, 1998), brand power (de Chernatony and McDonald, 1998) and brand strength (Aaker, 1996).

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26 This conceptualisation of a brand-building activity differs from that provided by some authors (e.g. Maathuis, 1999; van Riel, 2001), who consider brand-building activities as only those identified with the corporate brand. In contrast, any activity that can potentially affect brand-knowledge structures is considered here as part of a company's brand-building effort, assuming that the activity is manageable. Marketing communication can thus be considered a corporate brand-building tool. Indeed, many companies send stimuli identified with a product brand to shape their company's image. As PepsiCo's former CEO D. Wayne Calloway once remarked, 'concentrating on promoting our brand names is our best investment. We market Pepsi with a youthful, feisty, aggressive advertising campaign, and we don't mind that kind of image as a company' (Fombrun, 1996, p. 287). These activities affect that which constituencies, at least those involved enough with the company to know about the link between product and corporate brand, know and feel about the corporate brand and therefore should be considered corporate brand-building activities.

27 See also subsection 2.2.2 for a classification of corporate communication into public relations and corporate advertising, which considers message controllability as one of the main criterion to distinguish between both forms of communication.

Interestingly, these positive constituency responses arise from stimuli identified with the corporate brand, whether initiated by the company or not. These stimuli thus include words, actions, communications and products provided by the company (Keller, 2000), but also third-party stimuli identified with the corporate brand such as articles in the press about the company or printed matter provided by other organisations related to the company in some way (e.g. through sponsorship).

In summary, the management of the corporate brand is seen in this thesis from an external broad perspective. According to this view, managers attempt to build a corporate brand by planning and executing the many activities that affect constituencies' perceptions about the company. With this definition in mind, the following subsection considers a particular brand-building tool, corporate advertising and ad-like communication activities, and discusses the decisions that managers face when building a corporate brand through this form of corporate communication.

4.1.3. Managing the corporate brand through corporate advertising and ad-like communication activities

Following a decision-oriented managerial approach, this subsection explores corporate brand management using corporate advertising and ad-like communication activities. The relative importance of this form of communication in building the corporate brand is assessed in comparison to other common brand-building tools such as company's products, employee actions and other forms of communication. The broad decision situations that arise when managers seek to build a corporate brand using corporate advertising and the like are then identified and briefly described. Among common brand-building tools, corporate advertising and ad-like communication activities is a prime tool because it is an easily manageable antecedent of corporate brand knowledge that can effectively reach any relevant constituency with all kinds of messages in a suitable and appealing way.

4.1.3.1. Importance of corporate advertising and ad-like communication activities as a brand-building tool

Managers build a corporate brand in the minds of company constituencies using many different tools.[28] At least three broad antecedents of corporate brand knowledge are often employed as brand-building tools, namely products, actions

28 As discussed in subsection 2.2.3, a tool is a grouping of similar company-initiated activities.

and communications provided by the company (Keller, 2000). These activities, which are empirically known to profoundly affect the corporate brand knowledge stored in constituencies' minds, are actively used by many companies to enhance how they are perceived.

A frequently mentioned brand-building tool relates to the products a company offers. As said in subsection 2.1.1, a product refers to anything that can be offered to a market to satisfy a want or need. Products are very likely to influence constituencies' cognitive associations with an organisation.[29] They are likely to serve as a basis for consumers' inferences, particularly when no other information about the company is available (Keller and Aaker, 1998). Consequently, products may be actively employed to shape constituencies perceptions about the company. Managers, for example, can enhance a company's perceived credibility, particularly by consumers, by introducing successful products to the marketplace (Keller and Aaker, 1992).

Despite being a strong antecedent of corporate brand knowledge, products are seldom actively used for building corporate brands. A product obeys its specific market situation, which determines most aspects of its marketing. Hence, product's attributes, distribution, pricing and promotion depend on these competitive factors and are thereby hardly influenced by managers seeking to enhance constituencies' perceptions of the company.

A second widely cited brand-building tool relates to the behaviour of organisation members and partners. Employee actions are likely to shape corporate brand knowledge in a profound way (Schneider, 1991, p. 14 f.; Berndt, 1995b, p. 283). Since Kennedy's pioneering work (Kennedy, 1977), almost any aspect of employee behaviour has been recognised to influence corporate brand knowledge, and many of these aspects may be employed to shape the company image. For example, a company can be made more attractive, particularly to outside investors, by hiring a charismatic leader (Flynn and Staw, 2004; see also Anonymous, 2002; Khurana, 2002, for another view).

Although employee behaviour is considered by far 'the most important and effective medium' for enhancing perceptions of a company (van Riel, 1995, p. 32; Stuart, 2001; Hatch and Schultz, 2003), employee actions are rarely actively used

29 Interestingly, products are not a strong antecedent of corporate brand knowledge as commonly believed. Indeed, a study of the reputation of 100 selected companies, including the key players across a number of industries, has shown that corporate reputation, a notion closely related to the corporate brand knowledge stored in constituencies' minds, is not necessarily related to brand reputation (Scholz and Léger, 2005).

for building a corporate brand. Employee actions are difficult to control and behavioural changes are lengthy and arduous (van Riel, 1995, p. 33).

A third often mentioned brand-building tool is a company's total communication effort. As stated in section 2.2, communication encompasses all verbal and visual stimuli a company sends to its constituencies. Adverts or ad-like communication stimuli may have a profound effect on the perceptions and feelings toward a corporate brand, as a myriad of studies confirm. Managers may employ these stimuli to their advantage. For example, managers can enhance an already positive corporate image by sponsoring well-regarded events or causes (Javalgi et al., 1994). Managers can also build the corporate brand through marketing communication, for example, by increasing the use of brand advertising, which demonstrably improves attitude towards a company (Winters, 1986). Third-party communication stimuli about the company also serve as a brand-building tool (see Carroll and McCombs, 2003, for a review). For example, managers can increase admiration for the company and enhance a company's perceived innovation and management quality, regardless of economic performance, by associating the company in the media with popular management techniques (Staw and Epstein, 2000).

Contrary to other major brand-building tools, communication is an easy, fast and flexible way of building the desired corporate brand knowledge in constituencies' minds (van Riel, 1995, p. 32 f.; see also Esch, Hardiman and Mundt, 2004, p. 220). Communication is easy to manage and managers have established ways of enhancing the company's image through communication. Moreover, communication can quickly be put to tactical use and can be rapidly and cost-effectively adapted to new, different or changing requirements. Additionally, communication consists of a myriad of means of information delivery that allow all kinds of messages, either concrete or abstract, to be conveyed in an effective way. Because of all this, most companies employ communication as a prime brand-building tool.

As part of a company's total communication effort, corporate advertising and ad-like communication activities seem more suitable than other forms of communication for building a corporate brand. Indeed, stimuli resulting from this brand-building tool (e.g. adverts, events, exhibition booths, sponsored properties) can effectively create the desired brand-knowledge structures in constituencies' minds. This is evident when comparing corporate adverts and ad-like communication stimuli with those resulting from other forms of communication (i.e. marketing communication stimuli and third-party communication stimuli) in terms of modality, message, execution, time and place.[30]

Adverts and ad-like communication stimuli enable a company to convey the creative content in a suitable modality. Of course, that which is deemed suitable depends on the targeted constituency, but this broad communication form can employ all kinds of modalities — verbal, visual or other. Third-party communication stimuli about the company are, in contrast, not always capable of modality richness, because press coverage, the most common third-party stimuli about the company, is mostly verbal.

Corporate adverts and ad-like communication stimuli intend to convey all kinds of messages, simple and complex, emotional and informational, concrete and abstract (van Riel, 1995, p. 32; see also Keller, 1993, p. 10), whereas neither third-party communication nor marketing communication stimuli intend to convey such a range of company-related information. Third-party communication stimuli are not likely to convey the desired messages because information that a company deems important is often changed, or not communicated at all, by the inductors. Indeed, according to a media study of major US press publications in 1998, only 34 percent of all news reports about companies communicated key or positive messages about them (Ott, 1998). Neither are all kinds of messages conveyed by marketing communication stimuli. Their message, by definition, intends to support sales of a particular product.

Adverts and ad-like communication stimuli are able to convey information in an appealing way. Again, that which is deemed appealing depends on the constituency, but this form of communication is in fact flexible because of the number of different presentation and implementation options available (Keller, 1998). In contrast, third-party communication stimuli about the company are not always capable of expressive execution. Indeed, they seldom employ the 'artful use of print, sound, and colour' to the company's advantage (Kotler, 2000, p. 564).

Adverts and ad-like communication stimuli from a company intend to achieve effective frequency — that is, the optimum number of exposure situations re-

30 Stimuli resulting from these forms of communication are roughly compared here considering the behavioural framework developed in chapter 3. Contrary to Rossiter and Percy (1997, p. 419), who undertook a similar comparison, the comparison here considers capacity but also purpose. Both considerations are necessary because different forms of communication (i.e. marketing communication and corporate communication), which may explicitly pursue different communication effects, are compared. Indeed, while some stimuli may be capable of creating the desired brand-knowledge structures in constituencies' minds, this may not be their aim. See also subsection 2.2.1 for a conceptualisation of marketing communication and corporate communication.

quired to effectively convey the creative content to the target audience (AMA, 1995) —, which of course depends on the targeted constituency. More specifically, these stimuli may achieve relatively high frequency, if necessary, at a reasonable cost. Although absolute cost could be very high, the cost-per-thousand is low, particularly when using mass media. Thus, advertising and ad-like communication activities are able to obtain effective frequency at relatively low cost. Public relations, however, is not always capable of achieving effective frequency. Third-party communication stimuli about the company do not intend to achieve effective frequency, although single exposure to these stimuli may be more successful due to a constituency's intention to become exposed (Lord and Putrevu, 1993). Nevertheless, in general, obtaining press coverage can be difficult once the novelty wears off, and thereby it can almost be impossible to achieve high frequency (Kotler, 2000, p. 610).

Corporate communication can reach any constituency. The company's corporate communication stimuli indeed intend to reach practically every constituency. In particular public relations enables companies to get through to constituencies that are considered difficult to reach (Kotler, 2000, p. 565). In contrast, marketing communication does not even attempt to reach all of a company's constituencies. As stated in subsection 2.2.1, company marketing communication stimuli are targeted towards customers.

In short, other company communication efforts are less appropriate than corporate advertising or ad-like communication activities for building the corporate brand. Public relations is not always capable of projecting the desired company image because the resulting stimuli (i.e. third-party communications, mostly in the form of press articles) are often of a verbal and inexpressive nature, and their message, as well as their frequency, are only partially controlled by the company. Marketing communication also has serious deficiencies with regard to creating the desired corporate brand-knowledge structures because marketing communication stimuli often stop at product-related messages and do not intend to reach constituencies other than consumers. Corporate advertising and ad-like communication activities, on the other hand, can effectively reach any company constituency with all kinds of messages in a suitable and appealing way, which makes this form of communication superior to other communication forms in terms of corporate brand-building capacity. And, as argued above, communication is superior to other common brand-building tools, such as products and actions, because it is easier to manage, rapidly applicable and more flexible. Therefore, among the most common brand-building tools, corporate advertising and ad-like communication activities are the prime tool for building the corporate brand. Indeed, this form of communication is increasingly employed to shape constituencies' cognitions and emotions towards the company, as argued in chapter 1 and illustrated in subsection 2.2.4.

4.1.3.2. Major decision situations in corporate brand management using corporate advertising and ad-like communication activities

Building a corporate brand using corporate advertising and ad-like communication activities requires managers to make many decisions. Dowling (1986, p. 114 ff.), for example, proposes the following sequential decisions for planning corporate mass media advertising programmes: (1) selection and profile of a target audience (e.g. selecting customers as the target audience and profiling a subgroup of them as potential new users of the company's products), (2) identification of action objectives (e.g. learning about the company), (3) selection of brand objectives (i.e. category need, company awareness, company reputation or delayed company consideration and support), and (4) development of a suitable creative content. Clearly, decisions facing managers in the planning of corporate communication activities are complex and diverse.

Most marketing academics agree that communication activities — of which corporate advertising is one — involve at least three major decision situations: audience selection, creative selection and tool selection (see Berndt, 1995b; Batra, Myers and Aaker, 1996; Rossiter and Percy, 1997; Kotler, 2000; Percy, Rossiter and Elliott, 2001; Belch and Belch, 2004). These theorists also agree that this set of decisions is sequential, that is, once audience selection is made, creative selection follows, which in turn is followed by tool selection. Of course, the whole planning and decision-making process is iterative and managers alter or abandon decisions as the process develops (Belch and Belch, 2004). Consequently, the design of a corporate communication programme using corporate advertising and ad-like communication activities could resemble a process as suggested in Figure 4.3.

Managers are confronted with three major decisions in corporate brand management using corporate advertising and ad-like communication activities, and these decisions are described by Rossiter and Percy (1997) as follows: the first major decision is often **audience selection**. Managers select a target audience and develop a precise, disciplined description of them, including current behaviour and current perceptions and feelings towards the corporate brand.

Once a target audience has been selected, the next major decision situation managers encounter is often **creative selection**. This decision broadly consists of specifying the creative content of a communication programme, particularly brand positioning, as well as the best way of presenting and implementing this positioning.

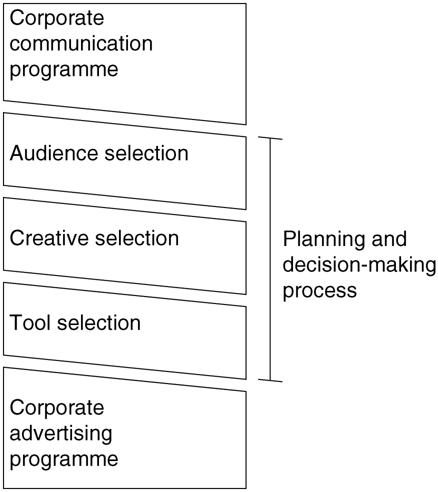

Figure 4.3. Major decision situations in corporate brand management using corporate advertising and ad-like communication activities.

The last major decision situation facing managers in charge of planning a communication effort is often **tool selection**. Tool selection consists of selecting the best communication tool to carry the creative content to the target audience. It encompasses focused tool selection (i.e. where to reach the audience) as well as communication scheduling (i.e. how often to reach the audience).

Each of these decision situations has a profound impact on a constituency's psychological responses to communication stimuli. Considering the behavioural framework developed in chapter 3, this impact can be explained as follows: audience selection determines which constituencies are to be exposed to the communication programme. Thus, to some extent, audience selection determines the prior corporate brand knowledge and the processing goals of the addressed constituencies at the moment of exposure. Creative selection defines what is said and how it is said in the programme. Creative selection thus determines characteristics of the communication stimuli, namely modality, message and execution. Finally, tool selection affects where, when and how often audiences are exposed to the communication programme. Thus, tool selection determines spatial and temporal factors of the resulting communication stimuli. In short, each of these major decisions affects either constituency-related (i.e. prior corporate brand knowledge and processing goals) or stimulus-related moderators (i.e. modality, message, execution, time and place), which, as argued in chapter 3, have a profound effect on the brand-knowledge structures stored in constituencies' minds. Hence, each of these major decisions affects the effectiveness of corporate communication programmes using corporate advertising and ad-like communication tools for building a corporate brand. The last of these decision situations, tool selection, is analysed in detail next.

4.2. Managerial Decision-Making Model

This section examines the tool selection decision, the third of the major decision situations that managers face when managing a corporate brand using corporate advertising and ad-like communication activities. Broadly following the steps proposed by decision analysis theory (see Keeney and Raiffa, 1976, p. 5 ff.; see also Clemen, 1996, p. 5 ff.), this section develops a comprehensive managerial model within which the selection from among means of communicating about the corporate brand can be debated. This decision-making model is constructed following the process sketched in Figure 4.4. First, this section identifies and outlines the complex decision of selecting from among corporate communication tools. This section then models the structure of the tool selection decision. The rationale for structuring this decision on the basis of behavioural science theory is discussed. Explicitly considering the behavioural framework developed in chapter 3, objectives are specified and attributes for measuring the degree of objective achievement are then identified. This section subsequently presents a multiattribute technique for choosing the best communication tool. Current approaches to selecting alternative corporate communication tools are discussed and their limitations made evident. Two heuristic decision-making techniques for choosing the best communication tool under conditions of both certainty and uncertainty are then presented. Finally, this section critically examines the proposed decision-making model, which appears to be theoretically sound and practically applicable for selecting corporate communication tools.

4.2.1. Identifying the decision problem

The first step in the decision analysis process involves identifying the decision problem, namely the decision goal and the available alternatives (Keeney and Raiffa, 1976, p. 5 ff.). The decision problem in question is the selection of alternative corporate communication tools; it is thus necessary to specify the goal of the tool selection decision and identify the available corporate communication tools.

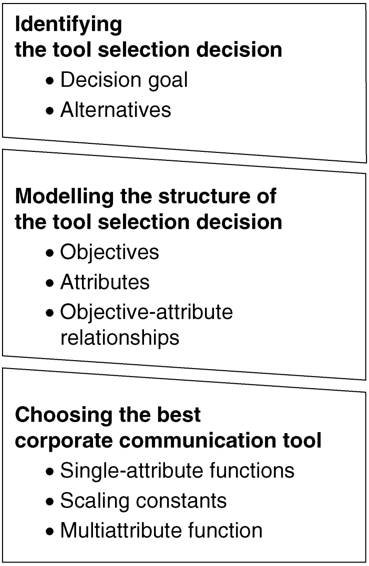

Figure 4.4. Three steps for developing a managerial decision-making model for corporate communication tool selection.

The decision goal is to select the single best alternative.[31] As such, the decision problem in question consists of *selecting* a corporate communication tool to carry the selected creative content to the selected target audience. It thus assumes that other important decisions in the communication planning process, such as audience and creative selection, have already been made, as discussed in subsection 4.1.3.

From the available communication tools, the decision consists of selecting a *single* alternative, often called a primary medium. This alternative is the single most effective communication tool for achieving the desired communication effects

31 This thesis distinguishes between the terms *goal* and *objective*. Per Webster's, a goal refers to 'the end towards which effort is directed', whereas an objective refers to 'something towards which effort is directed'. In a decision-making context, goals are either achieved or not and serve to identify the decision problem. On the other hand, objectives are achieved to a certain extent and serve to model the problem structure. See Keeney and Raiffa (1976, p. 34) for a further discussion.

and often accounts for over half the media budget (see Rossiter and Percy, 1997, p. 428 ff.). This tool alone should be capable of building the corporate brand.

From the set of available corporate communication tools, the decision consists of selecting the *best* one. Selecting communication tools is thus about choosing the alternative whose associated consequences are the best in terms of building a strong corporate brand, as suggested in subsection 4.1.2. This communication tool needs to be better than other available alternatives in terms of creating the desired brand-knowledge structures in memory of targeted constituencies.

The single best communication tool is chosen from among all *available* means of information delivery. Available alternatives are those communication tools that are feasible and viable for the company. Feasible means that they need to be capable of being carried out. This excludes alternatives that the company cannot afford, and also excludes communication tools that the company is unable to employ due to regulations or company-intern rules. As well as being feasible, these communication tools need to be viable, which means that they need to be capable of working, functioning or developing adequately. This excludes alternatives that, from the outset, are not likely to succeed. Obviously, there needs to be at least two available alternatives. One of the alternatives often represents the status quo, that is, no action. Hence, even if there is only one communication tool, it is better to regard the tool selection decision not as whether to accept or reject a communication tool, but as whether to accept the alternative or to accept the status quo (see Fischer et al., 1987, p. 19). Most of the time, however, communication tools are numerous due to the flexibility of the corporate advertising effort.

Communication tools are all available *means of information delivery*, which encompass all non-personal communication channels capable of carrying a creative content to a selected audience. Corporate communication tools are not only traditional advertising media, but also ad-like means of corporate brand communication, best regarded as additional advertising media, just like conventional media. Communication tools include various mass media such as broadcast television, magazines, newspapers and radio and various kinds of sponsored properties such as sports, culture, social and ecological sponsorship (see Berndt, 1995b, p. 297). Consistent with most marketing authors, a communication tool is thus understood at the most inclusive level (see Batra, Myers and Aaker, 1996, p. 583; Rossiter and Percy, 1997, p. 19; Kotler, 2000, p. 561; Belch and Belch, 2004, p. 301). That is, any means capable of carrying company-related information is considered a communication tool. The term also encompasses broad communication tools, communication vehicles, communication schedules or any combination of these.

- **Broad communication tools.** Broad communication tools, as discussed in subsection 2.2.3, are major modes of communication, including mass media advertising, but also company's properties, events, exhibitions, sponsored properties and websites.
- **Communication vehicles.** Communication vehicles are the specific means of delivery within a communication tool, such as Germany's *Handelsblatt,* UK's *Financial Times* or the US *Wall Street Journal* in the newspaper category of mass media advertising, and the Olympic Games, the FIFA World Cup or the Super Bowl (i.e. American football championship) in the sports category of sponsorship.
- **Communication schedules.** Communication tools also refer to placement and timing options within a vehicle. For example, specific locations, such as inside front cover of the UK magazine *Economist*, or specific issues such as 25 October 2004 issue of the German weekly *Der Spiegel,* or specific time slots such as the last commercial break of the US comedy series *Seinfeld*. These divisions of communication vehicles can also be thought of as communication tools (see Batra, Myers and Aaker, 1996, p. 583).
- **Combinations of communication tools.** Interestingly, a communication tool not only refers to a single means of information delivery, but also to any combination of means (Berndt, 1995b, p. 369). In its widest form, communication tools refer to entire corporate communication programmes.

4.2.2. Modelling the problem structure

Once the decision goal has been identified and alternatives have been generated, the next step in the decision analysis process concerns the modelling of the problem structure in detail (see Keeney and Raiffa, 1976, p. 5 ff.). This subsection does exactly this with the tool selection decision by structuring the elements of the decision problem into a logical framework. First, it is argued that the framework developed in chapter 3, founded on behavioural science theory, provides a useful basis for modelling the structure of deciding which means of corporate brand communication to use. Objectives are then structured and comprehensive and measurable attributes are identified to describe how well these objectives are achieved. Decisions need to be made in view of how corporate communication works. More specifically, it is argued that corporate communication tools need to be evaluated in terms of objectives based on brand-knowledge structures stored in constituencies' minds and that the level of achievement of these brand objectives needs to be indirectly measured by attributes based on stimulus-related moderators of corporate communication effects.

4.2.2.1. Behavioural basis for structuring the tool selection decision

Behavioural science theory has long been used for guiding communication decisions. Behavioural science theory was arguably introduced into communication planning by the DAGMAR model, presented by Colley (1961) in a report called *Defining Advertising Goals for Measured Advertising Results* (Batra, Myers and Aaker, 1996, p. 130 f.). This model advocated the evaluation of communication activities in a way that can be attributable to communication alone rather than to the whole marketing programme (Belch and Belch, 2004, p. 206). This model was the first to propose objectives based on psychological variables rather than economic variables, developing a precise method for selecting and quantifying these communication objectives. Although the DAGMAR model has been criticised (see Moriarty, 1983; Jones, 1994; Huey, 1999, for a review), its rationale for the use of behavioural objectives in communication planning is still valid. Understanding the communication and persuasion process is indeed considered the most important guide for communication planning and decision-making today (Batra, Myers and Aaker, 1996, p. 45).

Behavioural science theory provides a useful basis for structuring communication decisions. It enables companies to set concrete and measurable objectives, which can be meaningfully related to a specified target audience, a base value, a desired degree of change and a certain time period (Colley, 1961; Belch and Belch, 2004, p. 206 ff.). Enduring memory effects are particularly appropriate for evaluating the achievement of marketing objectives and for steering marketing processes (Berndt, 1995c, p. 21, 1996, p. 110). Enduring memory effects are indeed the basis for measurable and controllable objectives (Berndt, 1995c, p. 334, 1996, p. 110). Additionally, objectives based on enduring memory effects serve as meaningful communication devices (Batra, Myers and Aaker, 1996, p. 109). They help coordinate the company's communication effort because they are well understood and serve as a link between strategic and tactical decisions, between the company and its marketing services agencies. These objectives can even serve as a common denominator for all company-initiated activities, whether of a communicative nature or not (Keller, 1993). In fact, a behavioural approach to structuring communication decisions is necessary because economic objectives, such as profit or net present value of a profit stream, do not usually provide effective criteria for communication decision-making (Batra, Myers and Aaker, 1996,

p. 109 ff.; Belch and Belch, 2004, p. 198 ff.; Esch, Hardiman and Mundt, 2004).[32]

By guiding communication planning, behavioural science theory provides a useful basis for structuring the tool selection decision, a major decision in communication planning and decision-making. Psychological responses to communication, including immediate and enduring memory effects, serve as a basis for defining objectives for the selection of media types (Berndt, 1995c, p. 363 f.; Kotler, 2000, p. 566 f.). Enduring memory effects are deemed particularly suitable for setting media objectives (Belch and Belch, 2004, p. 202 ff.). Hence, their representation as brand-knowledge structures serves as a basis for communication planning (Keller, 2003, p. 597). Brand-knowledge structures can thus advise managers on tool selection. In particular, brand awareness and brand image (which are always communication objectives) offer managerial advice on how to select the appropriate media types (Rossiter and Percy, 1997, p. 419; Percy, Rossiter and Elliott, 2001, p. 53). In fact, awareness and image provide useful criteria for building a brand using all kind of tools, not only advertising and ad-like communication activities (Keller, 1993, p. 2). Both dimensions thus serve to structure the tool selection decision. Consequently, the behavioural framework developed in chapter 3, a framework that considers both brand-knowledge dimensions explicitly, provides a useful basis for structuring the decision of which means of corporate brand communication to use.[33]

The behavioural framework developed in chapter 3 is useful for setting the objectives for the tool selection decision. Brand knowledge is indeed useful for setting communication objectives in general (Batra, Myers and Aaker, 1996, p. 112; Rossiter and Percy, 1997, p. 110; Percy, Rossiter and Elliott, 2001, p. 53). The creation of brand awareness and brand associations in particular serves to

32 See subsection 3.1.1 for a comparison between psychological and economical variables. See also Berndt (1978, p. 9 ff.; 1995c, p. 128 ff.) for a thorough discussion of economic, psychological and exposure objectives in the tool selection decision.

33 Planning corporate communication programmes needs a whole target audience to be taken into consideration rather than a single individual, and a sequence of stimuli rather than a single communication stimulus. In other words, the level of analysis that is needed for the decision at hand changes from an individual constituency to a whole group of them (see Peter and Olson, 2005, p. 29 ff.). Despite larger units of analysis, the behavioural framework developed in chapter 3 still provides insight. The components of this framework can be interpreted as follows. Corporate brand knowledge refers to the aggregation of the brand-knowledge structures of the constituencies forming part of the target audience (see Berndt, 1995c, p. 128; Keller, 1998, p. 49). The same applies for stimulus-related moderators, which refer to the characteristics of the whole programme. In other words, instead of a point in time and space, broader and more continuous periods of analysis or a number of discrete periods of analysis need to be considered. This period is usually one year in advertising planning (Rossiter and Percy, 1997, p. 450).

evaluate communication tools (Keller, 1998, p. 254 ff.). Hence, awareness and image may help to specify communication objectives. Indeed, both dimensions provide useful objectives for selecting communication tools because they capture all relevant aspects of the tool selection decision, as discussed below. Therefore, corporate brand awareness and corporate image serve to structure the objectives of the decision of which corporate communication tools to use.

The behavioural framework developed in chapter 3 also helps to identify measurement scales for the objectives pursued in the tool selection decision. Brand knowledge provides useful attributes for evaluating the achievement of communication objectives because its measurement has been well documented (see Batra, Myers and Aaker, 1996, p. 124 ff.; Rossiter and Percy, 1997, ch. 18; Percy, Rossiter and Elliott, 2001, p. 251 ff.). Indeed, increased brand awareness and the creation of strong, favourable and unique brand associations may assist in evaluating the effectiveness and efficiency of communication tools (Keller, 1998, p. 262). Awareness and image are operational and measurable objectives, confirmed by the many proven ways of measuring them (Keller, 1993b, p. 12), as discussed briefly in chapter 3. Therefore, awareness and image also provide a useful basis for identifying attributes for the problem in question. Before identifying attributes for measuring the degree of objective achievement, however, these objectives must be specified, as done next.

4.2.2.2. Structuring objectives

Objectives refer to something towards which effort is directed, and their structuring consists of organising them in a hierarchy so that they describe in detail that which the decision maker wants to achieve.[34] By structuring objectives, they can be appropriately incorporated into a decision-making model (Clemen, 1996, p. 45).

Objectives can be structured in a hierarchy, which provides useful criteria for decision-making. Objectives vary in scope, explicitness and level of detail (Keeney and Raiffa, 1976, p. 41 ff.). There is an overall objective, which is extremely broad and often too vague for operational purposes. There are also more detailed objectives, which are narrower in nature and clarify the intended meaning of the more general objectives without distorting the sense of the whole. These narrow, lower-level objectives can be thought of as the means to an end, where the end is a broader, higher-level objective. In other words, objectives are important simply

34 See footnote 31 for a distinction between objective and goal.

because they help achieve other objectives or because they reflect what the decision maker really wants to achieve (Clemen, 1996, p. 44 ff.).

The overall objective of the corporate communication tool selection decision is to build the corporate brand. As mentioned in subsection 4.1.2, building a strong corporate brand is the aim, when selecting communication tools, as well as when making any other decision related to the management of a corporate brand. Hence, communication tools need to be compared in terms of how well they create positive brand-knowledge structures in constituencies' minds.

This overall objective, however, is too vague. It provides little, if any, insight into the evaluation of communication tools. The intended meaning of the brand-building objective needs to be clarified. The behavioural framework developed in chapter 3 provides some insight here. This framework analytically examined the corporate brand knowledge construct, identifying two of its dimensions and several of their components. This analysis thus provides narrower and thereby more operational objectives.

From the analysis of the corporate brand knowledge construct, at least two lower-level objectives to the overall brand-building objective can be identified: corporate brand awareness and corporate image (see Esch and Wicke, 2001, p. 42 f.; Esch, Hardiman and Mundt, 2004). Important for decision-making, both lower-level objectives seem to be mutually exclusive and collectively exhaustive with respect to the overall brand-building objective (see Clemen, 1996, p. 533 f.). They are mutually exclusive, as the increase of awareness and the creation of image are two different 'functions' of a communication stimulus, awareness being in fact a necessary predecessor of image (Rossiter, Percy and Donovan, 1991; Rossiter and Percy, 1997, p. 224). In addition, these two objectives are also collectively exhaustive. Because both dimensions suffice to describe and distinguish brand-knowledge structures stored in constituencies' minds (see subsection 3.2.2), they take all aspects of the brand-building objective into consideration.

The objectives of awareness and image can be made more operational by considering their different components as proposed in subsection 3.2.2. Corporate brand awareness is composed of recognition and recall: increasing awareness thus requires increasing corporate brand recognition, or recall, or both (Rossiter and Percy, 1997, p. 115 ff.). Similarly, corporate image is made up of different associations. For example, Brown and Dacin (1997, p. 70) propose two different 'categories' of corporate associations: corporate ability and corporate social responsibility, the former related to the company's capabilities to offer products, the latter related to the company's perceived social responsibility. These associations can be thought of as different subobjectives. Therefore, the creation of ability associations, social responsibility associations, or both, is needed to enhance the corporate image. An illustrative objectives hierarchy is shown in Figure 4.5. Further subdivisions of these lower-level objectives are also possible and, in fact, there is no obvious point where to stop (see Keeney and Raiffa, 1976, p. 43 f.).

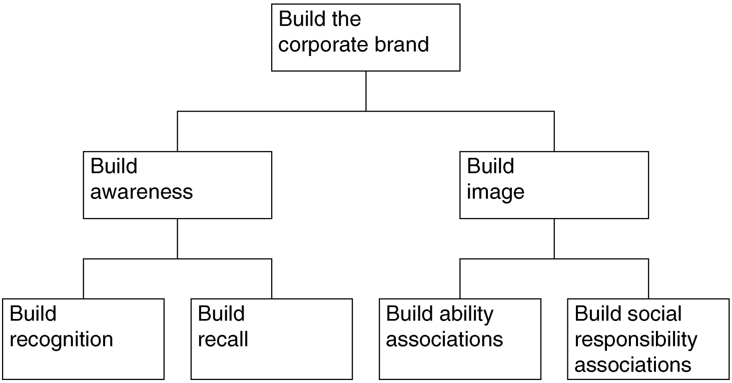

Figure 4.5. An illustrative objectives hierarchy for corporate communication tool selection. Based on Rossiter and Percy (1997) and Brown and Dacin (1997).

4.2.2.3. Identifying attributes

Once an objectives hierarchy has been specified, modelling the problem structure requires attributes to be identified for each of the lower-level objectives of that hierarchy. **Attributes** describe the degree to which the alternatives meet the objectives. They help clarify objectives and make them more meaningful. In this way, they make the consequences of alternatives more tangible. To be useful for decision-making, these attributes need to be comprehensive and measurable (Keeney and Raiffa, 1976, p. 38 ff.). They need to be comprehensive, that is, the level of an attribute needs to give insight into how well the associated objective is achieved and should not be subject to extraneous considerations. They also need to be measurable, which means that it should be possible to obtain a probability distribution for each alternative over the possible levels of the attribute and to assess preferences for these levels, considering temporal, financial and cognitive limitations.

Regarding the tool selection decision, identifying attributes consists of finding evaluators for brand objectives. These attributes should enable alternative communication tools to be measured according to their brand-building capacity.

These evaluators should indicate how well the consequences associated to communication tools meet brand objectives.

Evaluators may indicate how well brand objectives are achieved directly. For example, the achievement of the recognition objective might be reasonably evaluated by measuring the level of corporate brand recognition among a target audience. A readily available measure for this objective exists: individuals in the target audience could be asked if they have previously seen, say, the company logotype. A reasonable 'brand' attribute for this objective might be the proportion of individuals in the target audience who correctly recognise the company logotype. A brand recognition measure might thus be the percentage answering correctly.

There are some serious drawbacks to directly evaluating levels of achievement of brand objectives in terms of brand attributes. Brand attributes are likely to be affected by other factors besides the communication tool. Returning to the recognition example, a corporate brand might not be recognised if an individual member of the target audience was distracted during exposure to the corporate communication stimulus. A direct brand recognition measure, however, would not differentiate the effects due to the stimulus from those due to extraneous factors, although the low level of recognition would be not attributed to the stimulus. As a result, this and other attributes that directly measure level of brand objective achievement are not comprehensive.

Moreover, preference evaluations in terms of brand attributes are difficult, if not impossible to elicit. The decision maker would need to evaluate communication tools in terms of brand attributes, which would require most of the modelling of the problem structure to be done informally in the decision maker's mind. Returning to the recognition example, the decision maker would need to assess preferences for specific levels of corporate brand recognition (e.g. 80 percent of a target audience), which is relatively easy to do. However, the decision maker would also need to obtain a probability distribution (for example, for media types such as newspapers or magazines), over the possible levels of corporate brand recognition, which is almost impossible to accomplish. Therefore, attributes that directly measure levels of brand objectives achievement, apart from not being comprehensive, may not be measurable. As a result, brand attributes are not useful for measuring how well communication tools meet brand objectives.

The measurement of brand objectives achievement may also be carried out indirectly, employing proxy attributes. A **proxy attribute** reflects the degree to which an associated objective is met without directly measuring the objective

(Keeney and Raiffa, 1976, p. 55).[35] Improved performance in terms of the proxy attribute is conducive for meeting the associated objective. Returning to the recognition example, empirical findings documented in marketing and consumer research literature indicate that the logotype or product package needs to be displayed in the communication stimulus to increase brand recognition (Rossiter and Percy, 1997, p. 116). Because of this, the overall brand-building objective, particularly the corporate brand recognition objective, is achieved by better depiction of the company logotype in the stimulus (e.g. prominent placement in a corporate advert). Considering this relationship, how well a corporate communication tool achieves the recognition objective can be assessed by measuring how prominently the company logotype is depicted in the stimulus. A characteristic of the stimulus, related to its execution in this case, reflects how well a brand objective is achieved without measuring the objective directly.

The indirect and direct measurements of brand objectives achievement can be analytically represented. To do this, consider a simplified model for building corporate brands through corporate advertising and ad-like communication activities, represented in Figure 4.6 (see Keeney and Raiffa, 1976, p. 59). The input is controlled by the decision maker, the outputs measure the degree to which alternatives meet the decision maker's objectives. The system's input variable is:

$$A \equiv \text{Set of corporate communication tools.}$$

The system's output variables are various brand objectives related to corporate brand knowledge in target audience's minds. The achievement of these brand objectives is measured in terms of attributes $Y_1, Y_2, \ldots, Y_m$, which, for example, represent the proportion of the target audience who recognise or recall the corporate brand, or the degree to which members of the target audience deem the company to be socially responsible. This set of attributes thus directly measures the degree to which a communication tool meets the brand objectives.

For selecting corporate communication tools, one approach would be to get probability density functions over $Y_1, Y_2, \ldots, Y_m$ conditional on each possible communication tool. However, it might not be practical to employ $Y_1, Y_2, \ldots, Y_m$ for evaluating communication tools. As argued above, direct measurement of brand objectives achievement is neither comprehensive nor measurable. Another approach would be to consider a set of attributes $X_1, X_2, \ldots, X_n$ that indirectly measure the degree to which corporate communication tools meet brand object-

35 Arguably, all attributes are of a proxy nature because nothing can be measured absolutely. It should be noted, however, that there are different degrees to which an objective is directly measured. See Keeney and Raiffa (1976, p. 55) for a brief discussion.

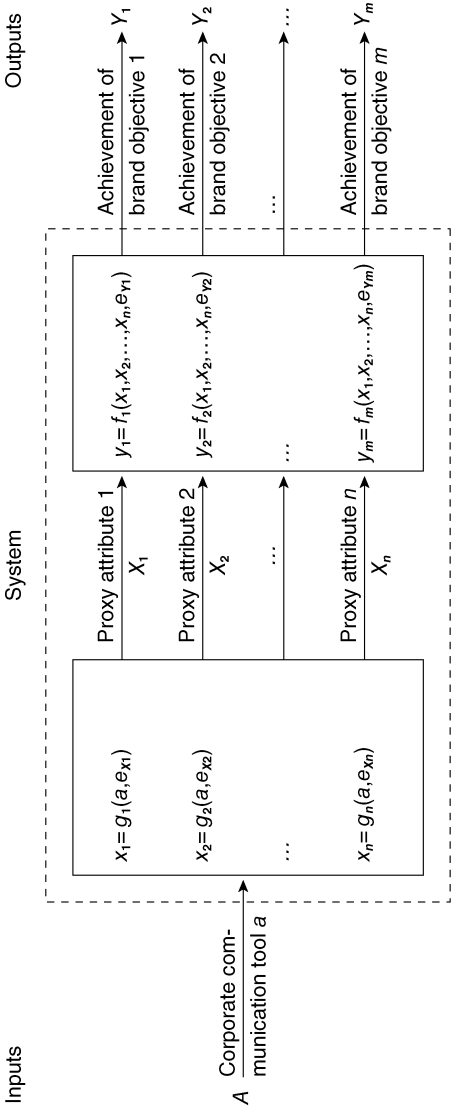

Figure 4.6. Proxy attributes in a simplified model of the tool selection decision. Based on Keeney and Raiffa (1976, p. 59). Note: The e_{Xi} and e_{Yj} represent causal factors not included in the model and random disturbances.

tives. That is, the decision maker would settle for probability density functions over $X_1, X_2, \ldots, X_n$. Now, fundamental attributes $Y_1, Y_2, \ldots, Y_m$ are different from proxy attributes $X_1, X_2, \ldots, X_n$. Both sets of attributes are, however, closely related to each other and their relationships could be analytically represented. Indeed, fundamental attributes have some probabilistic relationship to proxy attributes, designated in the model by

$$y_j = f_j(x_1, x_2, ..., x_n, e_{Yj}), \quad \text{for } j = 1,\ 2,\ ...,\ m,$$

where y_j represents a specific level of attribute Y_j, x_i represents a specific level of X_i, and e_{Yj} represents other causal factors and random disturbance (see Keeney and Raiffa, 1976, p. 58 ff.).

The model does not indicate what the function f_j is, for $j = 1, 2, \ldots, m$. For this reason it is not possible to obtain probability density functions over $Y_1, Y_2, \ldots, Y_m$. Instead, the decision maker gets probability density functions over $X_1, X_2, \ldots, X_n$ conditional on each corporate communication tool. Actually, $X_1, X_2, \ldots, X_n$ are functions of A. This relationship is shown in the model by:

$$x_i = g_i(a, e_{Xi}), \quad \text{for } i = 1, 2, \ldots, n,$$

where a designates a specific corporate communication tool and e_{Xi} represents other causal factors and random disturbance.

The use of proxy attributes implies that when the decision maker expresses his preferences for different levels of performance in terms of $X_1, X_2, \ldots, X_n$, he does this by considering the effects that $X_1, X_2, \ldots, X_n$ have on $Y_1, Y_2, \ldots, Y_m$. But this requires an understanding of f_j, for $j = 1, 2, \ldots, m$, or at least an understanding of how different levels of performance on $X_1, X_2, \ldots, X_n$ contribute to the overall objective of building the corporate brand (see Keeney and Raiffa, 1976, p. 60). Consequently, the introduction of proxy attributes requires that some of the system modelling is done in decision maker's mind, which works as an 'informal synthesizer' (Keeney and Raiffa, 1976, p. 58). The decision maker must intuitively consider the relationship between levels of performance on the proxy attributes and levels of the brand attributes that the proxy attributes represent (French, 1986, p. 199). In other words, the decision maker must use his mind as an informal synthesizer for assessing the f_j function, for $j = 1, 2, \ldots, m$. He must informally decide how different levels of the proxy attributes contribute to the achievement of brand objectives. Therefore, proxy attributes instead of brand attributes will be employed to evaluate brand objectives achievement, and the relationship between proxy attributes and the achievement of brand objectives will not be analytically represented but will be left to be considered in the decision maker's mind. However, a useful set of relationships between proxy attributes and the original objectives can be expressed to aid the decision maker predict the implication of proxy attributes, as shown below.

It is now necessary to find attributes $X_1, X_2, \ldots, X_n$ to measure objectives achievement. The behavioural framework developed in chapter 3 provides guidance for identifying 'tool' attributes. This framework synthesised extant research on stimulus characteristics which moderate corporate communication effects, arguing that enduring mental responses to communication are strongly related to various characteristics of communication stimulus, particularly on five broad factors: modality, message, execution, time and place. Considering these relationships, how well communication tools meet brand objectives may be indicated by attributes based on stimulus-related moderators. Additionally, the behavioural framework helps to understand the effect that specific levels of performance in terms of modality, message, execution, time and place have on awareness and image. Improved performance in terms of these tool attributes help achieve brand objectives. Stimulus-related moderators may thus provide suitable attribute scales for describing the consequences of communication tools, as shown in the example in the next section.

Evaluating brand objectives indirectly, in terms of tool attributes, seems more useful than evaluating them directly, in terms of brand attributes. Tool attributes are comprehensive because they give insight into how well brand objectives are met without being subject to extraneous considerations, as shown in the example above, where the better the depiction of the logotype, the higher the level of resulting brand recognition.

Moreover, tool attributes are measurable because, considering the myriad of studies found in marketing and consumer research literature relating tool characteristics to brand objectives, the decision maker can assess preferences for specific levels of performance on tool attributes. And, contrary to brand attributes, a probability distribution for each communication tool over the possible values of the tool attribute is easily constructed. These indirect scales of objectives measurement are thus more suitable for describing how well corporate communication tools meet brand objectives.

Specifically, the proposed set of tool attributes, based on the stimulus-related moderators identified in chapter 3, is suitable for evaluating corporate communication tools. This set of five attributes seems to be complete, operational, decomposable, non-redundant and minimal, all desirable properties of an attributes set (see Keeney and Raiffa, 1976, p. 50 ff.).

- **Completeness.** Each attribute is comprehensive. As chapter 3 argued, moderators help explain most of the communication effects. Therefore, these tool attributes represent most of the relevant aspects to consider when deciding which corporate communication tools to use.
- **Operationalisation.** The proposed attribute set is operational in that it is suitable and meaningful. Suitable because tool attributes are useful for choosing the best alternative. Meaningful because tool attributes help understand the implications of the communication tools. The operationability of this set of attributes will be made clear with the example given in the next section, where tool attributes are specified.
- **Decomposability.** Preferences for consequences in terms of tool attributes can be broken down, as explained in the next subsection.
- **Lack of redundancy.** Moderators were argued to be mutually exclusive; tool attributes based on moderators are thus different from each other.
- **Minimum size.** None of the five attributes could be eliminated from the analysis because all moderators demonstrably and systematically affect corporate communication effects. Moreover, there seems no point in combining them because each attribute has a different impact on brand-knowledge structures stored in constituencies' minds (see chapter 3).

Once a suitable attribute set has been found, it is then necessary to find unambiguous ways for measuring the levels of performance on each of these tool attributes. That is, the levels of each attribute must be measured on an adequate scale, which can be natural or constructed.

An attribute may have a natural scale. That is, there may be an unambiguous, obvious, commonly understood scale for an attribute, whose levels of performance are objectively measurable (Keeney and Raiffa, 1976, p. 40). For example, a natural scale to evaluate execution performance of online banners in terms of size would be by the number of pixels on screen. This is a natural scale because the size of online banners can be objectively assessed looking at their pixel number.

Interestingly, natural attribute scales are more easily found in the tool selection decision when evaluating qualitatively similar alternatives. Natural scales are thus likely to be available when comparing communication vehicles (e.g. search engines such as Yahoo vs. Google for internet advertising) or communication schedules (e.g. placing a corporate event before or after a big announcement), because the more a broad attribute is subdivided, the easier it is to identify attribute scales that can be objectively assessed (Keeney and Raiffa, 1976, p. 45 f.). For selecting corporate communication tools, this implies that when qualitatively similar alternatives are compared, the five broad tool attributes identified above are likely to be more specific. For instance, range of possible execution performances is of course very broad. However, it is possible to subdivide this attribute if the communication tools are similar in terms of execution performance. That is, if execution performance can be specified in terms of colour usage, use of humour, execution likeability or depiction of human characters, it is possible to assign physical or psychological measures that can be objectively measured to most scales. Hence, the more the alternative communication tools are qualitatively similar, the easier it may be to identify attribute scales than can be objectively assessed.

Different scales are often available for measuring one attribute. That is, when attributes are objectively measurable, it is still necessary to select an appropriate attribute scale. For example, suppose that a decision maker is choosing a German website to advertise online. Advertising media vehicles are websites such as yahoo.de, spiegel.de, prosieben.de, ebay.de, and amazon.de. One attribute for evaluating them is place performance, as measured by audience size. Fortunately a handy measurement scale exists for evaluating website audience: page impressions, usually measured in thousand page impressions per month. A page impression is defined as 'a measurement of responses from a web server to a page request from the user's browser, which is filtered from robotic activity and error codes and is recorded at a point as close as possible to the opportunity to see the page by the user' (IAB, 2005a). However, the decision maker could have chosen hits instead of page impressions, defined as the 'number of requests to a site's server sent by the user's computer to begin downloading a specific element of a requested page' (IAB, 2005a), or any other measure of online audience size.[36] Hence, there may be many scales available for measuring a tool attribute and its selection implies a subjective decision on the part of the decision maker.

Although natural attribute scales can often be found to measure levels of a single tool attribute, it is also possible that no objective index exists to measure a tool attribute. In this case, a subjective index must be constructed. For example, no natural scale seems to exist for evaluating modality performance of online ban-

36 Incidentally, hits are not used as a traffic measurement (Belch and Belch, 2004, p. 502). Hits refer to the number of times that a specific component of a site is requested. However, the number of hits bears no relationship to the number of pages downloaded, and is therefore a poor guide for online reach. 100 hits could mean 100 visitors making one request or only 1 visitor making 100 requests.

ner formats in terms of interactivity. Other than a constructed scale, no single measure indicates the level of banner interactivity.

In general, attribute scales must be constructed when evaluating qualitatively dissimilar alternatives. Consequently, the decision maker must often resort to subjective measures of effectiveness when comparing consequences associated with communication tools (e.g. consumer shows vs. trade shows of the exhibition category) or broad communication tools (e.g. advertising vs. sponsorship).

When attributes are not naturally measurable, it is necessary to construct an appropriate scale. For example, consider the selection of website categories for internet advertising. Common website categories include newspaper sites, portals, magazine sites, recruitment sites and search engines, among others (Ngai, 2003). Again, one attribute in corporate communication tool selection is place performance, as measured by audience size. However, the audience size of website types is not objectively measurable. Page impressions cannot be employed as a measurement of effectiveness because, while easily assessed for individual websites, there is no obvious way to assess them for categories of websites. Hence, it is necessary to construct a scale that represents different levels of place performance in the context of selecting website types. This scale must be constructed in general terms, so that it can be applied to all kinds of website categories.

The construction of an attribute scale involves two tasks (Keeney and Raiffa, 1976, p. 40). It is first necessary to establish a *n*-point ordered scale from 'best' to 'worst'. For selecting website categories, assume that place performance, represented by audience size, will be measured according to four levels. Levels can be numbered so that the higher numbers are the most preferred (Clemen, 1996, p. 128). Once a number of levels has been established, it is then necessary to assign consequences — described in general terms, ranked from best to worst — to several levels along the scale. Each level of the attribute scale must be thoroughly described, specifying its characteristics or comparing these characteristics with those of other similar alternatives (Clemen, 1996, p. 80).

In the case of place performance of website types, assume that audience size is judged on three characteristics: the overall popularity of the website category, the estimated size of the potential target audience, and the percentage of all internet users who visit the best-known sites within a category per month.

Considering these factors, the best level (Level 4) includes very popular website categories, addressing a mass audience and reaching more than 10 percent of all internet users. On the other hand, the worst level (Level 1) consists of highly focused website categories that are not popular and reach less than one percent of all internet users. Both intermediate levels on this constructed scale for online audience size can be identified and described in a similar fashion. Table 4.2 summarises these four levels in order from best to worst for measuring audience size of website types.

Table 4.2. Hypothetical constructed scale for measuring audience size of website categories.

Level	Description
4 (best)	Very popular website category. It addresses the largest possible mass audience and reaches more than 10% of all internet users.
3	Popular website category. It addresses a large mass audience and reaches 5% to 10% of all internet users.
2	Less popular type of website. It is relevant for a focused audience and reaches 1% to 5% of all internet users.
1 (worst)	Website category is not popular. It is relevant only for a highly-focused audience, which represents less than 1% of all internet users.

Once an attribute scale has been constructed, it is then possible to measure consequences of communication tools on that attribute. Returning to the audience size example for types of websites, consider the website category ‘portal’. Portals often serve as a starting point for internet users, providing services such as search, websites directory, news, weather, e-mail, stock quotes, entertainment, telephone directory information, area maps and chat or message boards (IAB, 2005a). This type of website addresses the largest possible mass audience and the best-known among them includes Yahoo and MSNBC in the US. According to Alexa (2005), an Amazon’s subsidiary that provides traffic rankings of websites, they are visited by about 30 percent of all internet users. Now, according to the scale constructed above for measuring website category audience, portals can be considered on Level 4. Similarly, consider online auctioneers. These sites offer person-to-person auctions, with products sorted into categories. They are less popular than portals and well-known sites, such as eBay, reach about 4 percent of all internet users according to traffic information provided by Alexa (2005). Then, according to these features, online auctioneers will be on Level 2. This scale is also useful for rating other website categories, including search engines (e.g. Google), content aggregators (i.e. channel, magazine and newspaper sites such as *BBC*, *Spiegel Online*, and *New York Times*), special packagers (i.e. those that cover interests based on a certain social demographic scale or cover a particular need such as online merchant Amazon or recruitment site Monster) as well as destination sites, which target a highly focused audience and cover in-depth information about a certain topic, such as a famous person or a football team.

Note that constructing attribute scales can be a demanding task. This requires practice from the decision maker or analyst (Clemen, 1996, p. 82), and may require the support of experienced, professional personnel (Keeney and Raiffa, 1976, p. 40 f.). A constructed attribute scale must be comprehensive and levels along the constructed scale should be fully described, which may require a high degree of creativity. And, because of the multiattribute nature of decisions such as the selection among communication tools, constructed scales are to be used in conjunctions with other scales, so that they must be structured internally in such a manner that they would work together properly with other scales, leading to problems of conjoint measurement (Keeney and Raiffa, 1976, p. 40 f.). Moreover, constructed scales must be measurable and specified in a way that makes it easy to quantify preferences over these scales. That is, constructed scales must make it possible to assess their probability distributions and to establish a cardinal utility measure (Clemen, 1996, p. 79 ff). Nevertheless, these are all manageable tasks, as many published applications of decision analysis fully confirm (see Keeney and Raiffa, 1976, ch. 7 and 8, for examples).

4.2.2.4. Modelling relationships between attributes and objectives

Once objectives have been structured and comprehensive and measurable attributes have been identified, it is then necessary to relate them meaningfully. This task is of great significance in the tool selection decision because the achievement of brand objectives is measured in terms of proxy attributes. In other decision situations, where objective achievement is measured according to fundamental attributes, the modelling of the relationships between attributes and objectives is straightforward and intuitive. For example, if the achievement of corporate brand recognition were measured in terms of the target audience proportion recognising the corporate brand, the relationship between levels of this attribute and brand recognition would be clear: the higher the proportion of the target audience recognising the corporate brand, the better the recognition objective is met. However, in the decision situation analysed here, the degree of brand objective achievement is not measured according to fundamental attributes but in terms of proxy attributes. Hence, the degree of achievement of brand objectives must be related to levels of performance on tool attributes in some meaningful way.

In theory, every tool attribute is related to every brand objective. Remember the simplified model shown in Figure 4.6, where every brand attribute, and thus the degree of achievement of every brand objective, is a function of an alternative's level of performance on all tool attributes.

As shown in this simplified model, every stimulus characteristic may affect the achievement of every brand objective (see also the behavioural framework developed in chapter 3). Level of modality performance, for example, affects the achievement of all brand objectives. Indeed, specific levels of modality performance are required to achieve recognition, recall, as well as every conceivable image objective. These relationships are illustrated in Figure 4.7, where every tool attribute is linked to every brand objective.

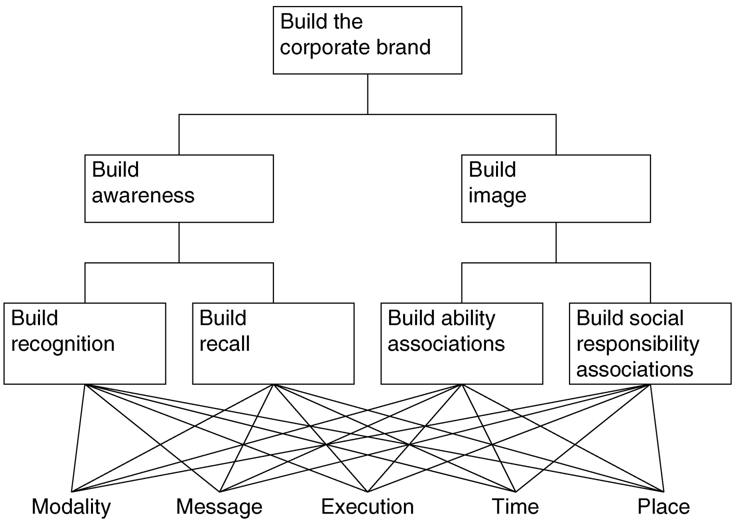

Figure 4.7. Relationships between tool attributes and brand objectives. Levels of every tool attribute affect the achievement of every brand objective.

This also means that the achievement of every brand objective is affected by the level of every tool attribute. Achievement of brand recognition thus depends on the levels of the five tool attributes identified. Indeed, for brand recognition it is recommended that two visual exposures to communication stimuli are attained portraying the corporate logotype, which should be displayed prominently, in colour, for at least two seconds (Rossiter and Percy, 1997, p. 217 ff.). Clearly, for building brand recognition, and also for achieving any other brand objective, specific tool requirements that involve the five identified tool attributes are required.

Fortunately, the decision maker may not need to consider all relationships between tool attributes and brand objectives. Considering only some key relationships may suffice for making sound decisions of which corporate communication tools to use. In other words, not all relationships will be absolutely relevant in every brand-building situation. Modality performance, for example, seems to be fundamental for increasing corporate brand awareness. Indeed, the encoding specificity principle, conceptually related to the modality performance of a communication tool, is the most important aspect to consider for increasing brand awareness, whether it is recognition or recall awareness (Rossiter and Percy, 1997, p. 217). Similar fundamental relationships between tool attributes and brand objectives are often found in the literature. These hypothetical fundamental relationships between the five tool attributes and the brand objectives are illustrated in Figure 4.8. In this figure, some relationships are represented with a thicker line to denote that they are essential for understanding how consequences associated to corporate communication tools meet specific brand objectives.

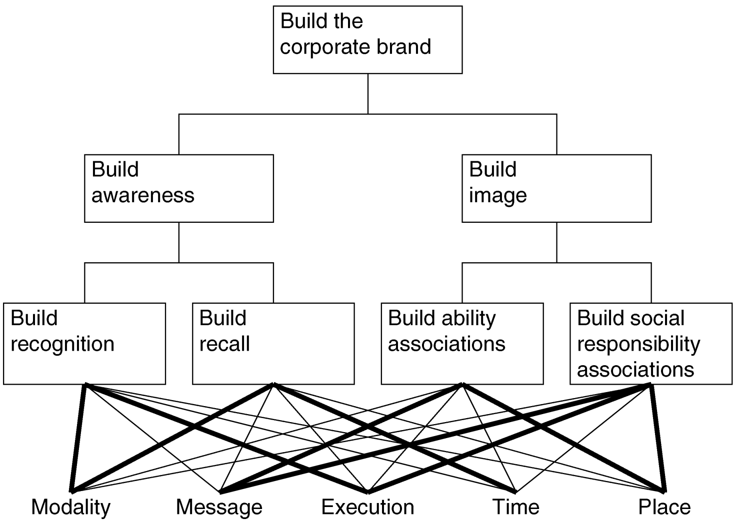

Figure 4.8. Relationships between tool attributes and brand objectives. Despite the fact that levels of every tool attribute affect the achievement of every brand objective, considering only some relationships — represented with a thicker line — could suffice for deciding which corporate communication tools to use.

These fundamental relationships imply that the achievement of every brand objective mainly depends on particular features of the corporate communication tools. In other words, the achievement of every brand objective has certain tool requirements. For example, although the achievement of brand recognition depends on the levels of all tool attributes, the achievement of this objective will mostly by affected by the visual capacity and the colour capacity of a communication tool (Rossiter and Percy, 1997, p. 420 f.).[37] Considering this, it could be said that recognition depends on modality performance and execution performance, regardless of performance in terms of other tool attributes.

Hence, it is not necessary to predict the implications of every tool attribute for every brand objective, but only of some tool attributes for every brand objective. The decision maker may concentrate on these fundamental relationships for making good decisions of which corporate communication tools to use.

The basis for identifying a useful set of relationships between levels of tool attributes and degree of brand objective achievement is marketing and consumer research literature. This literature is rich in empirical results on the effects of tool attributes on the knowledge structures in constituencies' minds. Indeed, one of the most heavily researched areas in marketing has been marketing communication, especially advertising (Keller, 2001). Additionally, relationships between tool attributes and brand objectives can be developed on the basis of results from other disciplines such as consumer and social psychology. Although these results are not typically designed to help managers develop successful corporate communication programmes, implications for selecting the appropriate corporate communication tools might reasonably be inferred from them. Experiments in psychology, including the vast body of research on persuasion and cognition, may thus shed light on communication effectiveness. Lastly, these relationships must not necessarily be based on established results, but also on speculations and of course on the decision maker's experience as well.

The identified relationships between tool attributes and brand objectives must then be structured. That is, these relationships must be articulated to help the decision maker understand how specific levels of tool attributes affect the achievement of brand objectives, mostly of lower-level brand objectives. Nevertheless, if it is hard to relate levels of attribute performance to lower-level objectives, it may be easier to relate these levels to the degree of achievement of higher-level

37 Tool requirements for achieving corporate brand recognition and other brand objectives are discussed in detail in subsection 4.3.2, where a useful set of relationships between tool attributes and brand objectives is identified for choosing among broad corporate communication tools.

brand objectives. The link of tool attributes to the achievement of higher-level brand objectives may result in operational ease. For example, the decision maker may think that the level of modality performance affects the achievement of the recognition and recall objectives and therefore he may want to relate modality performance to the achievement of the awareness objective. At most, these relationships must help the decision maker understand how specific levels of tool attributes affect the achievement of the overall objective of building the corporate brand.

The articulated relationships between tool attributes and brand objectives must then be expressed in some manner. As discussed above, these relationships cannot be analytically represented. That is, tool attributes and those hypothetical attributes that would directly measure brand objectives achievement have some probabilistic relationship which cannot be analytically designated. Still it is possible to express a useful set of relationships between several levels of proxy attribute performance and various degrees of objective achievement (Keeney and Raiffa, 1976, p. 60). There are generalisations on the relationships of tool attributes to brand objectives, which may be thought of as a series of testable propositions or hypotheses. For example, the relationship between level of modality performance and level of recognition could be expressed as follows: 'if a communication tool is capable of visual modality, then the recognition objective can be achieved, which implies that if a communication tool is not capable of visual modality, then the recognition objective cannot be met' or simply 'the better the visual modality, the higher the level of brand recognition'. This and other similar useful relationships for choosing among broad corporate communication tools are identified in subsection 4.3.2.

4.2.3. Choosing the best alternative

After modelling the problem structure, the next step in the decision analysis process is to use this structure for selecting the best alternative (Keeney and Raiffa, 1976, p. 5 ff.). This subsection presents techniques for choosing the best corporate communication tool — the alternative that maximises the building of the corporate brand. Firstly, current approaches to decision-making are reviewed and the limitations of analytical and non-analytical approaches for the tool selection decision are delineated. Two analytical decision-making techniques for choosing corporate communication tools are then presented, which represent a decision maker's preferences as an additive value function in the certainty case or as a multiplicative utility function in the uncertainty case and seem to be well-formulated analytical models for solving the tool selection decision.

4.2.3.1. Decision-making approaches to tool selection and their limitations

Managerial decisions can be made using various different approaches, at least three of which have been extensively applied to the tool selection decision: a non-analytical, an analytical, non-optimising and an analytical, optimising approach (see Dyer, Forman and Mustafa, 1992; Batra, Myers and Aaker, 1996, p. 599 ff.).

The tool selection decisions can be made without using a methodical procedure or plan. This non-systematic way of making decisions is here referred to as a complete non-analytical, intuitive analysis (see Keeney and Raiffa, 1976, p. 541). A non-analytical approach to decision-making does not consist of models, but of ad hoc heuristic simplifications (Keeney and Raiffa, 1976, p. 16 f.). With such an approach, the tool selection decisions are made on the basis of psychological shortcuts or 'rules of thumb' founded on a decision maker's experience and informal judgments — that is, common sense. Because of their nature, these heuristics rely on verbal argumentation for decision-making. These pragmatic rules of thumb evaluate communication tools according to quantitative and qualitative variables but, because the analysis is performed without a guiding framework, they only enable decision makers to evaluate a reduced number of alternatives.

A non-analytical approach to decision-making is widely employed today for selecting qualitatively dissimilar communication tools. Such rules of thumb are indeed commonly found in marketing literature to assist with the selection of broad communication tools (e.g. sponsorship vs. advertising). Rossiter and Percy (1997, p. 424 ff.), for example, review strategic factors that affect the selection among media types and identify two criteria for consideration: the capacity to convey the creative content and frequency potential. Based on both media characteristics, they propose a set of heuristics for media selection.[38] Similarly, Batra, Myers, and Aaker (1996, p. 584 ff.) propose quantitative and qualitative criteria for selecting from among media types, including reach, media characteristics in relation to the requirements of the creative content, production logistics and competitive setting (see also Belch and Belch, 2004, p. 313 ff.; Kotler, 2000, p. 587 ff., for similar sets of heuristics).

A non-analytical approach to choosing communication tools comes up against strong criticism, mainly because of its lack of method, which may cause the decision maker to ignore relevant information about the decision situation (see

38 These rules of thumb are discussed more thoroughly in section 4.3.

Keeney and Raiffa, 1976, p. 16 f.). Worse, these rules of thumb mostly ignore how communication works. They neither consider brand objectives, nor spell out the relationship between brand objectives and media decisions. Heuristics neither specify attribute scales nor suggest how to trade off the achievement of one objective against others. In short, non-systematic methods, despite the low cognitive requirement on the part of the decision maker, are, at best, too simple and likely to lead to biased and suboptimal tool selection decisions (see French, 1986, p. 337 f.; see also Tversky and Kahneman, 1981, for some empirical studies on inconsistencies of intuitive decision-making). Some form of decision analysis is often necessary to help the decision maker structure, understand, and fully appreciate the decision situation. A more systematic approach that attempts to model the tool selection decision thus seems more reasonable (see Leeflang et al., 2000, p. 24 ff.).

The tool selection decision may also be approached systematically using either optimising or non-optimising models of decision-making. An analytical approach to decision-making can make use of optimising models, which generally include mathematical programming of various kinds — linear, nonlinear, integer, dynamic or goal programming. Applied to the tool selection decision, these models are characterised because they assume that the best communication tool can be found (Dyer, Forman and Mustafa, 1992). Optimising models exclusively consider quantitative variables, although qualitative factors such as editorial climate, product fit or receptiveness of target audience can be given numerical values or 'media weights' and, in this way, be incorporated into the analysis (Gensch, 1970). Because of their mathematical nature, they are useful for evaluating a large number of communication tools (Dyer, Forman and Mustafa, 1992).

Optimisation methods are almost exclusively employed today for selecting from among the range of mass media vehicles (Berndt, 1995b, p. 22). Many of these models are described in marketing and media planning literature. For example, Berndt (1995b, p. 385 ff.) discusses a very simple optimisation model for selecting the best newspaper. The model consists of calculating cost-per-thousand values for each media alternative and using linear programming for finding the media mix that will maximise the number of exposures, subject to constraints in terms of advertising budget and maximum media availabilities.

Optimising models for choosing communication tools are not without criticism, mainly due to their serious deficiencies in incorporating qualitative considerations into the analysis. In fact, these models fail to consider qualitative differences among communication tools. As a result, the alternatives to be compared need to be qualitatively similar. Moreover, quantitative models optimise one single objective, although, as discussed in subsection 4.2.2, the tool selection decision comprises multiple objectives. In fact, these models do not really optimise. The proposed solution is not optimal when the assumptions are not complete, which unfortunately is usually true for these models as qualitative factors are not fully considered. As a result of these shortcomings, an optimising model's 'optimal weights' are considered meaningless, and mathematical programming, which was popular for media selection in the early 1960s, is not widely employed today (Dyer, Forman and Mustafa, 1992; Batra, Myers and Aaker, 1996, p. 600). Indeed, several empirical studies have shown that equal weights, or even random weights, do as well as optimal weights in many media decision situations.

The tool selection decision may also be analytically approached using non-optimising decision-making models. An analytical, non-optimising approach helps with problem solving, not through mathematical programming, but through non-optimising methods such as simulation and heuristic techniques. These techniques, applied to the tool selection decision, do not attempt to find the 'best' communication tool but only an acceptable one (Dyer, Forman and Mustafa, 1992). Non-optimising models consider all kinds of variables for evaluating communication tools, both quantitative and qualitative. These alternatives, however, need to be few in number, because these models cannot cope well with large alternative sets (Batra, Myers and Aaker, 1996, p. 600).

Non-optimising methods are widely employed for selecting communication vehicles today. In addition, these methods, particularly heuristic techniques, are increasingly used for selecting media types (e.g. broadcast vs. cable television) (Berndt, 1995b, p. 23). Berndt (1995b, p. 363 ff.), for example, delineates a scoring model for selecting advertising media types such as newspapers, consumer and trade magazines and broadcast and cable television. He proposes criteria such as media availability, portrayal capacity, reach and editorial fit for evaluating communication tools. He then proposes a decision rule (e.g. maximise the score) for selecting the 'optimal' alternative. Furthermore, Berndt points out that the set of criteria need to be comprehensive; weights of criteria need to reflect relative criteria importance and criteria ought to be evaluated, at least in scale measures.

Non-optimising models, despite being widely employed today in the tool selection decision, face some criticism. Primarily, these methods fail to show how good the proposed communication tool is (Dyer, Forman and Mustafa, 1992). Nevertheless, non-optimising models seem to be more appropriate than algorithmic models for corporate communication tool selection. Non-optimising models have fewer restrictive assumptions than algorithmic models, which allows for decision-making even when input variables are not quantitative or when they reflect complex aspects. In fact, non-optimising models accommodate all kinds of information: hard data, such as cost-per-thousand values, as well as qualitative aspects, such as competitive setting. Non-optimising models also enable multiple objectives to be considered. Because of these relative merits, non-optimising models using simulation techniques became popular for media decision-making in the late 1960s and early 1970s and have since become more popular using heuristic techniques (Batra, Myers and Aaker, 1996, p. 600).

4.2.3.2. A heuristic technique for corporate communication tool selection under conditions of certainty

A heuristic technique for corporate communication tool selection under conditions of certainty is presented here. This technique is schematically shown in Figure 4.9. First, the parameters of the tool selection decision are briefly presented. Then, a multiattribute value function is proposed to represent a decision maker's preferences for consequences related to the selection of corporate communication tools. This value function requires the decision maker to determine value functions over single attributes and their corresponding scaling constants, both tasks done with the importance of single brand objectives in mind. The maximisation of the multiattribute value function proposed here, which adds weighted preference scores on single tool attributes, seems to be an appropriate criterion for making decisions of which corporate communication tools to choose under conditions of certainty.

Presenting decision parameters

The tool selection decision broadly consists of choosing the best alternative from a set of available corporate communication tools. The 'best' communication tool is better than others in terms of building of the corporate brand. Assume that the set of communication tools has been generated,

$$a = \{a \in A \mid a = \text{corporate communication tool}\}\ ,$$

where a denotes a corporate communication tool within a set A of all available alternatives.

For any available communication tool there are associated consequences, which can be described in terms of evaluators. Consequences of each communication

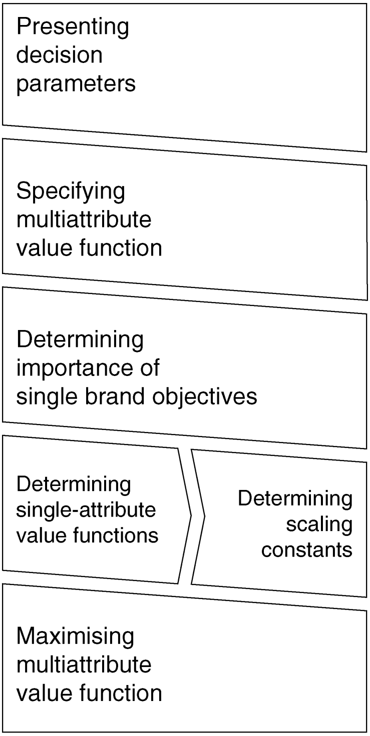

Figure 4.9. Schematic representation of a heuristic technique for corporate communication tool selection under conditions of certainty.

tool a in A can be described in terms of five tool attributes. This set of tool attributes, defined in subsection 4.2.2, consists of

X_1 = modality,
X_2 = message,
X_3 = execution,
X_4 = time,
X_5 = place,

where X_i denotes an attribute and also an evaluator of this attribute.[39] The five evaluators X_1, …, X_5 map each a in the act space into a point in the five-

39 To simplify the mathematical formulation, the same symbol is used for an attribute, namely X_i, and for the evaluator of this attribute, namely $X_i(\cdot)$ (see Keeney and Raiffa, 1976, p. 67).

dimensional consequence space. These five evaluators X_1, …, X_5 associate to each a in A five levels of performance x_1, …, x_5, obtained through

$$x_i \equiv X_i(a), \qquad \text{for } i = 1,...,5,$$

where x_i designates a specific level of performance of alternative a in terms of attribute X_i. For example, $X_1(a)$ refers to the level of performance of communication tool a in terms of modality. So, if a denotes major advertising media television, its evaluation in terms of modality performance would mention that television, as a promotional medium, allows pictures, sound and movement, all combined (see Kotler, 2000, p. 588). It is important to note that, because the certainty case is analysed here, certain known consequences are associated with each alternative. Hence, the decision maker is fully aware of the consequences of every communication tool on every tool attribute. These consequences can also be designated through a vector attribute. That is, the levels of performance x_1, …, x_5 can also be represented by

$$\mathbf{x} = (x_1, x_2, x_3, x_4, x_5),$$

where the boldface **x** represents a vector in contrast to a scalar (Keeney and Raiffa, 1976, p. 27).

Specifying a multiattribute value function

To choose a in A, the decision maker needs to be sure that he will be most satisfied with the consequences associated with communication tool a. As such, it is necessary to assess his preferences for each possible consequence (x_1, …, x_5). A systematic way of doing this is by formalising his preferences, which can be done using a value function. Such a multiattribute value function implies a preference ordering over all multidimensional consequences.

A decision maker's preferences for consequences related to the tool selection decision can be represented by a value function over the attributes X_1, …, X_5. A value function maps each point in a five-dimensional consequence space into an overall preference score in the unidimensional value space. This value function v combines levels of performance x_1, …, x_5 into an overall preference score. A function v, which associates a single real number $v(x_1, …, x_5)$ with each possible consequence (x_1, …, x_5), is said to be a value function representing the decision maker's preferences for consequences related to the corporate communication tool selection decision provided that

$$v(x_1', x_2', x_3', x_4', x_5') = v(x_1'', x_2'', x_3'', x_4'', x_5'') \Leftrightarrow (x_1', x_2', x_3', x_4', x_5') \sim (x_1'', x_2'', x_3'', x_4'', x_5'')$$

and

$$v(x_1', x_2', x_3', x_4', x_5') > v(x_1'', x_2'', x_3'', x_4'', x_5'') \Leftrightarrow (x_1', x_2', x_3', x_4', x_5') \succ (x_1'', x_2'', x_3'', x_4'', x_5''),$$

where the symbol $\sim$ reads 'indifferent to' and the symbol $\succ$ reads 'preferred to' (Keeney and Raiffa, 1976, p. 80 f.).

For specifying a multiattribute value function, an important issue to consider is the independence of a decision maker's preferences for specific levels of performance on single attributes. Namely, the specification of a functional form for a multiattribute value function requires the evaluation of the preferential independence conditions of a decision maker's preferences. These conditions concern preferences for consequences where no uncertainty is involved. An attribute X_i is considered preferentially independent of X_j, for $j \neq i$, if preferences for *specific levels* of X_i do not depend on the level of X_j (Clemen, 1996, p. 579). Attributes in a set of evaluators are mutually preferentially independent, if every subset of these attributes is preferentially independent of its complementary set of evaluators (Keeney and Raiffa, 1976, p. 111).

Given a set of n attributes $\{X_1, X_2, \ldots, X_n\}$, mutual preferential independence holds if there are $2^n - 2$ subsets that are preferentially independent (Keeney and Raiffa, 1976, p. 292). Clearly, the number of preferential conditions needing verification grows rapidly with the number of attributes. For the set of attributes relevant to the corporate communication tool selection decision, where $n = 5$, the ascertainment of mutual utility independence requires the verification of 30 preferential assumptions. Modality performance must be preferentially independent of its complement, and the reciprocal must also be preferentially independent, if *mutual* preferential independence holds. Moreover, attribute X_2 must be preferentially independent of $\{X_1, X_3, X_4, X_5\}$ and $\{X_1, X_3, X_4, X_5\}$ must be preferentially independent of X_2, and this must also hold for X_3, X_4, and X_5 individually considered. Additionally, attribute pairs must be preferentially independent of their complements. For a general n, there are $n(n - 1) / 2$ pairs of attributes that must be preferentially independent (Keeney and Raiffa, 1976, p. 112). Hence, for the set of attributes $\{X_1, \ldots, X_5\}$, there are 10 pairs of attributes to be tested for their respective complements. Moreover, the triplets of tool attributes (e.g. X_1, X_2, X_3) must be mutually preferentially independent of their complement (X_4 and X_5 in this case), and so on. If all hold, $X_1, \ldots, X_5$ will be mutually preferentially independent.

Fortunately, the work by Gorman (1968, cited in Keeney and Raiffa, 1976, p. 112) reduces the number of conditions to be verified.[40] His results demonstrate that if some independence conditions are verified, then some others are implied (French, 1986, p. 120). By Gorman, to verify mutual preferential independence, it is not necessary to test $2^n - 2$ possible preferential independence conditions of a set of n attributes $\{X_1, X_2, \ldots, X_n\}$, but instead it is enough to test $(n - 1)$ conditions. Hence, in the decision situation at hand, the number of preferential independence conditions needing verification drops to $(5 - 1) = 4$, although it may be advantageous to verify additional independence conditions for granting consistency (see French, 1986, p. 120).

The choice of which preference conditions to verify is not arbitrary. One simple set of $(n - 1)$ assumptions that implies mutual preferential independence of a set $\{X_1, X_2, \ldots, X_n\}$ is the preferential independence of the pairs $\{X_i, X_{i+1}\}$, for $i = 1, 2, \ldots, n - 1$. If each pair has the preferential independence property, then, according to Gorman, every triplet must have the preferential independence property, and so on. The reason for this implication is that the union of preferentially independent attribute subsets, which overlap but are neither contained in each other nor identical to the whole attribute set, is also preferentially independent (Keeney and Raiffa, 1976, p. 114). For example, if $\{X_1, X_2\}$ and $\{X_2, X_3\}$ are preferentially independent of their respective complements, then $\{X_1, X_2\} \cup \{X_2, X_3\} = \{X_1, X_2, X_3\}$ is preferentially independent as well. Hence, if every pair of attributes within an attribute set is preferentially independent of its complementary subset, the whole set of attributes is mutually preferentially independent.

For corporate communication tool selection, it is assumed that mutual preferential independence is applicable, or is at least a reasonable approximation. Hence, each pair of tool attributes $\{X_i, X_{i+1}\}$, for $i = 1, \ldots, 4$, is assumed to be preferentially independent of its respective complement. This implies that tradeoffs for tool attributes, say, X_2 and X_3, while keeping the levels of X_1, X_4 and X_5 fixed, do not depend on the particular levels of these fixed attributes. Therefore, if the paired consequence (x_2', x_3') is deemed better than (x_2'', x_3'') at levels of performance x_1', x_4', and x_5', the same holds at any other levels x_1, x_4, and x_5. In this case it could be said elliptically that $\{X_2, X_3\}$ is preferentially independent of its complement. In symbols, if preferential independence of $\{X_2, X_3\}$ holds,

40 See Keeney and Raiffa (1976, p. 299 ff.) for an illustrative procedure of how an analyst can question a decision maker to verify whether preferential independence holds in a particular decision situation.

$$(x_1', x_2', x_3', x_4', x_5') \succsim (x_1', x_2'', x_3'', x_4', x_5')$$
$$\Rightarrow (x_1, x_2', x_3', x_4, x_5) \succsim (x_1, x_2'', x_3'', x_4, x_5), \quad \text{for all } x_1, x_4, \text{ and } x_5,$$

where the symbol $\succsim$ reads 'at least as good as' (French, 1986, p. 69).

Mutual preferential independence does not mean that preferences for specific characteristics of a communication stimulus are independent of its other characteristics. A decision maker's preference for frequency, for example, may well depend on the type of message. A decision maker may indeed prefer a complex message to be conveyed to the target audience many times (i.e. relative high frequency) to get the message through, whereas he or she may prefer fewer exposures for a relative simple message (i.e. relative low frequency). Nevertheless, the decision maker must evaluate communication *tools* and not communication *characteristics*. As assumed in subsection 4.2.1, the target audience and the creative content have been selected. The decision maker then faces the tool selection decision and he or she evaluates alternative communication tools in terms of their capacity to build the corporate brand. For building brand recall, for instance, a decision maker would prefer communication tools capable of high frequency to those capable of a low frequency, regardless of the message performance of those alternatives (Rossiter and Percy, 1997, p. 420 f.). The decision maker would also prefer communication tools that adequately associate the company with its industry to alternatives that fail to adequately portray this link, regardless of the frequency capacity of those alternatives (Rossiter and Percy, 1997, p. 220 f.). Hence, message performance is mutually preferentially independent of time performance. Moreover, a communication tool capable of high frequency and of adequately portraying the link between the company and its industry would be preferred to communication tools that do not adequately portray this link and are only capable of low frequency, regardless of their performance in terms of modality, message and place. There is no reason why paired comparisons of $\{X_2, X_4\}$ should depend on the levels of other tool attributes. Thus, it seems appropriate to assume that $X_1, \ldots, X_5$ are mutually preferential independent.

Mutual preferential independence is advantageous in practice because it allows preferences over a single attribute to be assessed without considering levels of performance in terms of other attributes. To some extent, this condition represents the idea of 'all other things being equal, …' (French, 1986, p. 117). In comparisons where some levels of performance are kept fixed, a decision maker's preferences do not depend on the levels of these fixed attributes but are determined solely by the attributes in which there is variation (French, 1986, p.

117). Hence, the decision maker can concentrate his efforts on structuring his preferences over single attribute X_i, for $i = 1, \ldots, 5$, holding the other tool attributes fixed, assured that this assessment effort does not have to be repeated for different levels of the other attributes.

Once independent conditions have been evaluated, a decision maker's preferences need to be ascertained using a specific convenient mathematical expression. Mutual preferential independence and little or no uncertainty imply the existence of an additive value function (Keeney and Raiffa, 1976, p. 111 f.).[41] Hence, a decision maker's preferences for consequences related to the corporate communication tool selection decision, if they are to be fully articulated in a manner consistent with the above mutual preferential independence assumptions, can be expressed using an additive value function. The value function over tool attributes $X_1, \ldots, X_5$ is represented by a function v from the five-dimensional real space to the set of real numbers, that is $v : \mathbb{R}^5 \to \mathbb{R}$, such that

$$v(\mathbf{x}) = v(x_1, x_2, x_3, x_4, x_5) = \sum_{i=1}^{5} k_i v_i(x_i),$$

where

(a) $v(\text{worst } \mathbf{x}) = 0, \ v(\text{best } \mathbf{x}) = 1;$

(b) $v_i(\text{worst } x_i) = 0, \ v_i(\text{best } x_i) = 1, \quad \text{for } i = 1, \ldots, 5;$

(c) $0 \le k_i \le 1, \quad \text{for } i = 1, \ldots, 5;$

(d) $\sum_{i=1}^{5} k_i = 1.$

A decision maker's preferences for consequences related to corporate communication tool selection can thus be articulated in the form of an additive value function, which assigns 0 and 1 to the least preferred and the most preferred consequences, respectively. Let denote a least preferred consequence as $\mathbf{x}^-$ and a most preferred consequence as $\mathbf{x}^+$. The use of 'a most preferred' instead of 'the most preferred' indicates that there could be more than one consequence with the same degree of preference (Keeney and Raiffa, 1976, p. 140). The additive value function is assessed by determining single-attribute value functions and their correspondent scaling constants. In other words, to associate an overall preference score to each possible consequence ($x_1, \ldots, x_5$) requires value function v_i as well as scaling constant k_i to be determined separately, for $i = 1, \ldots, 5$. The value

41 Formal proof of this representation theorem can be found in Fishburn (1970) and Debreu (1976).

function v_i assigns 0 and 1 to the worst and the best levels of performance in terms of attribute X_i. The scaling constants k_1, …, k_5 range between 0 and 1 and add up to 1. Both the five single-attribute value functions and the five scaling constants must be determined with brand objectives in mind. Hence, before examining how to assess single-attribute value functions and attribute weights, the importance of single brand objectives must be determined.

Determining the importance of single brand objectives

A decision maker's preferences for consequences related to the corporate communication tool selection decision are assessed with brand objectives in mind. When the decision maker expresses his preferences for these consequences, he does so by considering the effects that these consequences have on the achievement of brand objectives. In other words, the objective of the decision maker when selecting tools is not to choose an alternative capable of, say, visual modality or likable execution per se, but to have a communication tool capable of achieving the decision maker's corporate brand objectives.

As discussed in subsection 4.2.2, the fundamental objectives in the tool selection decision are related to building the corporate brand, its dimensions awareness and image and their different components. However, these objectives are not meaningfully measurable by attributes that directly gauge objective achievement, but are indirectly by proxy attributes that measure characteristics of the communication tools. In particular, consequences associated with selecting corporate communication tools are measured in terms of modality, message, execution, time and place performance. How different levels of modality performance or execution performance build corporate brand recognition or build the corporate image must of course be taken into account. However, the relationships between levels of performance in terms of tool attributes and the level of brand objective achievement cannot be analytically represented. As a result, the relationships between brand objectives and single-attribute value functions or between brand objectives and scaling constants must be modelled in a decision maker's mind. When proxy attributes are used to characterise consequences, the decision maker must intuitively consider the relationships between levels of the proxy attributes and levels of the fundamental attributes that the proxy attributes represent. As said before, a decision maker's mind works as an informal synthesizer (see subsection 4.2.2). Hence, the decision maker must have these relationships in mind when assessing the additive value function that represents his preferences for consequences related to the tool selection decision.

In particular, the decision maker must understand how different levels of tool attribute X_i contribute to the overall brand-building objective or, better still, how specific levels of X_i relate to the achievement of lower-level brand objectives. This requires an understanding of how important single brand objectives are. The decision maker must be clear about how important it is for him to build, say, recognition or recall, in order to meaningfully assess single-attribute value functions and scaling constants.

The importance of single brand objectives can be better understood by assigning weights to these brand objectives. That is, the decision maker must translate his judgements of the importance of single brand objectives into weight assignments. The weight associated to individual brand objectives, however, might be difficult to determine at atomic level. Instead, it may be more appropriate to assign weights to subsets of brand objectives and then to make conditional assignments (Keeney and Raiffa, 1976, p. 123 ff.). To illustrate this point, consider a set of brand objectives with the three-story hierarchical structure shown in Figure 4.10. In this hypothetical brand objectives hierarchy, the overall objective is subdivided into lower-level objectives of more detail, which clarify the intended meaning of the more general objective. The all-inclusive brand objective is subdivided into two lower-level brand objectives, each of which is specified by two lowest-level brand objectives. Think of this objectives hierarchy as an abstracted version of that shown in Figure 4.5, where the first story represents the overall objective of building the corporate brand, the second story denotes increasing awareness and enhancing image, and the third story represents the lowest-level objectives of building recognition and recall for awareness and building corporate ability and corporate social responsibility associations for image.

Suppose for a moment that the four lowest-level objectives could be directly measured by attributes $Y_1, ..., Y_4$. These brand attributes $Y_1, ..., Y_4$ would evaluate directly how well lower-level brand objectives are achieved. The single-element attribute sets $\{1\}, \ldots, \{4\}$ are shown in the third row from the bottom in Figure 4.10, where $\{j\}$, for $j = 1, \ldots, 5$, is the single-element set containing the attribute index of Y_j. For example, attribute Y_1 would be the proportion of individuals in the target audience who successfully recognise the corporate brand. Remember that these *brand* attributes are different from the five *tool* attributes (modality, message, execution, time and place performance) identified in subsection 4.2.2.

Let I be the complete set of attribute indices of $\{Y_1, \ldots, Y_4\}$ and let S_1 and S_2 be subsets of I, so that

$$I = \{1, 2, 3, 4\};$$
$$S_1 = \{1, 2\};$$
$$S_2 = \{3, 4\}.$$

Let define the function w on subsets of I. This function associates a weight to an attribute subset, which represents the relative importance of this brand attribute subset for building the corporate brand. In other words, these weights reflect how important sets of brand objectives are for achieving the overall brand-building objective. Note that these weights are different to the scaling constants or 'attribute weights' necessary for calculating the overall preference scores associated to the possible consequences of corporate communication tool selection.

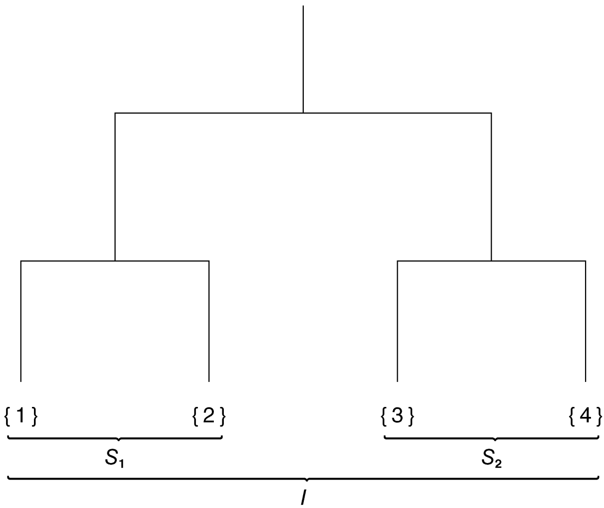

Figure 4.10. Abstracted schematic representation of a three-story brand objectives hierarchy. See also Figure 4.5 for a similar objectives hierarchy.

The function w defined on subsets of I satisfies the usual rules of a probability measure:

(a) $w(S) \geq 0, \quad \text{for } S \subset I,$

(b) $w(I) = 1,$

(c) $w(S_1 \cup S_2 \cup S_3 \cup \ldots) = w(S_1) + w(S_2) + w(S_3) + \ldots,$

where the subsets S_i, for $i = 1, 2, \ldots$, are disjoint (that is, where $S_i \cap S_j = \varnothing$, for $i \neq j$).

Let also define conditional weighting functions, such as

$$w\left(S_i \mid S_j\right) = \frac{w\left(S_i\right)}{w\left(S_j\right)}, \quad \text{for } S_i \subset S_j ,$$

where $w(S_i \mid S_j)$ refers to the conditional weighting of set S_i within the subset S_j. These conditional weighting functions indicate the weighting importance of attribute set S_i within the subset S_j (Keeney and Raiffa, 1976, p. 123 f.).

As previously mentioned, it may not be natural to assess $w(\{j\})$ directly — that is, to assign weights to individual brand objectives. Instead it might be more appropriate to assign weights to objective subsets and make conditional weight assignments. Hence, in the hypothetical brand objectives hierarchy shown in Figure 4.10, it may be more natural to compare:

$$\begin{aligned} w(S_1) &\quad \text{versus} \quad w(S_2) \\ w(\{1\}) &\quad \text{versus} \quad w(\{2\}) \\ w(\{3\}) &\quad \text{versus} \quad w(\{4\}). \end{aligned}$$

The values of the weights associated to single brand objectives are based on a decision maker's judgements of the importance of single brand objectives. In this regard, it is possible to think of three general cases.

Suppose that the decision maker thinks that various brand objectives are equally important for building the corporate brand. For example, increasing corporate brand awareness can be as important as enhancing corporate image for achieving the overall brand-building objective. That is, the decision maker thinks that subset S_1 is as equally important as S_2. Translating these judgments into conditional weights assignments, S_1 and S_2 would be weighted approximately equally. Hence,

$$w(S_1) = 0.50 \quad \text{and} \quad w(S_2) = 0.50.$$

In this case the weights imply that both brand objectives are complementary. That is, building the corporate brand requires building the image and also building awareness.

Now suppose the decision maker thinks that the achievement of one brand objective is much more important than the achievement of any other objective for building the corporate brand. That is, the importance of this one brand objective overwhelms the remaining objectives. For example, building corporate brand recognition — and not brand recall — may be a decision maker's sole awareness concern. That is, single-element set {1} is important, whereas {2} is not. When translating these judgments into conditional weights assignments, the weight associated to the brand recognition objective would be near 1 and the weights for any other awareness objective would be near zero. Hence,

$$w(\{1\} \mid S_1) = 1.00 \quad \text{and} \quad w(\{2\} \mid S_1) = 0.00.$$

In this case, each objective is said to be a substitute for the other. That is, building the corporate brand would require increasing recognition but not recall.

Finally, suppose that the decision maker thinks that all lower-level brand objectives are important for building the corporate brand, yet *some* brand objectives are more important than others. For example, enhancing corporate ability associations can be, say, twice as important as enhancing corporate social responsibility associations. That is, single-element set {3} is twice as important as {4} for achieving the brand-building objective. When translating these judgments into conditional weight assignments, the weight associated to the ability objective would be proportional to the social responsibility objective. Hence,

$$w(\{3\} \mid S_2) = 0.67 \quad \text{and} \quad w(\{4\} \mid S_2) = 0.33.$$

Note that these three general cases considering only two brand objectives can be readily extended to three or more objectives. Indeed, it is possible to assign weights to an objective subset with respect to its complement. For example, if the decision maker thinks that increasing recognition is as important as building corporate ability associations *and* corporate social responsibility associations, the weight associated to recognition will be roughly the same as the weight associated to enhancing ability and enhancing social responsibility combined. See section 4.3.2 for an example of where building a certain image-related brand objective (e.g. a utilitarian overall attitude towards the corporate brand) is compared to building a combination of various other image-related objectives.

Having determined conditional weights, it is now possible to determine weights associated to lowest-level brand objectives. For example, to find the weight associated to brand attribute Y_3 it is necessary to obtain the weight of single-element set {3}, that is

$$\begin{aligned} w(\{3\}) &= w(\{3\} \mid S_2) \cdot w(S_2) \\ &= 0.67 \times 0.50 \\ &= 0.33. \end{aligned}$$

In a similar manner, it is possible to find all individual brand attribute weights, displayed in the second row from the bottom in Figure 4.11.

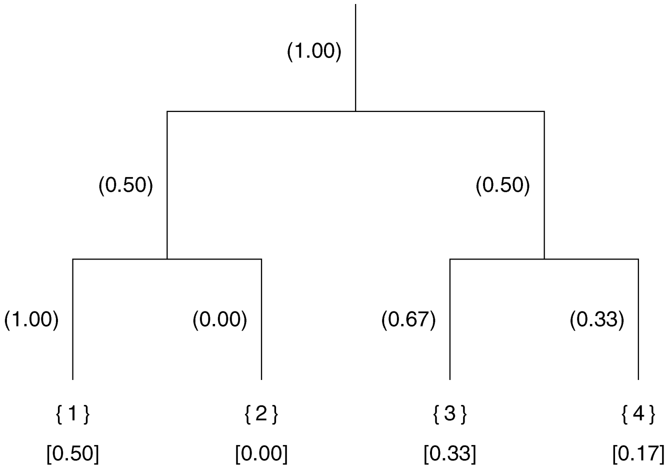

Figure 4.11. Hypothetical weights of brand objectives in a hierarchical structure. Conditional weights are shown in round brackets and brand attribute weights in square brackets. Based on Keeney and Raiffa (1976, p. 125).

The assessed weights have of course tangible repercussions on tool selection. When the weight associated to a brand objective is near 1, the decision maker must legitimately consider only requisite levels of performance associated to this brand objective; media requirements for achieving other brand objectives are not relevant. When brand objectives are equally weighted, the decision maker must consider requisite levels of all brand objectives simultaneously. These media requirements are equally important for achieving the overall brand-building objective. Otherwise, when no brand objective weight is close to 1 or brand objectives are not roughly equally weighted, the decision maker must consider requisite levels of all brand objectives and think carefully about the implications of these weights on the media requirements.

More specifically, the importance of single brand objectives, particularly the *relative* importance of lowest-level brand objectives, affects the decision maker's preference assessments over single attributes and the evaluation of scaling constants. The brand objectives pursued by the decision maker affect his preferences for consequences over single tool attributes. For example, the importance of the recognition objective for building a corporate brand affects how a certain execution performance is preferred. Remember that for building brand recognition, research in marketing and consumer behaviour has found that a communication tool must be capable of conveying the logotype prominently, in colour, and preferably accompanied by other visual content or copy that serves to draw attention to the communication tool for at least two seconds (Rossiter and Percy, 1997, p. 217 f.). Hence, an execution performance that displays the corporate logotype for a couple of seconds would be preferred to others that only 'flash' the logotype. In other words, the more important the brand recognition, the more preferred a communication tool that ensures sufficient exposure of the corporate logotype. Clearly, the decision maker evaluates levels of execution performance and also levels of performance on other tool attributes, with brand objectives in mind.

The brand objectives pursued by the decision maker also affect his judgement of the values of scaling constants. When the decision maker assesses scaling constants by evaluating his preferences for hypothetical consequences, where one tool attribute is at its best while all other attributes are at their worst levels, he does so by considering how these consequences contribute to the achievement of lower-level brand objectives, or at least to the achievement of the overall brand-building objective.[42] Returning to the recognition example, it has been said that the importance of the brand recognition objective affects the value of a certain execution performance for the decision maker. The more important the recognition for the decision maker, the higher the value of the corporate logotype progressing from insufficient exposure to sufficient exposure, and thus the higher the value of the scaling constant weighing execution performance, relative to other scaling constants. Evidently, regardless of the weighting procedure used, the decision maker assesses scaling constants with brand objectives in mind. How scaling constants, as well as value functions over single attributes, can be assessed in practice is described in detail below.

Determining value functions over single attributes

To obtain an overall preference score for consequence $(x_1, \ldots, x_5)$, it is necessary to determine the value function v_i, where v_i designates a value function over the single attribute X_i, for $i = 1, \ldots, 5$. In other words, the assessment of a decision maker's preferences for consequences over tool attributes requires the assessment of preference scores for specific levels of the tool attributes, where $v_i(x_i) = 0$ for the worst level X_i can have and $v_i(x_i) = 1$ for the best possible conse-

42 This weight assessment procedure, called swing weight, is described in detail below.

quence in terms of X_i.[43] Let x_i^- be a least preferred and x_i^+ a most preferred level of performance on attribute X_i, for $i = 1, \ldots, 5$. Again, note that there could be more than one level of performance on a single attribute with the same degree of preference.

Interestingly, value functions over single attributes are in fact conditional value functions, since they concern preferences over a single tool attribute given specific levels of the other attributes. However, because of the preferential independence conditions, the particular levels of these other attributes are not important for assessing single-attribute value functions, since these value functions would be the same for any level of the other attributes. A conditional value function thus represents preferences for consequences over a single attribute at a *specific* level of all other attributes but, because of mutual preferential independence, this value function represents preferences for consequences over a single attribute at *any* level of all other attributes. In fact, mutual preferential independence makes it possible to talk of single value functions over each of the attributes (Keeney and Raiffa, 1976, p. 227).

Value functions over single attributes are determined with brand objectives in mind. As discussed above, the decision maker must express his preferences for different levels of X_i considering the effects that x_i has on the achievement of lower-level brand objectives, or at least on the achievement of the overall brand-building objective.

How value function v_i over attribute X_i is determined in practice depends on the underlying scale of X_i. If level of performance x_i is measured on an interval or ratio scale, then an assessment procedure for continuous attributes should be used. However, if the underlying scale of attribute X_i is nominal or ordinal, then an assessment procedure for discrete attributes is more appropriate for determining v_i.[44] Useful assessment procedures for single-attribute value functions over both continuous and discrete attributes are shown in Table 4.3 and are described below.

Suppose that the underlying scale of tool attribute X_i is interval or ratio. That is, attribute X_i is quantitative and consequences in terms of X_i can be stated as a sca-

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43 Despite being unnecessary, it is useful to normalise the value functions over single attributes. In this way, these value functions are equivalent and scales are comparable, allowing for comparisons within and across attributes (Keeney and Raiffa, 1976, p. 116 f.).

44 An attribute scale can be continuous or discrete, regardless of whether the attribute scale is natural or constructed. In other words, the underlying scale of an attribute bears no relation to the nature of the scale. See subsection 4.2.2 for a discussion of natural and constructed attribute scales.

lar — that is, as a cardinal number. Examples of consequences measured on at least an interval scale include: number of main arguments in a television ad, size of a newspaper ad measured in sq. centimetres, number of insertions in a given period of time and number of visitors at a trade show.

Table 4.3. Assessment procedures for single-attribute value functions over continuous and discrete attributes, under conditions of certainty.

Continuous attributes	**Discrete attributes**
Mid-value point procedure:	Ratio comparison procedure:
1) Normalising value function	1) Setting endpoints of rating scale
2) Seeking subjective mid-value points	2) Rating intermediate levels
3) Checking for consistency and reiterating	3) Normalising ratings
4) Plotting subjective mid-value points and fairing a curve	4) Checking for consistency and reiterating
Source: Keeney and Raiffa (1976, p. 94 ff.).	Source: Clemen (1996, p. 130 f., 544 f.)

To assess a single-attribute value function over a continuous attribute, the general idea is to find a function that relates the amount x_i to $v_i(x_i)$, with this function being a continuous, real-valued function. One useful assessment procedure for finding this continuous function, which translates a cardinal number into a scalar, is the mid-value point method. The **mid-value point procedure** essentially requires the decision maker to seek subjective mid-value points. For any interval $[x_i', x_i''']$ of attribute X_i, its mid-value point x_i'' is such that the pairs (x_i', x_i'') and (x_i'', x_i''') are differentially value-equivalent (Keeney and Raiffa, 1976, p. 94). That is, the decision maker is equally satisfied about going from x_i'' to x_i' for a given increase of attributes other than X_i, as going from x_i''' to x_i'', for the same increase in the other attributes, where $x_i' < x_i'' < x_i'''$.

To assess a value function over a continuous attribute, the assessment procedure is as follows (see Keeney and Raiffa, 1976, p. 94 ff.). First, it is necessary to standardise the cardinal value x_i on a scale from 0 to 1. That is, let $v_i(x_i) = 0$ for the worst amount X_i can take on, and let $v_i(x_i) = 1$ for the best possible consequence in terms of X_i. For example, suppose that the tool attribute X_1 can be quantitatively measured and its levels lay within the interval from 0.0 to 30.0. As said before, these cardinal values must be scaled, so that $v_1(0.0) = 0$ and $v_1(30.0) = 1$.

It is then necessary to obtain mid-value points. The decision maker must seek the subjective mid-value point $x_i^{0.50}$ of the interval x_i^- to x_i^+, for which $v_i(x_i^{0.50}) = 0.50$. For example, if $i = 1$, the amount $x_i^{0.50} = x_1^{0.50}$ is such that if

$$(x_1^-, x_2', x_3', x_4', x_5') \sim (x_1^{0.50}, x_2'', x_3'', x_4'', x_5'')$$

then

$$(x_1^{0.50}, x_2', x_3', x_4', x_5') \sim (x_1^+, x_2'', x_3'', x_4'', x_5'') .$$

It means that the decision maker gives up the same amounts of X_2, …, X_5 to go from x_1^- to $x_1^{0.50}$ than to go from $x_1^{0.50}$ to x_1^+. Assume that the mid-value point of the interval from 0.00 to 30.0 is 7.5. That is, $v_1(7.5) = 0.50$. It implies that the decision maker is equally satisfied about going from 0.0 to 7.5 for a given decrease in the attributes X_2, …, X_5, as going from 7.5 to 30.0 for the same decrease in these other attributes.

The decision maker must then assess the mid-value points $x_i^{0.25}$ and $x_i^{0.75}$. It is necessary to apply the same procedure described above to determine the mid-value point $x_i^{0.25}$ of the interval x_i^- to $x_i^{0.50}$ for which $v_i(x_i^{0.25}) = 0.25$ and the mid-value point $x_i^{0.75}$ of the interval $x_i^{0.50}$ to x_i^+, in which $v_i(x_i^{0.75}) = 0.75$. Assume that the mid-value points of the intervals from 0.0 to 7.5 and from 7.5 to 30.0 are 2.5 and 15.0, respectively, so that $v_1(2.5) = 0.25$ and $v_1(15.0) = 0.75$.

As a consistency check, the decision maker could ascertain that $x_i^{0.50}$ is the mid-value point between $x_i^{0.25}$ and $x_i^{0.75}$. If this is not the case, the decision maker must manipulate his assessments to get a consistent and coherent set of compatible responses. Alternatively, more mid-value points could be determined.

Finally, it is necessary to plot the points assessed and to fair a curve passing through these points. Figure 4.12 shows a value curve, which represents a decision maker's preferences for different amounts of attribute X_1.

Other available assessment procedures for single-attribute value functions over quantitatively measured attributes include another conjoint scaling method, termed lock-step procedure (see Keeney and Raiffa, 1976, p. 91 ff.), and the ratio comparison procedure (see Clemen, 1996, p. 544 f.). This last procedure, which can be used to compare virtually any set of alternatives whether they are quantitatively measured or not (Clemen, 1996, p. 545), is discussed below.

The mid-value point procedure described above is useful for determining a value function over a single attribute whose scale is interval or ratio. Now suppose that x_i can be stated as a rank order (i.e. an ordinal number) or a paragraph of prose. That is, attribute X_i is not readily interpretable in terms of an interval or ratio scale but is measured on a nominal or ordinal scale. For example, following consequences can be measured on an ordinal or nominal scale: interactiveness of a banner ad (e.g. either interactive or non-interactive), usage of humour, likeability of a television ad (e.g. very likeable, likeable, not likeable, disgusting), trade show audience size (broad audience, focused audience, very focused audience). Evidently, these levels of performance are not clearly measurable on a meaningful numerical scale.

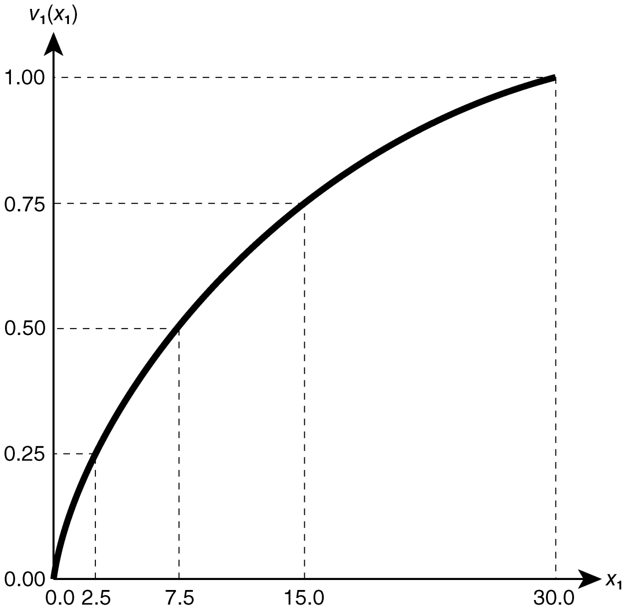

Figure 4.12. Assessing a hypothetical single-attribute value function over a continuous tool attribute using the mid-value point procedure.

Again, for assessing a single-attribute value function v_i, the idea is to find a function that relates the level x_i to $v_i(x_i)$. This value function translates an ordinal number or a paragraph of prose into a scalar. That is, attribute X_i, qualitative by nature, is made quantitative. Note that a single-attribute value function v_i is measured on an interval scale, regardless of the scale on which attribute X_i is measured (French, 1986, p. 330). Therefore it is possible also in these cases to obtain preference scores. The procedure, however, is different. For attributes that are not naturally quantitative, it is possible to determine value functions over single attributes on the basis of some ratio comparison. Essentially, the **ratio comparison procedure** requires giving arbitrarily chosen ratings to the worst and the best levels of X_i, and then *rating* the intermediate levels on the scale, indicating how much a level is worth relative to the other levels (Clemen, 1996, p. 544).

To assess a value function over a discrete attribute, the assessment procedure is as follows (see Clemen, 1996, p. 130 f., 544 f.). Firstly, the decision maker assigns arbitrary ratings to the least preferred and the most preferred levels of performance on attribute X_i. That is, he assigns a number of points between, say, 10 and 100 to the worst and the best levels of X_i, respectively. For example, suppose that the decision maker could identify and fully describe four meaningful levels of performance in terms of attribute X_2, where Level 1 is the worst and Level 4 is the best level. The decision maker assigns 10 points to Level 1 and 100 points to Level 4.

The decision maker must then rate intermediate levels on the scale, assigning meaningful numerical measurements to these intermediate levels. Suppose that the decision maker assigns, say, 70 points to Level 2 and 90 points to Level 3. These assessments mean that going from Level 1 to Level 2, with an increase of 60 points, is three times as good as going from Level 2 to Level 3, with an increase of 20 points, and that going from Level 2 to Level 3 is only twice as good as going from Level 3 to Level 4, with an increase of 10 points.

Once ratings have been assessed for all levels of performance on a single attribute, it is then necessary to scale these ratings so that they range from 0 to 1. An easy way to do this is by finding constants b and c so that, in the example here,

$$0 = b + c(10)$$
$$1 = b + c(100).$$

Solving these two equations simultaneously gives

$$b = -\frac{1}{9},$$
$$c = \frac{1}{90}.$$

These scaling constants can then be applied to calculating the value associated to each level. Thus,

$$v_2(\text{Level 1}) = -\frac{1}{9} + \frac{10}{90} = 0.00,$$
$$v_2(\text{Level 2}) = -\frac{1}{9} + \frac{70}{90} = \frac{2}{3} = 0.67,$$

$$v_2(\text{Level 3}) = -\frac{1}{9} + \frac{90}{90} = \frac{8}{9} = 0.89,$$

$$v_2(\text{Level 4}) = -\frac{1}{9} + \frac{100}{90} = 1.00.$$

Figure 4.13 shows the normalised ratings, which now represent a decision maker's preferences for levels of attribute X_2. Note that the preference scores assigned to the different levels are not evenly spaced. In fact, it could be surprising if they were (Clemen, 1996, p. 131).

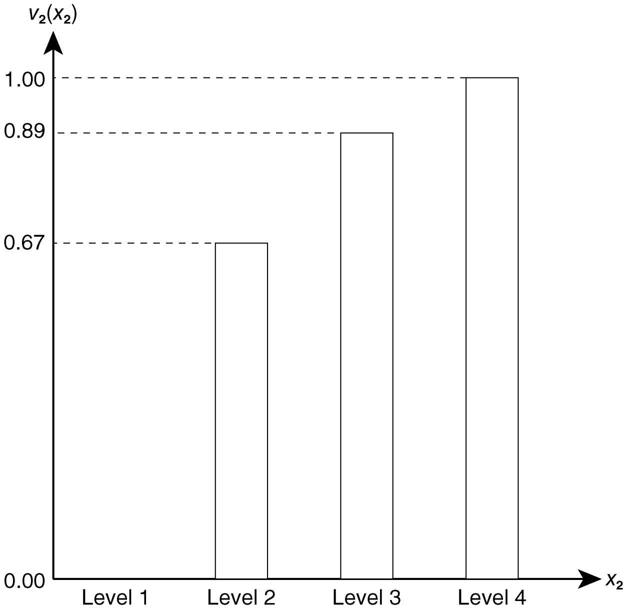

Figure 4.13. Assessing a hypothetical single-attribute value function over a discrete tool attribute using the ratio comparison procedure.

The preference scores obtained from single-attribute value functions have very specific meanings. The value $v_i(x_i)$ associated to a particular level of performance x_i can be interpreted as the contribution of level x_i to the overall satisfaction of the decision maker when deciding which corporate communication tools to use. If $v_i(x_i) = 0$, then the decision maker is least satisfied with the level of attribute X_i. Level x_i is thus the least effective for building the corporate brand. If $v_i(x_i) = 1$, then the decision maker is most satisfied with the level of X_i. Consequently, the level x_i is the best among all possible levels of X_i for building the corporate brand. Elliptically, the closer to 1 the preference score attached to the level x_i, the more satisfied the decision maker is with the level of X_i, and the more effective x_i is for building the corporate brand. Of course, a decision maker's judgments regarding his satisfaction or dissatisfaction with levels of performance are subjective. Another decision maker might assign different values to the same levels of performance. Moreover, level of performance x_i is associated to a specific preference score *in a given decision situation*. That is, the same level x_i could be more or less effective, and therefore more or less preferred, in another decision situation. The final contribution of level x_i to the decision maker's overall satisfaction with consequence $(x_1, \ldots, x_5)$ must be weighted by scaling constant k_i, which can be assessed in practice as discussed below.

Determining scaling constants

To obtain an overall preference score for consequence $(x_1, \ldots, x_5)$, once the value functions $v_1, \ldots, v_5$ have been determined, it is necessary to assess scaling constant k_i, for $i = 1, \ldots, 5$, where k_i designates a trade-off weight, based on the relative importance of the attribute X_i to achieve brand objectives. Each of these five scaling constants ranges between 0 and 1 and together they add up to 1.

Scaling constants are determined by assigning values for $k_1, \ldots, k_5$. In assigning these values, there are two essential aspects to consider: the ranges of the scales for single attributes and the brand objectives hierarchy (Keeney and Raiffa, 1976, p. 118 ff.).

Scaling constants are closely related to the ranges of the scales for single tool attributes (see Keeney and Raiffa, 1976, p. 121 ff.). Scaling constant k_i should reflect the relative value of progressing from worst to best in terms of attribute X_i (Clemen, 1996, p. 133). Scaling constant k_i will be relatively higher when communication tools differ widely from each other in terms of attribute X_i. On the other hand, scaling constant k_i will be relatively lower when levels of performance on attribute X_i are similar. Elliptically, the smaller the range of X_i, the lower the value of k_i. That is, the closer the best and the worst levels of X_i, the closer the value of k_i may be to zero.

This relationship between scaling constants and the ranges of levels that attributes assume is fundamental for assessing a decision maker's preferences. Scaling constant k_i is not determined on the basis of vague claims such as attribute X_i being three times as important as other attributes.[45] In fact, the k_i may be small but the attribute X_i still might be important. For example, suppose the decision maker is looking for a football club for sports sponsorship. All communication vehicles — football clubs in this case — offer the same execution performance for displaying a logotype on their jerseys. Now, when comparing football clubs, tool attribute X_2 refers to execution performance and all communication tools will offer very similar execution performances, so the best and the worst levels of X_2 are close together. Then k_2 will be close to zero. However, k_2 may be small but this does not mean that execution performance is unimportant to the decision maker in this decision situation.

By being closely related to the ranges of the scales for single attributes, scaling constants also relate to the brand objectives hierarchy. That is, when determining scaling constants, the decision maker must always consider how worst and best levels of the tool attributes relate to the achievement of single lower-level brand objectives, or at least how these levels contribute to the achievement of the overall brand-building objective.

Because of the close relationship between the ranges of the scales for single attributes and their corresponding scaling constants, the determination of scaling constants — like the assessment of single-attribute value functions — depends in practice on the underlying scales of the tool attributes. If attributes are measured on an interval or ratio scale, then a weighting procedure for continuous attributes should be used. However, if attributes are measured on a nominal or ordinal scale, then an assessment procedure for discrete attributes is more appropriate. The general idea of weighting procedures is to question the decision maker to obtain equations containing the unknown parameters (i.e. the scaling constants), and then to solve the system of equations for the parameter values. Two useful weight assessment procedures, one appropriate for measuring tool attributes quantitatively, the other appropriate for measuring tool attributes qualitatively, are shown in Table 4.4 and described below.

Suppose that the attributes X_1, …, X_5 are measured on at least an interval scale. For continuous attributes, one useful weighting procedure is the indifference assessment method. Essentially, the **indifference assessment procedure** consists of comparing hypothetical consequences and manipulating the amounts of one attribute until a decision maker's indifference point is reached (Keeney and Raiffa, 1976, p. 122).

45 Taking this discussion a step further, it is not clear what it means exactly when one attribute is more important than another (see Keeney and Raiffa, 1976, p. 272).

Table 4.4. Procedures for assessing scaling constants under conditions of certainty, when attributes are continuous or discrete.

Continuous attributes	**Discrete attributes**
Indifference assessment procedure:	Swing weight procedure:
1) Creating hypothetical consequences best on one attribute, worst on all others	1) Creating hypothetical consequences best on one attribute, worst on all others
2) Ranking-order consequences	2) Ranking-order consequences
3) Comparing consequences	3) Rating consequences
4) Obtaining scaling constants by finding indifferences	4) Obtaining scaling constants by normalising ratings
5) Checking for consistency and reiterating	5) Checking for consistency and reiterating
Source: Keeney and Raiffa (1976, p. 94 ff., 121 ff.).	Source: Edwards and Barron (1994), Clemen (1996, p. 547 ff.).

To determine scaling constants associated to continuous attributes, the assessment procedure is as follows (see Keeney and Raiffa, 1976, p. 94 ff., 121 ff.). First, the decision maker must create hypothetical consequence $\mathbf{x}^{\{i\}}$, for $i = 1, \ldots, 5$, such that

$$\mathbf{x}^{\{i\}} = \begin{cases} x_j = x_j^+, & \text{for all } j = i \\ x_j = x_j^-, & \text{for all } j \neq i, \end{cases}$$

where x_i^- represents the least preferred and x_i^+ the most preferred amount of attribute X_i. The hypothetical consequences are best in one attribute, worst in all others. For example, if $i = 2$, then

$$\mathbf{x}^{\{i\}} = \mathbf{x}^{\{2\}} = (x_1^-, x_2^+, x_3^-, x_4^-, x_5^-) .$$

Now, since $v_i(x_i^-) = 0$ and $v_i(x_i^+) = 1$, then

$$v(\mathbf{x}^{\{i\}}) = k_i .$$

For example, if $i = 2$, then

$$\begin{aligned} v(\mathbf{x}^{\{2\}}) &= v(x_1^-, x_2^+, x_3^-, x_4^-, x_5^-) \\ &= k_1(0) + k_2(1) + k_3(0) + k_4(0) + k_5(0) \\ &= k_2. \end{aligned}$$

It is now necessary to rank-order consequences $\mathbf{x}^{\{1\}}, \ldots, \mathbf{x}^{\{5\}}$. These hypothetical consequences should be compared to determine which rank first, second, third and so forth, which is not a particularly difficult task. This can be done, for instance, by asking the decision maker whether he prefers $\mathbf{x}^{\{3\}}$ or $\mathbf{x}^{\{4\}}$ (see Keeney and Raiffa, 1976, p. 304). By repeating this question for other binary comparisons, it is possible to obtain a complete ranking of the consequences $\mathbf{x}^{\{1\}}$, …, $\mathbf{x}^{\{5\}}$. At most $(5^2 - 5) / 2 = 10$ binary comparisons are possible, but only $(5 - 1) = 4$ are absolutely necessary to get a complete ordering. Suppose that the decision maker, after some serious thought, ascertains that

$$\mathbf{x}^{\{3\}} \succ \mathbf{x}^{\{5\}} \succ \mathbf{x}^{\{1\}} \succ \mathbf{x}^{\{2\}} \succ \mathbf{x}^{\{4\}}.$$

This would imply that for this decision maker

$$k_3 > k_5 > k_1 > k_2 > k_4 .$$

The decision maker should then compare consequences and reach indifferences between them. For example, the decision maker must compare

$$(x_1^-, x_2^-, x_3, x_4^-, x_5^-) \quad \text{versus} \quad \mathbf{x}^{\{5\}} ,$$

and manipulate the amount x_3 until he is indifferent between both consequences. Suppose this occurs at $x_3 = x_3'$; that is, suppose that

$$(x_1^-, x_2^-, x_3', x_4^-, x_5^-) \sim (x_1^-, x_2^-, x_3^-, x_4^-, x_5^+) ,$$

so that

$$v(x_1^-, x_2^-, x_3', x_4^-, x_5^-) = v(x_1^-, x_2^-, x_3^-, x_4^-, x_5^+) ,$$

or

$$k_3 v_3(x_3') = k_5 ,$$

and since it is assumed that the single-attribute value function over X_3 has already been determined, the decision maker can easily find $v_3(x_3')$. Suppose that

$$v_3(x_3') = 0.75 ,$$

so that

$$0.75 k_3 = k_5 .$$

Similarly, the decision maker can compare other hypothetical consequences. Assume, moreover, that

$$(x_1^-, x_2^-, x_3'', x_4^-, x_5^-) \sim (x_1^+, x_2^-, x_3^-, x_4^-, x_5^-) ,$$

and

$$v_3(x_3'') = 0.60\,,$$

so that

$$0.60k_3 = k_1\,.$$

Also assume that

$$0.30k_3 = k_2\,,$$
$$0.20k_3 = k_4\,,$$

which would have been obtained assessing indifferences between consequences.

Once these proportional relationships have been determined, it is then possible to obtain scaling constants by normalising the assessed ratios. That is, from the evaluated proportional relationships and

$$\sum_{i=1}^{5} k_i = 1\,,$$

it is possible to conclude that, in this example,

$$k_1 = 0.21, \quad k_2 = 0.11, \quad k_3 = 0.35, \quad k_4 = 0.07, \quad k_5 = 0.26\,.$$

For instance, from the proportional relationships assumed above, k_3 is calculated as 1 / (0.60 + 0.30 + 1.00 + 0.20 + 0.75) = 0.35. Figure 4.14 shows the preference scores associated to the hypothetical consequences $\mathbf{x}^{\{1\}}$, …, $\mathbf{x}^{\{5\}}$, which happen to be the values of the scaling constants k_1, …, k_5. These are the five individual scaling constants of the additive value function.

Additionally, it may be desirable to assess additional indifferences between consequences (Keeney and Raiffa, 1976, p. 123). For example, the decision maker might compare

$$(x_1^-, x_2^-, x_3^-, x_4^-, x_5) \quad \text{versus} \quad \mathbf{x}^{\{1\}}\,,$$

and manipulate the amount x_5 until he is indifferent between both consequences. In this way the decision maker would obtain an over-determined system of equations, which could be advantageous as the set of indifferent assessments is likely to be inconsistent. These inconsistencies will be useful for getting the decision maker to rethink his preferences and to arrive at a consistent set of scaling constants that truly represents his preferences for consequences related to the corporate communication tool selection decision.

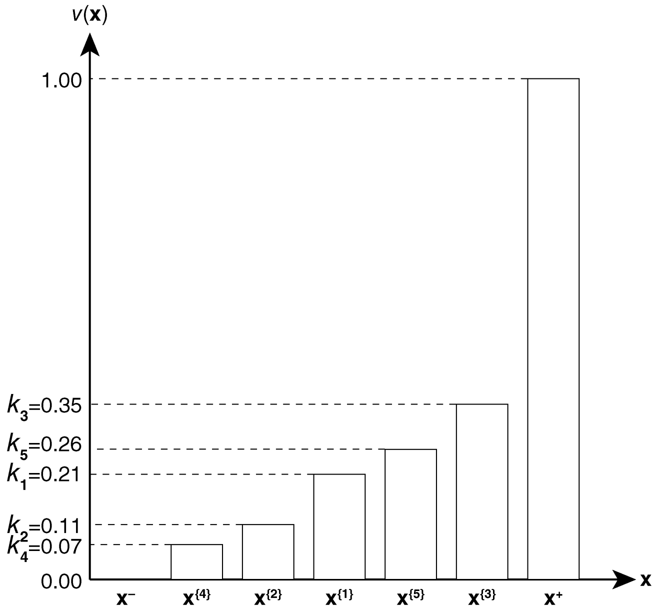

Figure 4.14. Graphical representation of the indifference assessment procedure to determining scaling constants associated to continuous attributes. Based on Clemen (1996, p. 550).

Clearly, the indifference assessment procedure is straightforward in concept. However, this procedure implies making difficult assessments, especially for attributes which are not quantitatively measurable. In this situation, the manipulation of the level of one attribute may not make much sense. As well as employing the indifference assessment procedure, the decision maker can use other formal methods for determining scaling constants associated to continuous attributes, including lotteries (see Clemen, 1996, p. 550 ff.) and swing weights. The swing weight procedure, which can be used in virtually any weight-assessment situation (Clemen, 1996, p. 547), is discussed below.

The indifference assessment procedure described above is useful for determining scaling constants when tool attributes are measured on an interval or ratio scale. Now suppose that tool attributes $X_1, \ldots, X_5$ are not readily interpretable in terms of an interval scale, but their underlying scales are nominal or ordinal. That is, tool attributes are not of a scalar nature. To assess scaling constants in this situation, the swing weight procedure is appropriate. The **swing weight procedure** is essentially a thought experiment in which the decision maker determines proportional relationships between scaling constants by ‘swinging’ attributes from worst to best, one at a time (Clemen, 1996, p. 547). This weighting procedure is similar to the indifference assessment method described above. However, the swing weight procedure does not require manipulation of the level of attributes.

To determine scaling constants whose underlying attributes are discrete, the assessment procedure is as follows (Edwards and Barron, 1994; Clemen, 1996, p. 547 ff.). The decision maker starts by creating hypothetical consequence $\mathbf{x}^{\{i\}}$, for $i = 1, \ldots, 5$, where $\mathbf{x}^{\{i\}}$ is the consequence best on tool attribute X_i, worst on all other attributes.

Then the decision maker ranks-order consequences $\mathbf{x}^{\{1\}}, \ldots, \mathbf{x}^{\{5\}}$. As in the example above, suppose that the decision maker thinks that

$$\mathbf{x}^{\{3\}} \succ \mathbf{x}^{\{5\}} \succ \mathbf{x}^{\{1\}} \succ \mathbf{x}^{\{2\}} \succ \mathbf{x}^{\{4\}}.$$

The decision maker must then rate each hypothetical consequence relative to others. That is, it is necessary to assess proportional relationships between consequences $\mathbf{x}^{\{1\}}, \ldots, \mathbf{x}^{\{5\}}$. Since $v_i(x_i) = 0$, it is known that

$$v(\mathbf{x}^{-}) = (x_1^{-}, x_2^{-}, x_3^{-}, x_4^{-}, x_5^{-}) = 0\,.$$

And, because of the ranking assumed above, it is also known that the best among these five hypothetical consequence is worth $v(\mathbf{x}^{\{3\}})$. The value of the other consequences must fall between 0 and $v(\mathbf{x}^{\{3\}})$. Knowing this, it is then possible to rate the other hypothetical consequences relative to $\mathbf{x}^{\{3\}}$. In particular, the task lies in obtaining proportional relationships between

$$v(\mathbf{x}^{\{5\}}) \text{ and } v(\mathbf{x}^{\{3\}}),$$
$$v(\mathbf{x}^{\{1\}}) \text{ and } v(\mathbf{x}^{\{3\}}),$$
$$v(\mathbf{x}^{\{2\}}) \text{ and } v(\mathbf{x}^{\{3\}}),$$

and

$$v(\mathbf{x}^{\{4\}}) \text{ and } v(\mathbf{x}^{\{3\}}).$$

The comparison is relatively straightforward: the decision maker must assess how much less satisfaction he gets by swinging a tool attribute from worst to best compared to changing attribute X_3 from worst to best. By swinging the tool attributes one at a time, he is assessing the ratios k_5 / k_3, k_1 / k_3, k_2 / k_3, and k_4 / k_3. This change may be thought of in percentage terms (Clemen, 1996, p. 548). That is, considering the increase in satisfaction resulting from swinging attribute X_3 from worst to best as 100 percent, the decision maker must ascertain the percentage of that increase he obtains by swinging, say, X_5 from worst to best.

Suppose after careful thought, the decision maker concludes that improving X_5 from worst to best is worth 60 percent of the value he obtains by changing X_3 from worst to best. In symbols,

$$0.60v(\mathbf{x}^{\{3\}}) = v(\mathbf{x}^{\{5\}}) .$$

Since $v(\mathbf{x}^{\{i\}}) = k_i$, for $i = 1, \ldots, 5$, it implies that

$$0.60k_3 = k_5 .$$

Similarly, the decision maker concludes that changing attribute X_1 from worst to best is worth half of the improvement in attribute X_3 and, doing the same thought exercise, he concludes that attribute X_2 is worth one-third and that attribute X_4 only one-tenth of the satisfaction he obtains by swinging X_3 from worst to best. These assessments mean that

$$0.50k_3 = k_1,$$
$$0.33k_3 = k_2,$$

and

$$0.10k_3 = k_4.$$

With these proportional relationships, it is possible to calculate the scaling constants. These assessments, along with the constraint that the five scaling constants add up to 1, allow a system of equations to be found for obtaining the values of the scaling constants (Clemen, 1996, p. 549). In this example, the scaling constants are

$$k_1 = 0.20, \quad k_2 = 0.13, \quad k_3 = 0.40, \quad k_4 = 0.04, \quad k_5 = 0.24 .$$

The scaling constants, assessed using the swing weight procedure, are graphically represented in Figure 4.15.

Again, it may be desirable to assess additional ratios. For example, the decision maker may consider the increase in satisfaction resulting from changing attribute X_5 from worst to best as 100 percent, and then assess the percentage of that increase by swinging, say, attribute X_1 from worst to best. In this way the decision maker would obtain an over-determined system of equations useful for policing inconsistencies in a decision maker's weighting judgements.

Besides the swing weight procedure, other procedure for assessing scaling constants related to non-continuous attributes is the rank order centroid method (see Edwards and Barron, 1994; Barron and Barrett, 1996). This procedure is a relatively new formally justifiable weighting method developed by Barron and Barrett for the certainty case, which allows scaling constants to be obtained by using only rank-order information about the hypothetical consequences $\mathbf{x}^{\{1\}}$, …, $\mathbf{x}^{\{5\}}$ (Clemen, 1996, p. 574). This procedure, therefore, does not require rating hypothetical consequences relative to others.

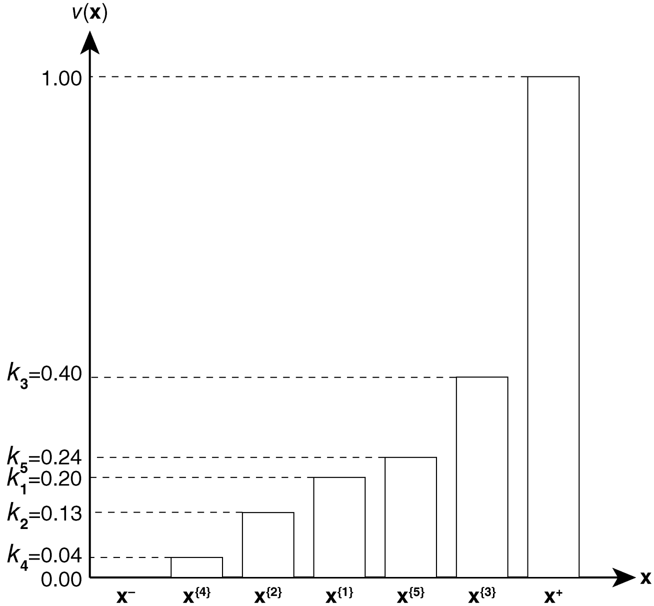

Figure 4.15. Graphical representation of the swing weight assessment procedure to determining scaling constants associated to discrete attributes. Based on Clemen (1996, p. 550).

Any of the weighting procedures described above allows meaningful values to be assigned for the scaling constants. The interpretation of these values is not easy however. Values of scaling constants depend on the choices of the levels of performance $x_1^-,...,x_5^-$ and $x_1^+,...,x_5^+$. In turn, the least preferred and the most preferred levels of performance depend on the possible consequences of the decision situation (Keeney and Raiffa, 1976, p. 271). Changing the levels x_i^- and x_i^+ will necessarily change the value of scaling constant k_i, for $i = 1, \ldots, 5$. And, because of the consistency condition, scaling constant k_j, for $j \neq i$, will necessarily change (Keeney and Raiffa, 1976, p. 272).

The value of scaling constant k_i, for $i = 1, \ldots, 5$, can be interpreted as the contribution to the decision maker's overall satisfaction of improving attribute X_i from worst to best. If $k_i = 0$, then there is no increase in satisfaction of changing attribute X_i from worst to best. A decision maker's satisfaction thus depends on the levels of tool attributes other than X_i. If $k_i = k_j$, for $j \neq i$, then the decision maker thinks that improving X_i from worst to best is as good for building the corporate brand as improving consequences in terms of attribute X_j from worst to best. Elliptically, if $k_i > k_j$, then the decision maker would rather change X_i from worst to best than change X_j from worst to best (Keeney and Raiffa, 1976, p. 272). Lastly, if $k_i = 1$, the increase in satisfaction of improving attribute X_i from worst to best is absolute. This means that there is no increase in satisfaction of swinging a tool attribute other than X_i from worst to best. Moreover, in this last case, the value function v and the single-attribute value function v_i are strategically equivalent — that is, both functions imply the same preference structure for any two consequences (see Keeney and Raiffa, 1976, p. 81 f.).

Note that the scaling constant k_1 does not indicate the importance of tool attribute X_i, for $i = 1, \ldots, 5$. The k_i may be small yet the attribute X_i may be very important (Keeney and Raiffa, 1976, p. 271 ff.). For example, if $k_4 = 0.10$ and $k_5 = 0.30$, it does not mean that attribute X_5 is three times as important as X_4. In fact, it is not even possible to conclude that X_5 is more important than X_4. It could be said, however, that these scaling constants reflect the judgments that the range of possible levels of place performance is three times as important as the range of possible time performances. That is, improving place performance from worst to best is three times as important as improving time performance from worst to best. Hence, scaling constant k_i cannot be interpreted as an indicator of the relative importance of the attribute X_i. The scaling constants $k_1, \ldots, k_5$, together with the single-value functions $v_1, \ldots, v_5$ allow the multiattribute value function that represents a decision maker's preferences to be determined for each possible consequence $(x_1, \ldots, x_5)$, as shown below.

Maximising the value function

Once single-attribute value functions and their corresponding scaling constants have been determined, it is then possible to associate an overall preference score to each available corporate communication tool. These preference scores indicate a decision maker's preferences for communication tools and can thus be employed to single out the 'best' alternative. Given the value function v, the problem is to

$$\text{find } a \in A \text{ to maximize } v(x_1, x_2, x_3, x_4, x_5)\,,$$

where the levels of performance $x_1, \ldots, x_5$ depends on communication tool a.

The corporate communication tool a' that maximises the additive value function v will be the alternative whose associated consequences are better for building the corporate brand. The characteristics of this communication tool make it the most suitable for carrying the creative content to the target audience in terms of resulting brand-knowledge structures in constituencies' minds.

Note that the single preference score associated to each available communication tool represents its overall relative effectiveness in building the corporate brand, *relative* to other alternatives. That is, the communication tool with the highest preference score is the best among the available alternatives. However, it may be possible that another communication tool, not evaluated, is even more effective in building the corporate brand.[46]

Because a value function assigns a scalar value to each consequence, a communication tool associated to an overall preference score of 0.50, for example, is not supposed to be twice as good as an alternative with a value of 0.25, but rather the difference between 0.50 and 0.25 is equivalent to the difference between 0.75 and 0.50. Remember that the value measurement is made on the basis of an interval scale.

Of course, overall preference scores associated to consequences of the corporate communication tool selection decision are based on subjective judgement. Another decision maker might assign five different preference scores to levels of performance on single attributes and might assign different values to the five scaling constants, and thus he might associate a different overall preference score to each corporate communication tool. Hence, other decision makers might find other 'best' communication tools for building the corporate brand.

In summary, a multiattribute heuristic technique that articulates a decision maker's preferences for consequences of tool selection in the form of an additive value function is an appropriate decision-making method for choosing the best corporate communication tool, that is, that alternative believed to be superior than others for building the corporate brand. This value function meaningfully represents a decision maker's preferences for communication tools under conditions of certainty. However, when consequences related to corporate communication tool selection are uncertain, as they are indeed likely to be, a decision

46 Remember that a major shortcoming of non-optimising methods used for selecting communication tools is that the decision maker does not know how good the 'best' alternative is. See subsection 4.2.3 for a discussion of optimising and non-optimising analytical models applied to tool selection.

maker's preferences should be articulated employing a heuristic technique that incorporates a decision maker's attitude towards risk, as proposed below.

4.2.3.3. A heuristic technique for corporate communication tool selection under conditions of uncertainty

A heuristic technique for deciding which communication tools to use under conditions of uncertainty is presented here. This technique is appropriate when the decision maker does not know for certain the resulting consequence of each of the available corporate communication tools. This situation is not uncommon in corporate communication tool selection. Indeed, there are many ways in which uncertainty can enter this decision. For example, the execution of an event, although planned, is not fully under a decision maker's control. And resulting place performance when selecting advertising media vehicles is not certain. One popular German weekly, *Der Spiegel*, had a circulation between 983,000 and 1,147,000 copies per issue in 2004, with an average of over 1.1 million copies (IVW, 2005). Considering circulation as a measure of place performance, the decision maker does not know for sure how many copies of this, or any other magazine, will be sold. Moreover, considering readership instead of circulation as a measure of place performance, it is likely that several individuals read each magazine issue. Various members of a family could share a copy, they could lend it to friends, reader circles could pass it around, patients could leaf through it in physicians' waiting rooms, and so forth. Neither magazine readership nor magazine circulation can thus be fully predicted at the moment of selecting media vehicles. Of course, uncertainty does not only apply to execution performance or place performance: consequences in terms of any other tool attribute can be uncertain. The sources of uncertainty are many and should be considered for making good decisions of which corporate communication tools to use.

The heuristic technique proposed here, which parallels the one proposed for the certainty case, is schematically shown in Figure 4.16. First, decision parameters are summarily presented. Then, a set of assumptions about the decision maker's preference attitudes are postulated and, consistent with these assumptions, a functional form for the utility model is derived. A decision maker's preferences for consequences related to tool selection are then formalised in the form of a multiattribute utility function, which is appropriate for decision situations involving risk. Contrary to a *value* function, a *utility* function appropriately incorporates the decision maker's risk attitude. A detailed way of assessing a suitable multiattribute utility function is then presented. Considering the importance of single brand objectives, single-attribute utility functions and scaling constants are determined. The specified utility function which assigns a utility score to each possible consequence of the tool selection decision is finally employed to evaluate corporate communication tools. The maximisation of expected utility is the appropriate criterion for a decision maker's optimal choice.

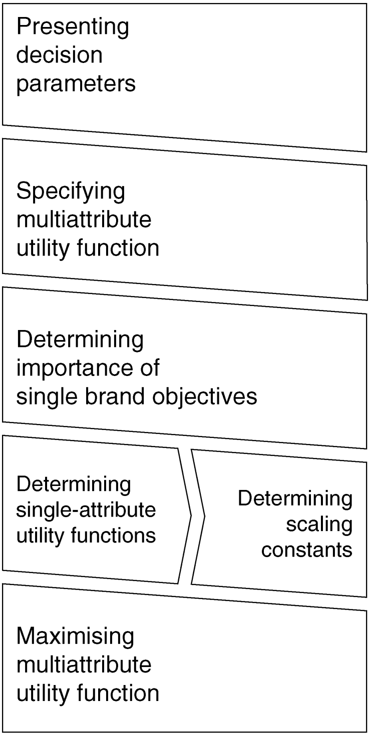

Figure 4.16. Schematic representation of a heuristic technique for choosing corporate communication tools under conditions of uncertainty.

Presenting decision parameters

For building the corporate brand using corporate advertising and ad-like communication activities, once audience strategy and creative strategy have been selected, the decision maker must choose the best corporate communication tool. Assume a finite number of available communication tools, which have already been generated:

$$a = \{a \in A \mid a = \text{corporate communication tool}\} .$$

Now assume that a brand objectives hierarchy has been specified and that tool attributes X_1, …, X_5 have been identified. These five tool attributes are appropriate for selecting corporate communication tools, as argued in section 4.2.2. This set of attributes consists of

$$\begin{aligned} X_1 &= \text{modality}, \\ X_2 &= \text{message}, \\ X_3 &= \text{execution}, \\ X_4 &= \text{time}, \\ X_5 &= \text{place}. \end{aligned}$$

Tool attributes fully describes the consequences of each corporate communication tool with views of the brand-building objective. In particular, the five evaluators X_1, …, X_5 associate to each a in A five uncertain levels of performance $\tilde{x}_1, \ldots, \tilde{x}_5$, so that

$$\tilde{x}_i \equiv X_i(a), \quad \text{for } i = 1,\ldots,5,$$

where $\tilde{x}_i$ designates a level of performance in terms of tool attribute X_i. Note that $\tilde{x}_i$ designates an uncertain level of X_i, where the tilde (~) represents uncertainty, or might also be viewed as the sign for a random variable (Keeney and Raiffa, 1976, p. 27). For simplicity of notation, the uncertain consequence associated to communication tool a is also denoted by the multiattribute consequence $\tilde{\mathbf{x}}$. This vector combines levels of performance $\tilde{x}_1, \ldots, \tilde{x}_5$ into a single multiattribute consequence,

$$\tilde{\mathbf{x}} = (\tilde{x}_1, \tilde{x}_2, \tilde{x}_3, \tilde{x}_4, \tilde{x}_5),$$

where the boldface $\tilde{\mathbf{x}}$ represents a vector in contrast to a scalar. The consequences of the tool selection decision are thus both uncertain and multidimensional.

Let denote the possible consequences of corporate communication tool selection as $\mathbf{x}_1$, $\mathbf{x}_2$, …, $\mathbf{x}_r$. Thus, uncertain consequence $\tilde{\mathbf{x}}$ is equivalent to a lottery L yielding consequences $\mathbf{x}_1$, $\mathbf{x}_2$, …, $\mathbf{x}_r$ with probabilities p_1, p_2, …, p_r, respectively.[47] That is,

47 Note that sub-indices of vectors and scalars have different meanings. Sub-indices of vectors represent possible consequences of tool selection, whereas sub-indices of scalars represent levels of performance. For instance, x_3 and $\mathbf{x}_3$ denote a level of message performance and a possible multidimensional consequence of tool selection, respectively.

$$L \equiv < p_1, \mathbf{x}_1; p_2, \mathbf{x}_2; \ldots; p_r, \mathbf{x}_r >,$$

where lottery L will result in consequence $\mathbf{x}_i$ with probability p_i. Of course, $p_i \geq 0$, for $i = 1, 2, \ldots, r$, and $\sum_{i=1}^{r} p_i = 1$. Note that it is possible that $p_i = 0$, that is, that specific consequences are not possible in a particular lottery.

Specifying a multiattribute utility function

For choosing the best corporate communication tool, the decision maker must assess his preferences for uncertain consequences related to the decision of which corporate communication tools to use. Because uncertain consequences are equivalent to lotteries, assessing preferences for uncertain consequences is equivalent to assessing preferences for probability distributions over these consequences. In other words, selecting communication tools requires the decision maker to assess his preferences for probability distributions over consequences $\mathbf{x}_1$, $\mathbf{x}_2$, …, $\mathbf{x}_r$ and then rank-order such probability distributions. The probability distributions over each possible multiattribute consequence depend on the chosen a. That is, the decision maker's choice of a communication tool a determines the probability distribution over uncertain consequence $\tilde{\mathbf{x}}$. In particular, assume that the choice of communication tool a' will result in consequence $\mathbf{x}_i$ with probability p_i', for $i = 1, 2, \ldots, r.$, and the choice of a'' will result in the same consequence $\mathbf{x}_i$ but with probability p_i'', for $i = 1, 2, \ldots, r$. As evident, there are infinite potential probability distributions over the finite set of consequences $\mathbf{x}_1$, $\mathbf{x}_2$, …, $\mathbf{x}_r$ (Keeney and Raiffa, 1976, p. 133).

The decision maker's preferences for consequences over the tool attributes X_1, …, X_5 can be systematically represented by assessing a utility function over these attributes. This utility function associates a real number to consequence $\mathbf{x}_i$, for $i = 1, 2, \ldots, r$. A function u is said to represent fairly and truthfully a decision maker's preferences for uncertain consequences of corporate communication tool selection provided that, for any pair of lotteries $L' = < p_1', \mathbf{x}_1; p_2', \mathbf{x}_2; \ldots; p_r', \mathbf{x}_r >$ and $L'' = < p_1'', \mathbf{x}_1; p_2'', \mathbf{x}_2; \ldots; p_r'', \mathbf{x}_r >$,

$$\sum_{i=1}^{r} p_i' u(\mathbf{x}_i) = \sum_{i=1}^{r} p_i'' u(\mathbf{x}_i)$$
$$\Leftrightarrow < p_1', \mathbf{x}_1; p_2', \mathbf{x}_2; \ldots; p_r', \mathbf{x}_r > \sim < p_1'', \mathbf{x}_1; p_2'', \mathbf{x}_2; \ldots; p_r'', \mathbf{x}_r >$$

and

$$\sum_{i=1}^{r} p_i' u(\mathbf{x}_i) > \sum_{i=1}^{r} p_i'' u(\mathbf{x}_i)$$
$$\Leftrightarrow < p_1', \mathbf{x}_1; p_2', \mathbf{x}_2; ...; p_r', \mathbf{x}_r > \succ < p_1'', \mathbf{x}_1; p_2'', \mathbf{x}_2; ...; p_r'', \mathbf{x}_r >,$$

where the symbols $\sim$ and $\succ$ read 'indifferent to' and 'preferred to', respectively, and $\sum_{i=1}^{r} p_i u(\mathbf{x}_i)$ is the expected utility of a lottery yielding consequences $\mathbf{x}_1$, $\mathbf{x}_2$, …, $\mathbf{x}_r$ with probabilities p_1, p_2, …, p_r. This implies that expected utility is the appropriate criterion to use in choosing among uncertain consequences (Keeney and Raiffa, 1976, p. 219 f.). Hence, to choose a in A, the decision maker must be most satisfied with the probability distribution associated to communication tool a.

The specification of a multiattribute utility function u requires the independence of the decision maker's preferences for lotteries over consequences related to the tool selection to be evaluated. The independence condition relevant in this case is utility independence. Utility independence concerns preferences for consequences that do involve uncertainty. An attribute X_i is said to be utility independent of X_j, for $j \neq i$, if preferences for *uncertain consequences* involving different levels of attribute X_i do not depend on the particular level of X_j (Keeney and Raiffa, 1976, p. 226; Clemen, 1996, p. 580). That is, preferences for lotteries with varying levels of attribute X_i and a common, fixed level of X_j are independent of the fixed level of X_j (French, 1986, p. 184). Attributes X_1, X_2, …, X_n in a set of evaluators are mutually utility independent if every subset of these attributes is utility dependent of its complement (Keeney and Raiffa, 1976, p. 284 and 289).

There are $(2^n - 2)$ attribute subsets that must be utility independent if mutual utility independence holds for attributes X_1, X_2, …, X_n (Keeney and Raiffa, 1976, p. 292). Hence, for corporate communication tool selection where $n = 5$, it would be necessary to verify 30 assumptions to ascertain mutual utility independence. Fortunately, several sets of weaker conditions also imply mutual utility independence, which reduces the number of conditions needing verification. Given a set of n attributes $\{X_1, X_2, …, X_n\}$, the weaker conditions require, at most, the verification of n assumptions. However, it may be beneficial to verify additional independence conditions for improving confidence in the utility independence evaluation.

One useful set of weaker conditions to test postulates that attributes X_1, X_2, …, X_n are mutually utility independent if attribute pair $\{X_i, X_{i+1}\}$, for $i = 1, 2, …, n - 1$, is preferentially independent and attribute X_1, or any other single attribute, is utility independent of its complement (Keeney and Raiffa, 1976, p. 292, 311).[48] These conditions thus require only preferences for consequences with two varying attributes and preferences for lotteries involving one attribute to be evaluated. These conditions have been proven to be operationally verifiable in practice (see e.g. Keeney and Raiffa, 1976, ch. 7 and 8, for illustrative applications).

For corporate communication tool selection under conditions of uncertainty, it is assumed here that mutual utility independence holds, or it is a good approximation to assume that it does. As already assumed in the additive value model, every pair of tool attributes $\{X_i, X_{i+1}\}$, for $i = 1, \ldots, 4$, is preferentially independent of its complementary attribute set. Thus trade-offs for tool attributes X_1 and X_2, while keeping the levels of performance on X_3, X_4, and X_5 fixed, do not depend on the particular values of these fixed levels. For the uncertainty case, it is additionally assumed that tool attribute X_1 is utility independent of its complement $\{X_2, X_3, X_4, X_5\}$. That is, comparisons between one 50-50 lottery and either another 50-50 lottery or a certain consequence that involve levels of modality performance, while attributes X_2, X_3, X_4 and X_5 are held fixed, do not depend on the particular levels of the fixed attributes. In other words, if risky level of performance $\tilde{x}_1'$ is preferred to $\tilde{x}_1''$ at levels $x_2', \ldots, x_5'$, the same may hold at any other levels $x_2, \ldots, x_5$. In symbols:

$$\begin{aligned}&(\tilde{x}_1', x_2', x_3', x_4', x_5') \succsim (\tilde{x}_1'', x_2', x_3', x_4', x_5')\\ &\Rightarrow (\tilde{x}_1', x_2, x_3, x_4, x_5) \succsim (\tilde{x}_1'', x_2, x_3, x_4, x_5), \quad \text{for all } x_2, \ldots, x_5.\end{aligned}$$

Mutual utility independence is a reasonable assumption in corporate communication tool selection. For example, for building brand recognition, the decision maker would prefer communication tools that are likely to display the corporate logotype for at least two seconds, regardless of the alternative's performance in terms of modality, message, time and place (Rossiter and Percy, 1997, p. 420). Now, the decision maker's preferences between a communication tool with 50 percent chance of displaying the logotype for at least two seconds and an alternative displaying the logotype for two seconds for sure are not likely to depend on the levels at which attributes X_1, X_2, X_4, and X_5 are held fixed. Hence, it seems appropriate to assume that execution performance is utility independent of its complement. And because every pair of tool attributes is preferentially independent, it is possible to conclude that the tool attributes $X_1, \ldots, X_5$, are mutually utility independent.

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48 See Keeney and Raiffa (1976, p. 299 ff.) for an assessment procedure for verifying utility independence conditions in practice.

Utility independence is considerably useful for assessing multiattribute utility functions (Keeney and Raiffa, 1976, p. 227 ff.). Indeed, the resulting form of the utility function seems practical in terms of its general robustness and its required assessments, also when there are more than three attributes, as is the case in deciding which corporate communication tools to use (Keeney and Raiffa, 1976, p. 298).

As in the heuristic technique for the certainty case, it is necessary to construct a mathematical model that is a reasonable representation of the decision maker's preferences in this risky situation. When each subset of an attribute set is utility independent of the remaining evaluators, then the multiplicative form of the utility function must be used (Keeney and Raiffa, 1976, p. 289).[49] That is, if the tool attributes X_1, …, X_5 are mutually utility independent, then the decision maker's preferences for lotteries over consequences related to the corporate communication tool selection decision can be represented by a multiplicative utility function. Under this set of independence conditions over the decision maker's preferences, his preferences can be represented by a real-valued utility function u on the five-dimensional space of real numbers, that is $u : \mathbb{R}^5 \to \mathbb{R}$, such that

$$1 + ku(\mathbf{x}) = 1 + ku(x_1, x_2, x_3, x_4, x_5) = \prod_{i=1}^{5} \left[kk_i u_i(x_i) + 1 \right],$$

where

(a) $u(\text{worst } \mathbf{x}) = 0,\ u(\text{best } \mathbf{x}) = 1;$

(b) $u_i(\text{worst } x_i) = 0,\ u_i(\text{best } x_i) = 1, \quad \text{for } i = 1,\ ...,\ 5;$

(c) $0 \leq k_i \leq 1, \quad \text{for } i = 1,\ ...,\ 5;$

(d) k is a nonzero solution to the equation

$$1 + k = \prod_{i=1}^{5} (1 + kk_i).$$

Under conditions of uncertainty, the decision maker's preferences for consequences related to tool selection can be articulated by a multiplicative utility function. The utility function u is normalised by assigning an overall preference score of 0 to the worst consequence and a preference score of 1 to the best consequence of the decision of the corporate communication tool selection decision. Let $\mathbf{x}^-$ and $\mathbf{x}^+$ denote a least desirable and a most desirable consequence. The single-attribute utility function u_i, for $i = 1$, …, 5, is scaled by letting the least desir-

49 See Keeney and Raiffa (1976, p. 290 f.) for a brief formal proof of this representation theorem.

able level of X_i be 0 and the most desirable level be 1. The scaling constant k_i corresponding to attribute X_i, for $i = 1,\ldots, 5$, ranges between 0 and 1. The additional scaling constant k is calculated on the basis of $k_1, \ldots, k_5$. Hence, because of the mutual utility independence condition, the assessment of a five-attribute utility function is reduced to the assessment of five single-attribute utility functions and some scaling constants. As in the additive value model, these assessments are executed with brand objectives in mind. Thus, before discussing procedures for assessing single-attribute utility functions and for choosing the proper values for scaling constants, it is necessary to discuss how the importance of single brand objectives is determined.

Determining the importance of single brand objectives

For assessing the decision maker's preferences for corporate communication tools, it is necessary to start the assessment by determining the importance of single brand objectives. In other words, the assessment of preferences for probability distributions over consequences $\mathbf{x}_1, \mathbf{x}_2, \ldots, \mathbf{x}_r$ is carried out considering the effects that these probability distributions have on the achievement of lower-level brand objectives, or at least on the degree to which they contribute to the achievement of the overall brand-building objective. As argued in subsection 4.2.2, the relationships between levels of performance on tool attributes and degree of brand objective achievement cannot be analytically represented, but should be articulated in decision makers' minds. To assist the decision maker in this task, the importance of single brand objectives should be assessed.

The manner of determining the importance of single brand objectives is the same as under conditions of certainty. As explained in detail in the additive value model, it is first necessary to assign weights to subsets of tool attributes and then make conditional assignments. Firstly, weights are assigned to attribute subsets, comparing these subsets against others. Then, conditional weight assignments are made to attribute sets within these subsets. In this manner it is possible to find the weights associated to lower-level brand objectives, which give insight into the relative importance of each of these brand objectives.

As in the certainty case, conditional weights associated to single brand objectives are ascertained on the basis of the decision maker's judgements about the relative importance of these brand objectives for building the corporate brand. If the decision maker thinks that a subset of brand objectives is his sole concern in a given decision situation, then the conditional weight associated to the objectives subset is close to 1, whereas the conditional weight of its complementary subset approaches zero. In this case, brand objectives are said to substitute one another.

However, if the decision maker thinks that every brand objective is equally important for building the corporate brand, then the conditional weight associated to every brand objective is about the same. In this case, brand objectives are complementary. Lastly, if the decision maker thinks that all brand objectives are important, yet some objectives are more important than others, he needs to assess how worthwhile it is for him to achieve one brand objective over another. Conditional weights associated to these brand objectives will reflect these proportional relationships.

Weights associated to lower-level brand objectives need to have been calculated before assessing the utility function over uncertain consequences related to corporate communication tool selection. As discussed in the heuristic technique for the certainty case, the relative importance of lower-level brand objectives affects the decision maker's preferences for particular levels of performance on single tool attributes. These weights also affect his judgements of the values for scaling constants, not only of scaling constant k_i associated to attribute X_i, for $i = 1, \ldots, 5$, but also indirectly of additional scaling constant k, which is unique to the multiplicative utility function. The approach for assessing the single-attribute utility functions $u_1, \ldots, u_5$ and the scaling constants $k_1, \ldots, k_5$ remains the same as in the certainty case, but operationally the problem is more involved, as demonstrated in the forthcoming discussion on how to assess single-attribute utility functions and their corresponding scaling constants.

Determining utility functions over single attributes

To associate an overall preference score to each lottery over the tool attributes $X_1, \ldots, X_5$, it is necessary to determine the utility function u_i over single attribute X_i, for $i = 1, \ldots, 5$. That is, preference scores for particular levels of the tool attributes should be assessed, knowing from the outset that the least desirable consequence in terms of X_i gets zero and the most desirable consequence gets 1. The symbol x_i^- designates a least desirable level of attribute X_i and x_i^+ designates a most desirable level of X_i, for $i = 1, \ldots, 5$.

The assessment of the single-attribute utility functions $u_1, \ldots, u_5$ resembles the assessment of the five value functions over single attributes in the additive value model. However, the procedure is more demanding due to the introduction of uncertainty into the analysis. Uncertainty implies that, besides assessing preferences for consequences over attributes $X_1, \ldots, X_5$, it is also necessary to assess the decision maker's attitude towards risk. Instead of answering questions such as whether level of performance x_i' is more or less desirable than level x_i'', the decision maker should be capable of evaluating whether lottery $< 0.50, x_i^a;$

$0.50, x_i^b >$ is preferred to lottery $< 0.50, x_i^c; 0.50, x_i^d >$, where x_i^a, x_i^b, x_i^c, and x_i^d are all specific levels of attribute X_i. The decision maker should at least be prepared to answer questions such as whether he prefers lottery $< 0.50, x_i^a;$ $0.50, x_i^b >$ to a certain consequence x_i^e, where x_i^a, x_i^b, and x_i^e are particular levels of X_i.[50] For instance, the decision maker should be capable to ascertain whether he prefers to reach 100,000 members of a target audience for certain or to reach either 90,000 individuals with 50 percent chance or 110,000 with 50 percent chance. Clearly, the task of assessing utility functions over single attributes is more complex than the assessment of single-attribute value functions.

As under conditions of certainty, preferences for uncertain consequences in terms of single attributes are assessed with brand objectives in mind. When the decision maker expresses his preferences for lotteries over the tool attributes X_1, …, X_5, he does so by considering the effects that attribute X_i has on the achievement of lower-level brand objectives, or at least the effects of X_i on the achievement of the overall objective of building the corporate brand.

The applicable assessment procedures for single-attribute utility functions depend on the underlying scale of the attributes over which preferences are to be assessed (Keeney and Raiffa, 1976, p. 190). In some contexts the tool attribute X_i may be quantitative and the x_i scale is interval or ratio. Examples include number of participants, size of the typography, number of field-surrounding billboards (e.g. at sport events) or event duration. In other contexts, the values on the x_i scale are of a nominal or ordinal nature. Some consequences that are not easily measurable on a meaningful interval or ratio scale involve such subjective appraisals as an index of ad likeability, personnel friendliness, message trustworthiness or interactiveness. When scales are quantitative, assessment procedures for continuous attributes should be employed; otherwise, procedures for assessing single-attribute utility functions over discrete attributes make more sense. Regardless of whether a scale for attribute X_i is quantitative or not, the decision maker should be able to answer whether he prefers a level of performance x_i' to a level x_i''.

Assessment procedures for single-attribute utility functions over both continuous and discrete attributes in circumstances of risk are shown in Table 4.5. From the procedures reviewed for assessing single-attribute value functions, a version of

50 The comparison between a lottery and a certain consequence supposes that the substitutability axiom holds. This axiom postulates that a decision maker is indifferent between any lottery that includes a certain consequence A and one formed by substituting A with a lottery that is judged to be its equivalent (see Clemen, 1996, p. 505; see also French, 1986, p. 156 f.). This axiom allows lotteries to be substituted into a decision for their certainty equivalents.

the mid-value point method is also appropriate under conditions of uncertainty. The ratio comparison procedure is only limited to the certainty case because nothing about this procedure encodes the decision maker's attitude towards risk (Clemen, 1996, p. 552 f.). For discrete attributes, the probability-equivalent procedure could be used instead under conditions of uncertainty.

Table 4.5. Assessment procedures for single-attribute utility functions over continuous and discrete attributes, under conditions of uncertainty.

Continuous attributes	**Discrete attributes**
Mid-value point procedure:	Probability-equivalent procedure:
1) Identifying utility function shape	1) Creating reference lottery yielding best level and worst level of performance
2) Normalising utility function	2) Adjusting probability in the reference lottery until reaching indifference with a certain level of performance
3) Seeking subjective mid-value points	3) Repeating assessment for each other level of performance
4) Checking for consistency and reiterating	4) Checking for consistency and reiterating
5) Fairing a curve through the points found	
6) Choosing a utility function	
Source: Keeney and Raiffa (1976, p. 188 ff.), Clemen (1996, p. 474 f.).	Source: Clemen (1996, p. 475 ff.).

When attribute X_i is quantitative, one useful assessment method is a version of the **mid-value point procedure**, which considers certainty equivalents instead of certain consequences. Using this procedure for the uncertainty case, a single-attribute utility function is assessed as follows (see Keeney and Raiffa, 1976, p. 188 ff.; see also Clemen, 1996, p. 474 f.). First of all, it is necessary to identify the shape of the single-attribute utility function. That is, some possible qualitative characteristics of the decision maker's preferences over a single attribute such as monotonicity, risk aversion and increasing risk aversion must be determined.

A utility function u_i is said to be monotonic when a greater amount of attribute X_i is *always* preferred to a lower amount or when a lower amount of X_i is *always* preferred to a greater amount (Keeney and Raiffa, 1976, p. 141 f.). In the former case the utility function u_i is monotonically increasing, in the latter it is monotonically decreasing. To determine whether a utility function is increasingly monotonic, the decision maker must verify that, if amount x_i'' is greater than x_i', x_i'' is always preferred to x_i' (Keeney and Raiffa, 1976, p. 191).

The decision maker's preferences over single attributes are sometimes nonmonotonic. For example, a nonmonotonic utility function seems to better represent preferences over message performance as measured by the quality of information about a company that is offered. Indeed, results of an experimental investigation demonstrated that, all else being equal, information quality improves consumer decision effectiveness up to a certain point, beyond which consumer evaluations were found to suffer where high levels of information quality were made available (Keller and Staelin, 1987). Considering these results, a decision maker would prefer high to low levels of information quality up to a certain point, although he would not be very satisfied with extreme high levels of information quality. Hence, his preferences would be monotonically increasing up to a certain level and monotonically decreasing thereafter. Such a nonmonotonic utility function is illustrated in Figure 4.17.

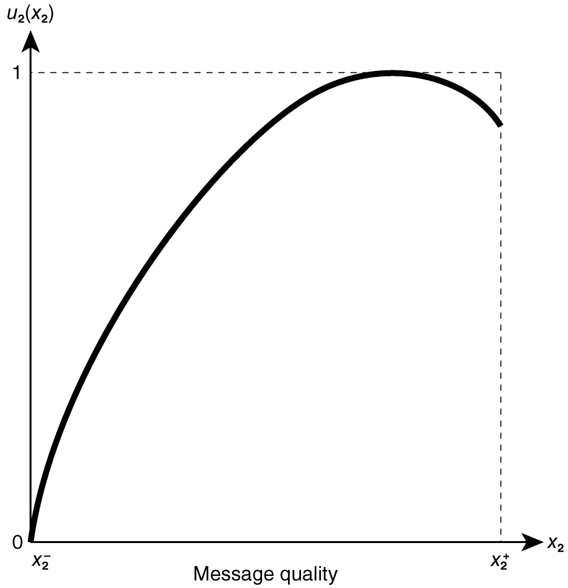

Figure 4.17. Example of a nonmonotonic utility function over message performance as measured by information quality. Up to a certain level, the higher the information quality offered, the more desirable a message performance; above that level, the higher the information quality offered, the less preferred a message performance. Based on Keller and Staelin (1987).

Besides monotonicity, another qualitative characteristic of the decision maker's preferences to be identified is his basic attitude towards risk. A utility function u_i could be risk averse, risk neutral or risk prone. These three basic risk attitudes are represented on monotonically increasing utility functions in Figure 4.18. A

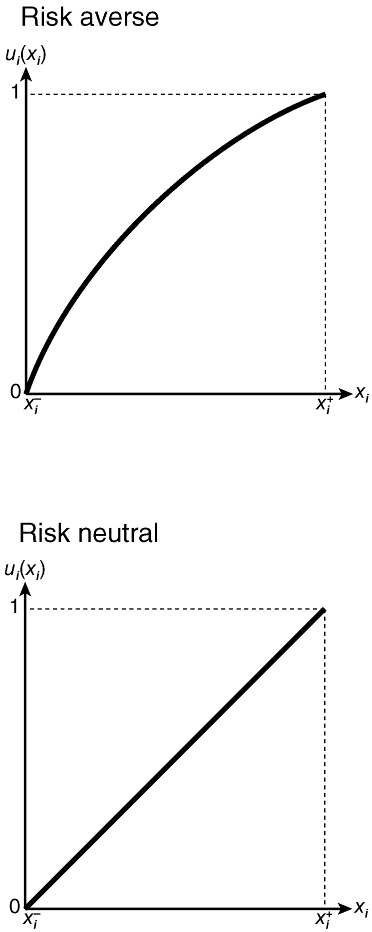

Figure 4.18. Risk properties of monotonically increasing single-attribute utility functions.

decision maker is risk averse if he prefers the expected consequence of any nondegenerate lottery to that lottery (Keeney and Raiffa, 1976, p. 149).[51] However, if the decision maker prefers any nondegenerate lottery to the expected consequence of that lottery, then he is risk prone (Keeney and Raiffa, 1976, p. 150). But, if a decision maker is indifferent between any nondegenerate lottery and its

51 A nondegenerate lottery is one where no single consequence has a probability of one of occurring.

expected consequence, then he is risk neutral. How to identify the decision maker's attitude towards risk is relatively straightforward (Keeney and Raiffa, 1976, p. 191 f.). One way to do this is to ask the decision maker if he prefers the lottery $< 0.50, x_i + h; 0.50, x_i - h >$ or the certain amount x_i, for arbitrarily chosen amounts x_i and h, and to repeat this questioning for various x_i and h to cover the entire range of consequences in terms of attribute X_i. If the expected consequence is always preferred, it is reasonable to assume that the decision maker is risk averse. If the lottery is preferred, then he is risk prone. If the decision maker is indifferent between each lottery and its expected consequence, then he is risk neutral.

Apart from identifying the decision maker's basic attitude towards risk, it is also useful to determine whether his basic risk attitude increases, decreases or remains constant for different amounts of attribute X_i. One way to identify this is to calculate certainty equivalents and then assess risk premiums. A certainty equivalent of uncertain level $\tilde{x}_i$ is that amount x_i such that the decision maker is indifferent between the lottery $\tilde{x}_i$ and the amount x_i for certain (Keeney and Raiffa, 1976, p. 143). The risk premium of a lottery $\tilde{x}_i$ is its expected amount minus its certainty equivalent. For increasing amounts of attribute X_i, the risk premium increases, decreases or remains constant when a monotonically increasing single-attribute utility function is increasingly, decreasingly or constantly risk averse, respectively. The risk premium may also increase in a certain range of attribute X_i and decrease beyond that range. One way to determine the risk premium is to ask the decision maker for his risk premium for a lottery of the form $< 0.50, x_i - h; 0.50, x_i + h >$ for specific amounts x_i and h and then to ask him how this risk premium would behave as x_i is increased with h held fixed (Keeney and Raiffa, 1976, p. 193).

After some qualitative characteristics of utility function u_i have been identified, it is then necessary to assess preference scores for a few amounts of attribute X_i. First of all, the decision maker needs to normalise the utility function u_i. That is, let $u_i(x_i^-) = 0$ and $u_i(x_i^+) = 1$. Then, he must seek subjective mid-value points by determining the certainty equivalents for a few 50-50 lotteries. It is particularly important to assess the certainty equivalent $x_i^{0.50}$ for the lottery $< 0.50, x_i^-; 0.50, x_i^+ >$. Then he must find the amount $x_i^{0.25}$ so that the lottery $< 0.50, x_i^-; 0.50, x_i^{0.50} >$ and the amount $x_i^{0.25}$ for certain are equally desirable to the decision maker. Subsequently, he must find the certainty equivalent $x_i^{0.75}$ for the lottery $< 0.50, x_i^{0.50}; 0.50, x_i^+ >$. It would be advisable to check for the consistency of these preferential judgments, for example, by assuring that the certainty equivalent for the lottery $< 0.50, x_i^{0.25}; 0.50, x_i^{0.75} >$ is equal to $x_i^{0.50}$ since $u_i(x_i^{0.50}) = 0.50$.

Finally, once the preference scores for a few particular points on the utility function have been fixed, it may be possible to fair a curve through these mid-value points. Additionally, it may be possible to find a mathematical expression that simultaneously satisfies all of the identified qualitative and quantitative restrictions for the single-attribute function. That is, a parametric family of utility functions could possess the relevant qualitative characteristics previously specified by the decision maker. For instance, if a utility function u_i that is monotonically increasing on attribute X_i and constantly risk averse has been assessed, a family of utility functions that satisfies these characteristics is

$$u_i(x_i) \sim -e^{-cx_i} ,$$

where c is a positive constant calculated on the basis of the quantitative mid-value points assessed (Keeney and Raiffa, 1976, p. 167 f., 196 ff.).[52]

The mid-value point procedure described up to this point is useful for assessing single-attribute utility functions over continuous attributes. When tool attribute X_i is not quantitative, one useful assessment procedure is the probability-equivalent assessment method. The essence of the **probability-equivalent procedure** lies in evaluating a hypothetical decision with two options, a certain consequence and a risky one, and then adjusting the probability in the reference lottery to achieve indifference.

Using this procedure a single-attribute utility function is assessed as follows (see Clemen, 1996, p. 475 ff.; see also Keeney and Raiffa, 1976, p. 140 f., 222 f.). First, the decision maker needs to create the reference lottery $< p, x_i^+; 1-p, x_i^- >$ that yields the most preferred level of attribute X_i with a probability p and the least preferred level of X_i with the complementary probability $(1 - p)$. This is the risky consequence.

Then he must assign a preference score for level of performance x_i, adjust p until the decision maker is indifferent between the reference lottery and the level x_i for certain. The decision maker must be equally satisfied between obtaining x_i for certain and receiving x_i^+ with p chance or x_i^- with $(1 - p)$ chance. That is, he must be indifferent between the certainty and the risky options.

52 See Keeney and Raiffa (1976, ch. 4) for various parametric families of utility functions over a single attribute and their qualitative restrictions.

The probability p can be then used to numerically scale probability distributions over uncertain consequence $\tilde{x}_i$. The scale is then arbitrarily set by assigning $u_i(x_i^-) = 0$ and $u_i(x_i^+) = 1$. Since the preference score associated to level of performance x_i must be equal to the expected utility of the reference lottery, then

$$\begin{aligned} u_i(x_i) &= pu_i(x_i^+) + (1-p)u_i(x_i^-) \\ &= p(1) + (1-p)(0) \\ &= p. \end{aligned}$$

The probability-equivalent procedure is graphically shown in Figure 4.19. Here, there is an uncertain and a certain option, labelled A and B respectively. The risky option A yields the most preferred level of attribute X_i with a probability p and the least preferred level of X_i with a probability $(1 - p)$. The certainty option B yields x_i for certain. Now the decision maker must think about various probabilities that make the probability of obtaining the most desirable level of performance x_i^+ greater or less until he is indifferent between options A and B.

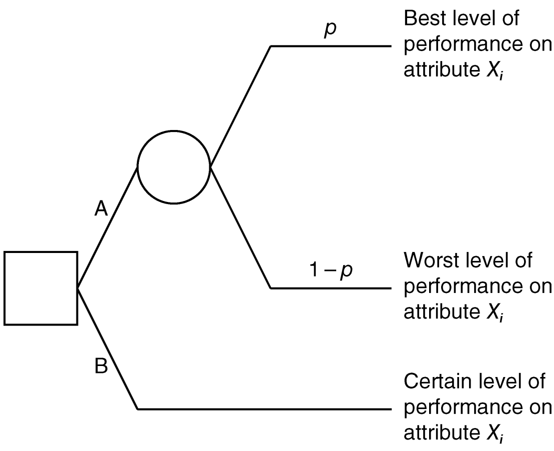

Figure 4.19. A reference lottery for assessing preference scores using the probability-equivalent procedure. Based on Clemen (1996, p. 476).

This probability-equivalent evaluation serves to assign a utility to a single level of attribute X_i. However, attribute X_i may take many other levels of performance. Hence, it is necessary to repeat this assessment for any other level x_i, adjusting the probability p such that the decision maker is indifferent between x_i and the lottery $< p, x_i^+; 1-p, x_i^- >$.

Lastly, to gain confidence in the assessments, it may be advisable to check the assessments for consistency. For example, let x_i', x_i'', and x_i''' designate an increasing preference sequence, so that $u_i(x_i') < u_i(x_i'') < u_i(x_i''')$, and let the level of performance x_i'' for certain be indifferent to the lottery $< p, x_i'''; 1-p, x_i' >$. For consistency, p must be such that

$$u_i(x_i'') = pu_i(x_i''') + (1-p)u_i(x_i')$$

or

$$p = \frac{u_i(x_i'') - u_i(x_i')}{u_i(x_i''') - u_i(x_i')} .$$

The probability-equivalent assessment procedure rests on the very foundations of utility theory and is conceptually very appealing. However, this procedure has two major practical shortcomings. Firstly, it is useful for problems with only a few possible consequences in terms of a single attribute, perhaps up to 50 (Keeney and Raiffa, 1976, p. 140, 222). Secondly, the probability-assessment procedure directly assigns a preference score to each of the levels of a single attribute. Therefore, this procedure fails to exploit the basic preference structure of the decision maker, its requisite information is difficult to assess and its preference score assessments are difficult to work with in expected utility calculations and sensitivity analysis (Keeney and Raiffa, 1976, p. 222 f.). Nevertheless, this procedure is useful for non-quantitatively measurable attributes, those with no natural ordering (Keeney and Raiffa, 1976, p. 140).

Regardless of the assessment procedure used for determining preference scores, the implications of these preference scores are similar to those made for the values obtained from single-attribute value functions. That is, the real number $u_i(\tilde{x}_i)$ associated to each level $\tilde{x}_i$ is the contribution of tool attribute X_i to the decision maker's overall satisfaction in selecting corporate communication tools. If $u_i(\tilde{x}_i) = 0$, then the decision maker is least satisfied with uncertain level of performance $\tilde{x}_i$. More specifically, probability distribution associated to $\tilde{x}_i$ is the least preferred and the level of performance $\tilde{x}_i$ is expected to be the least effective for building the corporate brand. If $u_i(\tilde{x}_i) = 1$, then the decision maker is most satisfied with the probability distribution associated to $\tilde{x}_i$. This level of performance is expected to be the most effective for building the corporate brand. The closer the value $u_i(\tilde{x}_i)$ to 1, the more preferred the probability distribution associated to $\tilde{x}_i$ and the more effective this level of performance is expected to be with views of the brand-building objective. The final contribution of tool attribute X_i to the decision maker's overall satisfaction depends, however, on the scaling constant corresponding to attribute X_i. In other words, the five single-attribute utility functions separately assessed should be pasted together, scaling them appropriately, which is performed below.

Determining scaling constants

To assign overall preference scores to lotteries over the tool attributes $X_1, \ldots, X_5$, once single-attribute utility functions have been determined, it is necessary to assess scaling constant k_i, for $i = 1, \ldots, 5$, where k_i ranges between 0 and 1 and designates a trade-off weight based on the relative importance of X_i to achieving the brand objectives. Additionally, on the basis of $k_1, \ldots, k_5$, it is necessary to evaluate the scaling constant k, where k can take positive or negative values.

The problem of scaling single-attribute utility functions is very similar to that of scaling value functions over single attributes (Keeney and Raiffa, 1976, p. 302). Hence, the problem of determining scaling constants is no more involved than in the additive value model, except for the fact that there are more of them. Again, weight assessments must be executed considering both the importance of single brand objectives and the range of the attribute scales. When determining scaling constant k_i, for $i = 1, \ldots, 5$, the decision maker must consider how specific levels of performance on attribute X_i relate to levels of achievement of lower-level brand objectives, or at least how specific levels of X_i contribute to the overall brand-building objective. Besides reflecting on the brand objectives hierarchy, the assessment of scaling constants requires the ranges of the scales for single tool attributes to be considered. If the least preferred and the most preferred levels of performance on attribute X_i are close together — that is, the range of the scale for X_i is relatively small — then k_i may be small (Keeney and Raiffa, 1976, p. 272). Indeed, as the least preferred and the most preferred levels of X_i become closer and closer, the value of scaling constant k_i approaches zero.

The procedure for determining scaling constant k_i, for $i = 1, \ldots, 5$, depends again on the underlying scales of the tool attributes $X_1, \ldots, X_5$. That is, the choice of a weight assessment procedure relates to the scale on which levels of performance are measured — namely, nominal, ordinal, interval or ratio. Different weighting procedures are available for different types of scales. When tool attributes are measured on an interval or ratio scale, a weight assessment procedure for continuous attributes should be used. Otherwise, when tool attributes are measured on a nominal or ordinal scale, a weighting procedure for discrete attributes should be employed. The indifference assessment procedure and the swing weight procedure discussed above for the certainty case are also appropriate under conditions of uncertainty (Keeney and Raiffa, 1976, p. 302; Clemen, 1996, p.

552 f.). Additionally, scaling by using a probabilistic assessment procedure is appropriate. Two useful procedures for assessing scaling constants under conditions of uncertainty for both continuous and discrete attributes are shown in Table 4.6 and described in more detail below.

Table 4.6. Weight assessment procedures under conditions of uncertainty, for continuous and discrete attributes.

Continuous attributes	**Discrete attributes**
Indifference assessment procedure:	Probability-equivalent procedure:
1) Creating hypothetical consequences worst on one attribute, a variable level of performance on another attribute, and any fixed level of all other attributes	1) Creating reference lottery yielding most desirable and least desirable consequence
2) Finding specific amounts of two attributes that make the decision maker indifferent	2) Adjusting the probability of the reference lottery until reaching indifference between the lottery and a certain consequence best on one attribute, worst on all others
3) Obtaining scaling constants by solving linear equations	3) Finding a scaling constant that satisfies the indifference condition
5) Evaluating additional scaling constant	4) Repeating assessment for each other scaling constant
4) Checking for consistency and reiterating	5) Evaluating additional scaling constant
	6) Checking for consistency and reiterating
Source: Keeney and Raiffa (1976, p. 301 ff., 307 ff., 347 f.).	Source: Clemen (1996, p. 550 ff., 591 f.).

When the tool attributes X_1, …, X_5 are measured on at least one interval scale, scaling constant k_i, for $i = 1$, …, 5, can be assessed using an indifference assessment procedure that is different than the one proposed for the certainty case. The essence of this **indifference assessment procedure** is to select a specific amount x_i' of attribute X_i and an amount x_j' of X_j, for $j \neq i$, so that for any fixed levels of all other attributes, the decision maker is indifferent between a consequence yielding x_i' and x_j^- together, and x_j' and x_i^- together.

To determine scaling constants associated to continuous attributes, a useful indifference assessment procedure is as follows (see Keeney and Raiffa, 1976, p. 301 ff., 307 ff., 347 f.). Firstly, the decision maker must create two hypothetical consequences. The first consequence yields a certain amount x_i and the least preferred amount of attribute X_j together, and any fixed amounts of all other tool attributes, whereas the second hypothetical consequence yields amount x_j and the least preferred amount of X_i together, for any fixed amounts of all other attributes. Note that these fixed levels of other attributes are the same in both consequences. Both these hypothetical consequences are graphically shown in Figure 4.20. In this Figure, the decision maker has to decide between options A and B. Option A yields amount x_i and x_j^- together, whereas option B yields x_j and x_i^- together. The levels of all other tool attributes are fixed in both options.

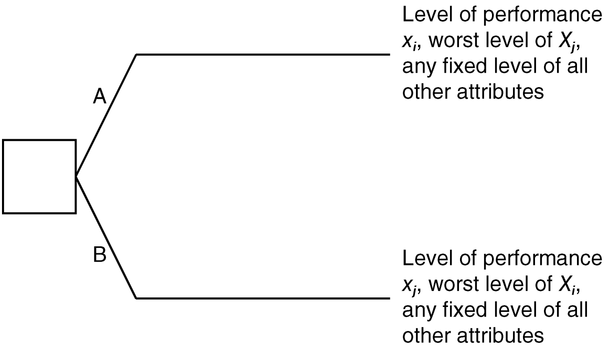

Figure 4.20. Hypothetical decision for assessing scaling constants using an indifference assessment procedure. The decision maker must seek indifference between options A and B by manipulating the amounts x_i and x_j, holding all other attributes at any fixed levels.

It is then necessary to find the amounts of X_i and X_j that makes the decision maker indifferent. That is, the decision maker must manipulate the amounts x_i and x_j to reach indifference between both consequences, holding all other attributes at any fixed levels. Suppose that this occurs at $x_i = x_i'$ and $x_j = x_j'$. Since $u(x_1^-, x_2^-, x_3^-, x_4^-, x_5^-) = 0$ and $u(x_1^+, x_2^+, x_3^+, x_4^+, x_5^+) = 1$, and since $u_i(x_i^-) = 0$ and $u_i(x_i^+) = 1$, for $i = 1, \ldots, 5$, the overall preference scores of the two indifferent consequences can be equated to yield

$$k_i u_i(x_i') = k_j u_j(x_j').$$

Assuming that the single-attribute utility functions u_i and u_j have been assessed, both $u_i(x_i')$ and $u_j(x_j')$ are easily found, so that the equation above is linear. For example, if

$$u_1(x_1') = 0.20 \quad \text{and} \quad u_2(x_2') = 0.40,$$

then

$$\begin{aligned} k_1 u_1(x_1') &= k_2 u_2(x_2') \\ k_1 0.20 &= k_2 0.40 \\ k_1 &= 2k_2. \end{aligned}$$

In the same manner, it is necessary to generate four additional independent equations with the unknown scaling constants. It is then possible to solve these linear equations. Again, it is recommended to check for consistency of these judgements. A way of doing this is to generate additional equations that include some scaling constants. But since these scaling constants have already been evaluated, they could just be substituted into the linear equations.

Evidently, this weighing procedure is similar to the indifferent assessment method proposed for the certainty case. However, the indifferent assessment procedure proposed here requires neither hypothetical consequences to be rank-ordered nor the extreme levels of the tool attributes, but any level to be used. This is beneficial because it could be difficult for the decision maker to assess preferences for extreme consequences (Keeney and Raiffa, 1976, p. 303).

Besides assessing scaling constants $k_1, \ldots, k_5$, it is necessary to evaluate the additional scaling constant k, which is unique to the multiplicative utility function. The parameter k can be found from the $k_1, \ldots, k_5$. It is particularly necessary to evaluate the multiplicative utility function at the most preferred consequence to find

$$1+k=\prod_{i=1}^{5}(1+kk_i)\,.$$

If $\sum_{i=1}^{5} k_i \neq 1$ then the additional scaling constant k can be found in practice using an iterative procedure (Keeney and Raiffa, 1976, p. 307).[53] When $\sum_{i=1}^{5} k_i > 1$, it follows that the utility independence condition of the multiplicative utility function can only be preserved given that $-1 < k < 0$.[54] First, the decision maker must determine $k = k'$ and substitute this into the equation above. If the right-hand side is smaller than the left-hand side of the equation, then the true value of k is smaller than k'. If the right-hand value is greater than the left-hand value, then the true value of k is greater than k'. In this way the decision maker can evaluate the equation above iteratively to converge to the true value of k.

When $\sum_{i=1}^{5} k_i < 1$, it follows that $k > 0$. Using the same iterative procedure, it is possible to converge to the true value of k. Again, the decision maker must determine $k = k'$. If the right-hand side is greater than the left hand side of the

53 If $\sum_{i=1}^{5} k_i = 1$ then the decision maker's preferences for uncertain consequences of the corporate communication tool selection decision can be represented by an *additive* utility function, a special version of the multiplicative utility function which does not allow any kind of interaction among attributes. See sub-subsection 4.2.3.4 for a thorough discussion on interaction among tool attributes.

54 See Keeney and Raiffa (1976, p. 347 f.) for proof of this assertion.

equation, then the true value of k is smaller than k', whereas if the right-hand value of k is smaller than the left-hand side, then the true value of k is greater than k'. In this way, the scaling constant k can be calculated.

The indifference assessment procedure described above for scaling constants is useful when tool attributes are quantitative. However, if levels of performance on these attributes are not scalar, then a version of the probability-equivalent procedure used for assessing single-attribute utility functions is more appropriate for assessing scaling constants. The idea of this **probability-equivalent procedure** consists of comparing a certain consequence and a lottery and then adjusting the probability in the reference lottery to achieve indifference.

Using a probability-equivalent procedure, scaling constants can be determined as follows (Clemen, 1996, p. 550 ff., 591 f.). First, the decision maker needs to create reference lottery $<p, \mathbf{x}^+; 1-p, \mathbf{x}^->$, yielding the best consequence with a probability p and the worst consequence with a probability $(1-p)$. Let $u(\mathbf{x}^-) = 0$ and $u(\mathbf{x}^+) = 1$. Also he needs to create various hypothetical typical consequences, where one attribute is at its best and all other attributes are at their worst level. These hypothetical consequences are denoted $\mathbf{x}^{\{i\}}$, for $i = 1, \ldots, 5$, such that

$$\mathbf{x}^{\{i\}} = \begin{cases} x_j = x_j^+, & \text{for } j = i \\ x_j = x_j^-, & \text{for } j \neq i, \end{cases}$$

where x_i^- represents the least desirable level of performance on attribute X_i and x_i^+ the most desirable level of X_i.

Then, it is necessary to find the probability p that makes the decision maker indifferent between the lottery $<p, \mathbf{x}^+; 1-p, \mathbf{x}^->$ and the certain consequence $\mathbf{x}^{\{i\}}$. Figure 4.21 shows this graphically. It shows that the decision maker must adjust p until he reaches indifference between the lottery A and the certain consequence B, which is best on one attribute, worst on all others. Suppose this occurs at $p = p'$. The probability p' makes the decision maker indifferent between the lottery and the certain consequence, so that

$$\begin{aligned} u(\mathbf{x}^{\{i\}}) &= p'u(\mathbf{x}^+) + (1-p')u(\mathbf{x}^-) \\ &= p'(1) + (1-p')(0) \\ &= p'. \end{aligned}$$

Since $u(\mathbf{x}^{\{i\}}) = k_i$, for $i = 1, \ldots, 5$, then

$$k_i = p'.$$

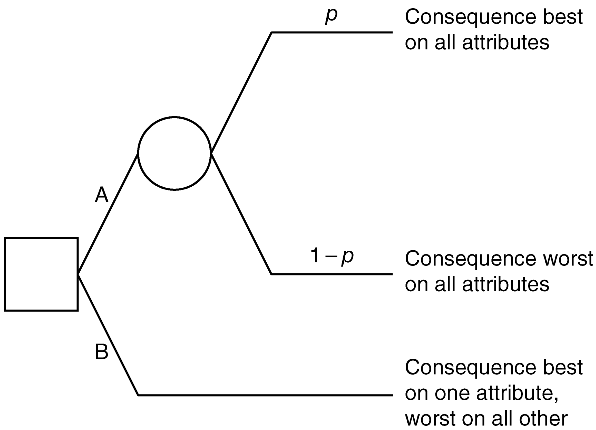

Figure 4.21. Assessing scaling constants using a probability-equivalent procedure. Based on Clemen (1996, p. 551).

The probability p' is then the scaling constant for the one odd attribute in the certain consequence. It is then necessary to repeat these indifference assessments with every other hypothetical consequence. Once the scaling constants $k_1, \ldots, k_5$ have been determined, the decision maker needs to evaluate the parameter k. This is best done iteratively, as argued above. Lastly, it is necessary to check weighting judgements for consistency. A simple way of doing this is to generate some equations that include the scaling constants. But since scaling constants are already known, it is possible to substitute these parameters into the equations to verify the consistency of these judgements.

With any of the weighting procedures described above it is possible to assign values to the six scaling constants of the multiplicative utility function. Scaling constants $k_1, \ldots, k_5$ have very specific meanings.[55] Their values indicate the improvement in utility that results from changing one attribute from worst to best (Clemen, 1996, p. 551 f.). The implications of various values of the scaling constants are as follows. If $k_i = 0$, then changing tool attribute X_i from x_i^- to x_i^+ results in no increase of utility. That is, level of performance x_i^- is as good (or as bad) as level x_i^+ for building the corporate brand. If $k_i = k_j$, for $j \neq i$, then changing either attribute X_i or X_j from worst to best results in the same improvement in the decision maker's satisfaction. That is, swinging X_i from worst to best and

55 The implications of the different values that the additional scaling constant k can have are explained later in this chapter, where interaction among tool attributes is discussed in detail.

swinging X_j from worst to best are both equally effective for building the corporate brand. If $k_i > k_j$, then the decision maker would rather change X_i from worst to best than change X_j from worst to best. That is, changing attribute X_i from worst to best is more effective than swinging X_j for achieving the brand objectives. Finally, if $k_i = 1$, then changing attribute X_i from x_i^- to x_i^+ results in the most preferred consequence. As such, the utility function u and the single-attribute utility function u_i are strategically equivalent. That is, these two utility functions imply the same preference structure for any two lotteries (Keeney and Raiffa, 1976, p. 144).

Maximising the utility function

Once single-attribute utility functions and scaling constants have been determined, the decision maker can find the most preferred communication tool among all available means of corporate brand communication. For this, the decision maker must evaluate the corporate communication tools available, assign an overall preference score to each possible consequence and then calculate the expected preference score of each available alternative. The overall preference score $u(\mathbf{x}_i)$ increases with the increasing value of the consequence $\mathbf{x}_i$ to the decision maker. The optimal choice is thus to select a communication tool with the highest expected numerical value. That is, given the utility function u,

$$\text{choose } a \in A \text{ to maximize } \sum_{i=1}^{r} p_i u(\mathbf{x}_i),$$

where $\sum_{i=1}^{r} p_i u(\mathbf{x}_i)$ is the expected utility of communication tool a. Note that the probability p_i relates to communication tool a since the probability distribution over uncertain consequence $\tilde{\mathbf{x}}$ depends on a.

Suppose that the corporate communication tool a' is associated to the maximum expected utility. That is, a' is the corporate communication tool whose consequences in terms of modality, message, execution, time and place performance are such that alternative a' is expected to better achieve all brand objectives simultaneously. The expected features of this communication tool make it the most suitable for conveying the creative content to the target audience. Note that the decision maker does not know for certain which consequence will prevail from communication tool a'. Any of the possible consequences $\mathbf{x}_1$, $\mathbf{x}_2$., …, $\mathbf{x}_r$ may result from choosing alternative a' and the actual consequence may not be optimal for the brand-building effort. However, among all available communication tools, alternative a' *is expected* to be the best in terms of building the corporate brand.

As discussed in the heuristic technique for the certainty case, the real-valued preference score associated to each communication tool means little. It only indicates how preferred a communication tool is with respect to others with regard to building the corporate brand. Remember that these overall preference scores are measured on an interval scale. This means that the zero point on the utility scale is established arbitrarily. Hence, it is not possible to compare the absolute magnitudes of preference scores, but only intervals. For example, suppose that overall preference scores of 0.20, 0.30 and 0.60, obtained using a multiplicative utility model, are associated to corporate communication tools a', a'', and a''', respectively. A communication tool a''' associated to an overall preference score of 0.60 is neither two times as good as alternative a'', with a preference score of 0.30, nor three times as good as a', with a preference score of 0.20. It could be said, however, that the increment in satisfaction is greater in exchanging a'' for a''' than in exchanging a' for a''.

In summary, the heuristic technique proposed here has postulated various independence conditions about a decision maker's preferences for uncertain consequences related to corporate communication tool selection. These conditions have been used to reduce the assessment of a five-attribute utility function to the assessment of five single-attribute utility functions and some scaling constants. Consistent with these assumptions, the decision maker's preferences for lotteries over the tool attributes $X_1, \ldots, X_5$ are articulated in the form of a multiplicative utility function. This utility function assigns a preference score to each possible consequence over the five tool attributes identified, which allows the expected preference score associated to each corporate communication tool to be calculated. The maximisation of the expected utility is an appropriate criterion for choosing the communication tool superior to others for building the corporate brand.

Relationship between value functions and utility functions

There are clearly parallels between the heuristic technique for the uncertainty case and the additive value model described above. Both mathematical models of preferences postulate a set of assumptions about preferences of the decision maker and derive a functional form, consistent with these assumptions (Keeney and Raiffa, 1976, p. 223). These assumptions, which concern how the decision maker's preferences interact among the attributes, enable the form of the value function or the utility function to be concluded. Moreover, these independence conditions reduce the amount of subjective information needed to model a decision maker's preferences by separating the multiattribute function into parts that represent different attributes (Keeney and Raiffa, 1976, p. 281). In fact, preferential independence assumptions, or utility independence assumptions in the uncertainty case, are necessary and sufficient conditions for discussing a single function over one of the attributes (Keeney and Raiffa, 1976, p. 227).

Value functions and utility functions over consequences related to tool selection, as well as their independence assumptions, are fundamentally related. Indeed, utility independence is analogous to preferential independence, except that the assessments are made under conditions of uncertainty (Clemen, 1996, p. 580). The concept of utility independence can thus be viewed as a specialisation of the concept of preferential independence, where utility independence is the stronger condition (Keeney and Raiffa, 1976, p. 284). By definition, it follows that if attribute X_i is utility independent of X_j, for $j \neq i$, then X_i is preferentially independent of X_j (Keeney and Raiffa, 1976, p. 284; French, 1986, p. 184). The opposite is not necessarily true. The proof is that degenerate lotteries, which involve no uncertainty, are the same as sure consequences. With a multiattribute *utility* function, preferential independence is necessary but not a sufficient condition for obtaining separability (Clemen, 1996, p. 580). However, as discussed above, preferential independence of attributes X_1, X_2, …, X_n can be strengthened to utility independence, provided that one of these attributes is utility independent of its complement (Keeney and Raiffa, 1976, p. 311).[56]

By definition, a utility function is a value function (Keeney and Raiffa, 1976, p. 220). Indeed, a utility function for degenerate lotteries, where one possible consequence has a probability of one of occurring, is the same as a value function for a certain consequence. However, a value function is not necessarily a utility function (Keeney and Raiffa, 1976, p. 220). Necessary and sufficient conditions for the additive value function are prerequisites for the multiplicative utility function, but not sufficient (Keeney and Raiffa, 1976, p. 330). Hence, different value functions which rank certain consequences in the same way can rank a set of lotteries over these consequences in different ways (Clemen, 1996, p. 552).

Value functions and utility functions are both real-valued functions, measured on an interval scale (Keeney and Raiffa, 1976, p. 282; French, 1986, p. 330). This implies that both are unique up to positive affine transformations. Assuming that the additive value function v and the multiplicative utility function u represent

56 See Keeney and Raiffa (1976, p. 311 ff.) for algebraic proof of this assertion.

the same preferences, then v and u are strategically equivalent up to exponential transformations (French, 1986, p. 182).[57]

A multiattribute value function v over consequences related to corporate communication tool selection can be easily converted into a multiattribute utility function u over these consequences. Indeed, given v, and since

a) $\{X_1, \ldots, X_5\}$ are mutually preferentially independent,
b) some tool attribute X_i is utility independent of its complement,
c) number of tool attributes is greater than 3,

the assessment of u is straightforward (see Keeney and Raiffa, 1976, p. 332).

The utility function u over the scalar attribute V, which measures value by v, must have constant risk aversion (Keeney and Raiffa, 1976, p. 331).[58] To transform a value function into a utility function, it is necessary to compare the expected value of any 50-50 lottery yielding the least preferred and the most preferred levels of performance in terms of one attribute with the value of the certainty equivalent of that lottery. If the value of the certainty equivalent is equal to the expected value of that lottery, then the utility function is constant risk neutral and the utility function must have the form

$$u(\mathbf{x}) \sim v(\mathbf{x}).$$

If the value of the certainty equivalent is greater than the expected value of that lottery, then the utility function is constant risk prone and the utility function must have the form

$$u(\mathbf{x}) \sim -e^{-cv(\mathbf{x})}, \quad \text{for } c > 0.$$

Finally, if the value of the certainty equivalent is smaller than the expected value of that lottery, then the utility function is risk averse and the utility function must have the form

$$u(\mathbf{x}) \sim e^{cv(\mathbf{x})}, \quad \text{for } c > 0.$$

Despite these similarities, value functions and utility functions differ from each other, mainly in the way they handle uncertainty and interaction among attributes. Value functions are useful for corporate communication tool selection under conditions of certainty. Evidence has shown that an additive value function is

57 Remember that two strategically equivalent functions are those implying the same preference structure for any two lotteries.
58 See Keeney and Raiffa (1976, p. 331) for a formal proof of this assertion.

reasonable for most decision situations that involve little or no uncertainty. In other words, value functions do not encode a decision maker's attitude towards risk but are only required to rank certain consequences in a way that is consistent with a decision maker's preferences for these consequences. There are no concerns with lotteries or uncertain consequences (Clemen, 1996, p. 552). That is, a decision maker's preferences for consequences completely define his preferences for alternatives (French, 1986, p. 149).

On the contrary, utility functions do incorporate a decision maker's attitude towards risk. A utility function ranks lotteries over consequences in a way that is consistent with a decision maker's risk attitude. Hence, a decision maker's preferences for consequences *and* for probabilities define his preferences for communication tools. Taking these preferences for probabilities into account may be fundamental for making sound selection decisions. For example, suppose a decision maker selects between two corporate events, where the expected number of attendants is a measure of place performance. One event takes place inside and attracts 5,000 attendants for definite, whereas the other event, which takes take place outside, either attracts nobody due to heavy rain or attracts 10,000 attendants on a warm, sunny day. Both events have an expected number of 5,000 attendants. If a decision maker's preferences for consequences completely define his preferences between these communication tools — that is, the decision maker makes his choice on the basis of expected *value* —, then he would be indifferent between both events. However, the decision maker may consider the outdoor event riskier than the indoor event, and, if he is risk averse, it seems reasonable that he would prefer the indoor event. In this case, the expected *utility* of the outdoor event would be lower than that of the indoor event. In other words, the decision maker may not be preferentially indifferent among these choices. Hence, in this and other corporate communication tool selection decisions involving uncertainty, a decision maker's preferences are better represented using a utility function rather than a value function.

Besides being distinct in terms of their certainty assumptions, utility functions and value functions also differ in their interaction assumptions. Additive value functions *under conditions of uncertainty* assume independence of a decision maker's preferences for consequences and for probabilities. In other words, besides mutual preferential independence, additive value functions also require preferences across attributes to be *additive* independent in order to be an accurate model of a decision maker's preferences under conditions of uncertainty

(Clemen, 1996, p. 584).[59] However, multiplicative utility functions, under the same conditions of uncertainty, assume only independence of a decision maker's preferences for lotteries over consequences; independence for probabilities is not assumed. A multiplicative utility function thus solely requires mutual utility independence, which allows for certain interaction among tool attributes to be modelled, as discussed in detail below.

The final point regarding the differences between value functions and utility functions is that although the distinction between these mathematical representations of a decision maker's preferences is theoretically important, applications of decision analysis rarely distinguish between them (Clemen, 1996, p. 553). In fact, value functions are extremely useful for understanding preferences and making difficult decisions, even as an approximation to problems under conditions of uncertainty (Clemen, 1996, p. 553), and as a rough-cut approximation when interaction among attributes is not critical to the decision at hand (Clemen, 1996, p. 585). However, in decision situations where this interaction does play a role, multiattribute utility theory is more appropriate, as discussed below.

4.2.3.4. Interaction among tool attributes

The possible interaction among tool attributes and its modelling using the two heuristic techniques presented in this subsection are discussed here. In corporate communication tool selection, attributes may interact.[60] That is, the level of performance on a tool attribute may affect a decision maker's preferences for levels of other attributes. High levels of performance on every tool attribute in particular may not be extremely important for building the corporate brand. As long as some attributes perform well, consequences of tool selection may be adequate. In other decision situations, high levels of every tool attribute may be worth more than the sum of the values obtained from the individual attributes.

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59 Additive independence is an even stronger condition than utility independence (Clemen, 1996, p. 584; Keeney and Raiffa, 1976, p. 239). Attributes $X_1, X_2, \ldots, X_n$ are additive independent if preferences for lotteries over $X_1, X_2, \ldots, X_n$ depend only on their marginal probability distributions and not on their joint probability distribution (Keeney and Raiffa, 1976, p. 295). Additive independence requires that preferences for lotteries over one attribute do not depend on changes in *lotteries* over the other attributes. On the other hand, utility independence only requires that preferences for lotteries over one attribute do not depend on changes in *certain levels* of the other attributes (Clemen, 1996, p. 584).

60 Interaction among tool attributes, not among communication tools, is discussed here. For a brief discussion on how the communication tools included in a corporate communication programme interact, and how this interaction can be modelled, see subsection 4.2.4.

The two mathematical models of a decision maker's preferences discussed in this subsection may capture interaction among tool attributes. However, value functions and utility functions differ in the degree of sophistication with which they can handle interaction, the level of interaction they are able to capture and the operational ease with which they can model interaction. In other words, built-in consideration of value functions and utility functions make them less or more prepared for capturing interaction among attributes.

An additive value function as the one presented in this subsection cannot capture interaction among attributes (Clemen, 1996, p. 576; see also Keeney and Raiffa, 1976, p. 232). However, additive value models may allow modelling interaction using simple approximation techniques. One way of doing this is to include a 'bonus' or a 'penalty' for those consequences with noticeable interaction effects (Clemen, 1996, p. 585). For instance, consider a decision maker with preferences for various levels of modality performance and time performance owing to the impact these attributes will have on corporate brand recall (see Rossiter and Percy, 1997, p. 219 ff.). It could be that the decision maker's preferences for various levels of modality performance are different depending on the degree of exposure. He could be most satisfied if both attributes were at their best but he may consider a low level of either modality performance or time performance almost as bad as low levels of performance on both attributes. Such an interaction of preferences cannot be represented with an additive value function. However, to capture this interaction with an additive value model, the decision maker would get a bonus of some points in his overall preference score if there is an increase in levels of performance on both attributes.

This simple approximation technique for capturing interaction with an additive value model soon finds its limits. In corporate communication tool selection, there could be a variety of possible interaction effects to consider given that the consequences of this decision are evaluated over five attributes. Remember that evaluating mutual utility independence of a five-attribute set requires verifying $2^5 - 2 = 30$ preferential assumptions. That is, up to 30 different relationships between tool attributes should be considered for potential interaction. Moreover, tool attributes could take on many different levels of performance and each level could lead to a degree of synergistic gains or losses. Capturing the many possible interaction effects simultaneously may be difficult because of the rapid increase in the number of specific bonuses and penalties to consider. In addition, it is not clear how the degree of interaction would be measured in an additive value model. Hence, instead of employing add-hoc bonuses and penalties or using any other simple approximation technique for capturing interaction among attributes, it may be better to model this interaction, which can be more easily achieved based on multiattribute utility theory.

A multiattribute utility function can better capture interaction among attributes. Indeed, some kinds of interaction is embedded in its functional form. A utility function over five attributes can generally be written as:

$$u(\mathbf{x}) = \sum_{i=1}^{5} k_i u_i(x_i) + \mathrm{OT} ,$$

where OT designates other terms besides the weighed addition of single-attribute utility functions (Keeney and Raiffa, 1976, p. 302). In this general multiattribute utility function, utility function u_i captures preferences over single attribute X_i, for $i = 1, \ldots, 5$, and the other terms in this function capture the interaction among $X_1, \ldots, X_5$ (Clemen, 1996, p. 583).

A multiattribute utility function allows for different levels of interaction to be modelled, from no or little interaction among attributes to complex interaction among them. When there is little or no interaction of preferences across attributes, the general multiattribute utility function presented above has no other terms. In this context, the functional form of the utility function is additive and a decision maker's preferences are represented by an additive utility function.[61] The utility function proposed in this subsection for representing a decision maker's preferences under conditions of uncertainty is still useful. However, the multiplicative representation of the utility function is reduced to an additive representation. Hence, if no interaction exists among tool attributes, then a decision maker's preferences for consequences related to corporate communication tool selection can be articulated by a utility function of a form:

$$u(x_1, x_2, x_3, x_4, x_5) = \sum_{i=1}^{5} k_i u_i(x_i) .$$

This additive utility function represents a decision maker's preferences when there is little or no interaction among attributes. However, if there are some interaction effects across attributes, then the general multiattribute utility function presented above has other terms besides the weighted addition of single-attribute utility functions. Particularly when this interaction conforms to the notion of mutual utility independence, a decision maker's preferences can be articulated by a

61 See footnote 59 for a brief discussion on additive independence, the necessary and sufficient independence condition for the additive utility function. See also Keeney and Raiffa (1976, p. 295 ff.) for a general discussion of the additive utility function.

multiplicative utility function. That is, a multiplicative utility function allows for certain types of interaction among attributes (Keeney and Raiffa, 1976, p. 232). In this case, the utility function proposed for the uncertainty case is a useful representation of a decision maker's preferences. Thus, if tool attributes interact yet are mutually utility independent, then a decision maker's preferences for consequences related to tool selection can be modelled by a multiplicative utility function as the one proposed in this subsection, which can also be written as:

$$\begin{aligned} u(x_1, x_2, x_3, x_4, x_5) = & \sum_{i=1}^{5} k_i u_i(x_i) \\ & + k \sum_{\substack{i=1 \\ j>i}}^{5} k_i k_j u_i(x_i) u_j(x_j) \\ & + k^2 \sum_{\substack{i=1 \\ j>i \\ l>j}}^{5} k_i k_j k_l u_i(x_i) u_j(x_j) u_l(x_l) \\ & + \cdots + k^4 k_1 k_2 \cdots k_5 u_1(x_1) u_2(x_2) \cdots u_5(x_5). \end{aligned}$$

Another situation occurs when there is interaction of preferences across attributes but these attributes are not mutually utility independent. In these situations, the general multiattribute utility function presented above will have other terms and their number and form will depend on the number of independence assumptions that can be confirmed. Hence, when mutual utility independence does not hold, the multiplicative utility function may not represent a decision maker's preferences well. In these situations, there are at least two solutions (Keeney and Raiffa, 1976, p. 255 ff.; Clemen, 1996, p. 592 f.).

One solution could be to chain various utility functions over subsets of the consequence space, and then consistently scale them (Keeney and Raiffa, 1976, p. 257 f.). For this, it is first necessary to subdivide the consequence space into subsets so that various functional forms of the utility function are appropriate over these consequence subsets. For example, preferences for consequences may not interact up to a particular level of one attribute, and then, from that level, they may have some interaction that is consistent with the notion of mutual utility preference. In this example, preferences could be represented by an additive utility function over one subset of the consequence space and by a multiplicative utility function over the other consequence space subset. Once utility functions have been found for subsets of the consequence space, it will only be necessary to weight these utility functions appropriately to obtain an accurate mathematical representation for preferences over these consequences.

Another possible solution when attributes interact yet are not mutually preferential independent is the use of a more general multiattribute utility function to truly represent a decision maker's preferences (Keeney and Raiffa, 1976, p. 258 ff.). In this case weaker independence assumptions over the decision maker's preferences are necessary. In other words, it is necessary to develop or use more complicated assumptions about the decision maker's preferences that imply more general utility functions. The functional form of the utility function would thus be more complex than the additive or the multiplicative models discussed above. For instance, if every single attribute is utility independent of its complement but these attributes are not mutually utility independent, the decision maker's preferences can be represented by a multilinear utility function, a generalisation of the multiplicative utility function (Keeney and Raiffa, 1976, p. 293).[62] Even if every attribute is not utility independent of its complement, there may be some multiattribute utility function that represents the decision maker's preferences in this decision situation. In the most general case, it is possible to model the decision maker's preferences over five attributes using a utility function of the form:

$$\begin{aligned} u(x_1, x_2, x_3, x_4, x_5) = {} & \sum_{i=1}^{5} u_i(x_i) \\ & + f_1(x_1) f_2(x_2) f_3(x_3) f_4(x_4) f_5(x_5), \end{aligned}$$

where the functions f_1, …, f_5, capture interaction of preferences across tool attributes.[63]

Despite the wide range of possibilities of multiattribute utility theory for mathematically modelling preferences over interacting attributes, assessing a multiattribute utility function that permits complex interaction among many attributes may become extremely complex (Clemen, 1996, p. 591). Above all, it is operationally more difficult to verify independence assumptions and to assess the resulting utility function (Keeney and Raiffa, 1976, p. 258). Fortunately, evidence from behavioural research suggests that it is rarely, if ever, necessary to model extremely complex preference interaction (Clemen, 1996, p. 593). Indeed, for many decision situations, additive or multiplicative models are reasonable approximations even if they are not totally valid (Keeney and Raiffa, 1976, p. 261).

62 See Keeney and Raiffa (1976, p. 293 f.) for proof of this representation theorem and a general discussion on the multilinear utility function.

63 See Fishburn (1974) for the requisite assumptions and a discussion of scaling the *fi*'s functions.

Even when requisite assumptions do not precisely hold over the domain of all the attributes, it may be a good approximation to assume they do (Keeney and Raiffa, 1976, p. 298). Collectively, this implies that a multiplicative utility model may be approximately valid in many corporate communication tools selection decisions under conditions of uncertainty where attributes interact. As a result, the multiplicative utility function proposed for the uncertainty case is useful for representing a decision maker's preferences in many decision situations where the desirability of various levels of performance on a single tool attribute depends on the specific levels of the other attributes.

One of the most demanding tasks in multiattribute utility theory is the operationalisation of the notion of interaction among attributes (Clemen, 1996, p. 593). This interaction could be meaningfully modelled by means of a utility function such as the one proposed in this subsection for the uncertainty case. Indeed, a multiplicative utility function can accurately represent different levels of interaction between a decision maker's preferences for lotteries over consequences.

A multiplicative utility function is a good mathematical model for representing preferences in situations with and without interaction among attributes. When there is no interaction among attributes, a decision maker's preferences have been said to be better articulated by the additive form of the utility function. An additive utility function, however, is a multiplicative utility function where the scaling constant k is zero.[64] A multiplicative utility function may also be appropriate in decision situations with interaction among attributes. As discussed above, a multiplicative utility function is a good representation of a decision maker's preferences when attributes interact, even as an approximation when these attributes are not mutually utility independent. The scaling constant k in these situations is different to zero. Hence, the multiplicative utility function proposed in this subsection is a useful model of a decision maker's preferences for consequences over tool attributes with various levels of interaction.

With the multiplicative utility function, the type and degree of interaction is modelled with the scaling constant k. That is, this empirically evaluated constant may be interpreted as a parameter that indicates the manner in which the levels of one attribute affects the values of the levels of the other attributes. As defined in the heuristic technique for the uncertainty case, parameter k is a nonzero solution to the equation

64 See subsection 4.2.3 for a discussion of the functional form of the multiplicative utility function, where the scaling constant k is also discussed.

$$1 + k = \prod_{i=1}^{5} (1 + kk_i),$$

where k_i, for $i = 1, \ldots, 5$, is the scaling constant associated to tool attribute X_i in the multiattribute utility function.[65]

To interpret parameter k, the five tool attributes can be grouped into two subsets.[66] The set of tool attributes X has been defined as $\{X_1, \ldots, X_5\}$ and the consequences over these five attributes have been designated by $\mathbf{x} \equiv (x_1, \ldots, x_5)$, where x_i designates a specific level of performance on attribute X_i. Suppose that Z is a subset of X and $\overline{Z}$ the complement of Z. When referring to a subset Z of X and its complement $\overline{Z}$, it is possible to designate $\mathbf{x}$ by $(\mathbf{z}, \overline{\mathbf{z}})$. For example, if $Z = \{X_1, X_2, X_3\}$, then $\mathbf{z} = (x_1, x_2, x_3)$ and $\overline{\mathbf{z}} = (x_4, x_5)$.

As argued in the heuristic technique for the uncertainty case, attributes in X are mutual utility independent. Because any subset of a mutually utility independent attribute set is also mutually utility independent (Keeney and Raiffa, 1976, p. 292), Z and $\overline{Z}$ are mutually utility independent subsets. These independence conditions imply that a utility function over subsets Z and $\overline{Z}$ is multiplicative. Hence, a two-attribute utility function u' over Z and $\overline{Z}$ can be written in the form:

$$u'(\mathbf{z}, \overline{\mathbf{z}}) = u'(\mathbf{z}, \overline{\mathbf{z}}^-) + u'(\mathbf{z}^-, \overline{\mathbf{z}}) + ku'(\mathbf{z}, \overline{\mathbf{z}}^-)u'(\mathbf{z}^-, \overline{\mathbf{z}}),$$

where $u'(\mathbf{z}, \overline{\mathbf{z}})$ is normalised by $u'(\mathbf{z}^-, \overline{\mathbf{z}}^-) = 0$ and $u'(\mathbf{z}^+, \overline{\mathbf{z}}^+) = 1$, being $\mathbf{z}^-$ and $\mathbf{z}^+$ the least preferred and the most preferred consequences in terms of Z, and $\overline{\mathbf{z}}^-$ and $\overline{\mathbf{z}}^+$ the least preferred and the most preferred consequences in terms of $\overline{Z}$ (see Keeney and Raiffa, 1976, p. 234). Note that $u'(\mathbf{z}, \overline{\mathbf{z}}^-)$ is a conditional utility function over Z given $\overline{\mathbf{z}}^-$, and $u'(\mathbf{z}^-, \overline{\mathbf{z}})$ is a conditional utility function over $\overline{Z}$ given $\mathbf{z}^-$.

In this multiplicative utility function over two attributes, the product term $ku'(\mathbf{z}, \overline{\mathbf{z}}^-)u'(\mathbf{z}^-, \overline{\mathbf{z}})$ captures the interaction between the attribute sets Z and $\overline{Z}$. The more preferred the levels of performance in terms of Z or $\overline{Z}$, the higher the

65 See both heuristic techniques presented in this subsection for various weighting procedures for assessing $k_1, \ldots, k_5$ and for an iterative procedure for evaluating k.

66 The implications of parameter k are illustrated here by grouping five attributes into two subsets to avoid unnecessary complications and detail. Indeed, many of the important concepts in multiattribute utility theory can be illustrated with a two-attribute decision situation (Keeney and Raiffa, 1976, p. 219). The material here is also relevant to decision situations involving three or more attributes.

values in the conditional utility functions and the higher the product term in absolute terms.

Suppose that k is positive. If $k > 0$, then the product term is *added* to the utility, and the overall preference score for the consequence $(\mathbf{z}, \overline{\mathbf{z}})$, for preferred levels of Z or $\overline{Z}$, is even higher. The increase in utility caused by an incremental increase in $\overline{Z}$ is greater for more preferred levels of Z. That is, more preferred levels of Z complement more preferred amounts of $\overline{Z}$ and attributes make up a deficiency in another. In other words, preferred levels of performance on each attribute work together. If all attributes are high, the addition effect is strong. That is, high levels or performance on all attributes are worth more than the sum of the utility obtained from the individual attributes. Hence, when k is positive, tool attributes complement each other. These situations arise in the corporate communication tool selection decision in the case of attribute bundles, where two or more of the attributes are more useful together.

For example, let the consequences represent two distinct attributes, message performance and execution performance. These two tool attributes may be complementary. That is, a low level in either message performance or execution performance may be almost as bad as low levels of performance on both attributes, and a completely effective consequence may be guaranteed only by high levels on both attributes. In this situation, it is possible to talk of synergies among attributes. The positive coefficient of the product term indicates that this property holds.

Suppose that k is negative. If $k < 0$, then the product term is *subtracted* from the utility, and the overall preference score for the consequence $(\mathbf{z}, \overline{\mathbf{z}})$, for preferred levels of Z or $\overline{Z}$, is lower. The increase in utility caused by an incremental increase in $\overline{Z}$ is smaller for more preferred levels of Z. That is, more preferred levels of Z and $\overline{Z}$ are substitutes for each other and attributes take the place of one another. In other words, preferred values of each attribute work against each other. However, if some attributes are high and others low, the subtraction effect is not as strong. High levels of performance on all attributes are worth less than the sum of the utility obtained from the individual attributes. Hence, when k is negative, the attributes are substitutive for each other.

For example, assume the consequences represent two distinct attributes, time performance and place performance. To a great extent, levels of performance on these two attributes could be viewed as substitutive. The simultaneous success of every attribute may not be extremely important; as long as one attribute performs well, the corporate communication programme will be effective. That is, if the level of one attribute was down (e.g. place performance is inadequate) while the other was up (e.g. appropriate time performance), the communication programme would still be effective. Adequate performance on one attribute would most likely ensure the overall success of the communication programme.

This substitutive property could be viewed in another way. The relative importance of an adequate time performance increases as place performance is less adequate. This means that the more inadequate time performance is, the more important it is that place performance is appropriate. This also means that appropriate time performance is less important when place performance is adequate than when place performance is inadequate. This property is accounted for by the fact that the product term has a negative coefficient.

Parameter k can also be interpreted graphically (see Keeney and Raiffa, 1976, p. 240 ff.). Consider the two lotteries < 0.50, A; 0.50, C > and < 0.50, B; 0.50, D >. The first lottery result with probability one half in $(\mathbf{z}', \overline{\mathbf{z}}')$ and with probability one half in $(\mathbf{z}'', \overline{\mathbf{z}}'')$, whereas the second lottery results in $(\mathbf{z}', \overline{\mathbf{z}}'')$ with 0.50 chance and in $(\mathbf{z}'', \overline{\mathbf{z}}')$ with 0.50 chance. These paired consequences are shown in Figure 4.22. Assume that preferences are increasing in both Z and $\overline{Z}$. The lottery < 0.50, A; 0.50, C > implies that the decision maker gets either a high level of both Z and $\overline{Z}$ or a low level of these attributes. However, the lottery < 0.50, B; 0.50, D > implies that the decision maker either gets a high level of Z or $\overline{Z}$, but not a lot (or a little) of both.

Using the two-attribute utility function u' presented above, it is easy to show the relationship between preferences over these lotteries and scaling constant k. If lottery < 0.50, A; 0.50, C > is preferred to < 0.50, B; 0.50, D >, then an increase in $\overline{Z}$ is necessary to complement an increase in Z in going from A to C. Otherwise the increase in Z could not be exploited. Z and $\overline{Z}$ can be thought of as complementary. Hence,

$$<0.50, A; 0.50, C> \succ <0.50, B; 0.50, D> \Leftrightarrow k > 0.$$

However, if < 0.50, B; 0.50, D > is preferred, then it is necessary to perform well in terms of either Z or $\overline{Z}$ and, given a high level of Z, the additional satisfaction due to an increase in $\overline{Z}$ is not so much. Z is a substitute for $\overline{Z}$. Hence,

$$<0.50, A; 0.50, C> \prec <0.50, B; 0.50, D> \Leftrightarrow k < 0.$$

Finally, if both lotteries are equally preferred, then there is no interaction among attributes and the multiplicative utility function turns out to be simply additive. Hence,

$$< 0.50, A; 0.50, C > \sim < 0.50, B; 0.50, D > \Leftrightarrow k = 0.$$

In summary, tool attributes may interact in some corporate communication tool selection decision situations. This interaction among tool attributes is better accounted for by the multiattribute utility theory. The multiplicative utility function proposed as part of the heuristic technique for the uncertainty case accounts for possible interaction in the decision maker's preferences, where levels of one attribute affect the values of other attribute. In the multiplicative utility function, the sign of the scaling constant k indicates the manner in which attributes interact among them. If $k = 0$, then there is no interaction among tool attributes and the multiplicative representation reduces to the additive representation. If $k > 0$, then tool attributes are complementary: more preferred levels of one attribute are necessary to complement better levels of other attributes. However, if $k < 0$, then attributes are substitutive and better levels of one attribute substitute worse levels of other attributes.

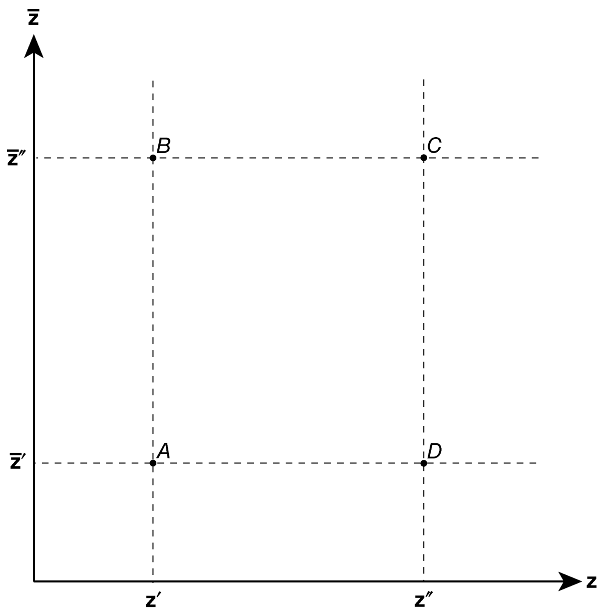

Figure 4.22. Graphical interpretation of the product term in the utility multiplicative function using lotteries over attributes set. Based in Keeney and Raiffa (1976, p. 240).

4.2.4. Critique of the managerial model

This subsection critically examines the proposed managerial decision-making model. Specifically, it addresses theoretical concerns related to the framing of the corporate communication tool selection decision, the modelling of the decision structure and the modelling of the decision maker's preferences, as well as some concerns related to the practical use of the model.

4.2.4.1. Discussion of the decision problem

The decision-making model developed here identifies the tool selection decision as the selection, among all available means of information delivery, of the single alternative that is better than others for building the corporate brand. The model attempts to find the best communication tool for conveying an already selected creative content to an already selected target audience. The way in which the corporate communication tool selection is framed appears to have two drawbacks:

1. the decision problem identified fails to consider the iterative nature of communication planning and
2. the goal of the tool selection decision seems to be incomplete.

By assuming that the selection of target audience and creative content has been made, the identified decision problem does not consider the iterative nature of communication planning and decision-making. However, the tool selection decision may cause changes to the target audience and the creative content. In addition, by assuming that the communication tools have already been generated, the identified problem also fails to consider the iterative nature of the tool selection decision as such. However, the modelling of the problem structure and of the decision maker's preferences may lead to more alternatives being generated or prespecified alternatives being discarded (Keeney and Raiffa, 1976, p. 10 f.). Therefore, the decision problem in question, like any other decision situation analytically considered in marketing and media planning literature, represents an ideal selection decision situation.

The aim of the identified problem is to select a single communication tool, not design a whole corporate communication programme (i.e. a set of coordinated corporate communication tools). The proposed model, however, allows a number of useful mechanisms to be used for designing an entire communication programme. One mechanism is to follow a lead-element approach to tool selection, which recommends considering the best communication tool to be the primary medium, that is, the single most effective medium for achieving all brand objectives, on which half or more of the media budget will be spent (Rossiter and Percy, 1997, p. 428 ff.; see also Esch, Hardiman and Mundt, 2004, p. 245 f.). Once the primary medium has been selected, and if resources are still available, this approach then recommends selecting other communication tools (see Dommermuth, 1989, p. 49; Berndt, 1995a, p. 236). These one or more secondary brand-building communication tools could be used to reach target audience members inappropriately reached by the primary medium, to achieve brand objectives more cost-effectively or to address target audience members near or at the point where they make decisions that may affect the company in some manner (e.g. consume, invest in, apply for or recommend the company or its products) (see Rossiter and Percy, 1997, p. 429 f.).

Another mechanism that the proposed model offers for designing whole corporate communication programmes consists of considering communication tools as contending corporate communication programmes. Alternatives, which include combinations of communication tools, are understood at the most inclusive level (see subsection 4.2.1). Hence, the proposed model can evaluate whole corporate communication programmes and thereby single out the 'best' programme for building a strong corporate brand. As such, the true corporate communication tools are not the individual tools themselves, but the possible portfolios of communication tools (see French, 1986, p. 19). It is therefore possible to consider synergies among the individual communication tools that make up contending communication programmes. This accounts for decision situations where communication tools complement each other and together provide additional levels of modality performance, a richer execution performance, additional visual opportunities or simply a broader reach beyond the levels of performance than offered by communication tools individually considered. The modelling of these and other interactions among individual communication tools within a corporate communication programme is straightforward with the decision-making model developed in this chapter. The decision maker must simply give a corporate communication tool made up of various individual alternatives (i.e. a corporate communication programme) a higher preference score than the sum of the preference scores assigned to the component communication tools.

One last feasible mechanism for designing corporate communication programmes relates to the use of the generated overall preference scores together with combinatorial algorithms. The multiattribute techniques proposed in subsection 4.2.3 associate cardinal numbers to communication tools, which could be applied in a general fashion. Assuming that the attributes are measured on a ratio scale, preference scores could be used in an optimising or heuristic model (see Dyer, Forman and Mustafa, 1992, for an example). In short, despite not explicitly addressing the design of corporate communication programmes, the proposed decision model provides a number of useful mechanisms.

4.2.4.2. Discussion of the problem structure

The managerial decision-making model developed here articulates the structure of the tool selection decision based on the behavioural framework proposed in chapter 3. Specifically, the decision problem is structured by specifying objectives on the basis of the corporate brand knowledge construct and by identifying attributes on the basis of stimulus-related moderators of corporate communication effects. The way in which the problem structure has been modelled seems to raise a number of theoretical concerns, related to

1. the general difficulty of the task,
2. the specification of multiple objectives,
3. the identification of attributes difficult to quantify,
4. the use of proxy attributes and
5. the omission of cost considerations.

In general, modelling the problem structure is the most difficult part of decision analysis (von Winterfeldt, 1980). Modelling the problem structure is challenging because an objectives hierarchy is difficult to construct and operationalise; the resulting objectives hierarchy may be either too simple, posing theoretical problems, or too complex, posing practical problems (Keeney and Raiffa, 1976). Regarding the tool selection decision, modelling the problem structure is challenging mostly because of the complexity of the communication phenomena. The problem structure consists of many objectives (because corporate brand knowledge is a multi-dimensional construct) and multiple attributes (because no single evaluator can successfully describe communication effects). Despite this complexity, the effort of modelling the corporate communication tool selection decision seems worthwhile. By reflecting the decision maker's mental structure of the problem, a systematic model-building approach serves to develop a well-reasoned communication programme, as illustrated in this chapter.

The problem structure discussed above considers multiple communication objectives simultaneously, whose levels of achievement are inevitably compromised. It is also argued to lead to ineffective communication decisions (see Batra, Myers and Aaker, 1996, p. 128). Nevertheless, focusing on a single or a few communication objectives is a priority when selecting a target audience and a creative content. Indeed, a corporate brand should not attempt to be everything for every-one. On the other hand, when selecting communication tools, both awareness and image are always necessary objectives for building the corporate brand, as argued in subsection 4.2.2. And lower-level objectives, related to either awareness or image, are often mutually exclusive and either one is pursued, depending on the target audience and the creative content, as shown in the next section.

The problem structure discussed above identifies attributes which are only quantifiable with difficulty and, as a result, seem to be highly subjective in their measurement. However, the nature of attribute scales, as well as their degree of quantification, ultimately depends on the kind of corporate communication tools evaluated. Tool attributes are only subjectively quantifiable when selecting broad communication tools or communication tools such as media types, whereas tool attributes are more objectively quantifiable when selecting communication vehicles or communication schedules. In both cases, comprehensive and measurable attributes can be developed for specific applications of the model. For the former, it may be possible to construct subjective scales based on expert judgment and accumulated experience; for the latter, it may be possible to construct objective measurement scales based on quantitative variables. Owing to its non-optimising nature, the proposed model conveniently accommodates both kinds of scales.

The problem structure discussed above measures the achievement of brand objectives in terms of proxy attributes, introducing additional complications into the analysis which ought to be avoided (see Keeney and Raiffa, 1976, p. 62 f.). Proxy attributes imply that some of the modelling of the problem structure is done in the decision maker's mind, who informally decides how well brand objectives are met by different levels of performance in terms of proxy attributes. If the relationships between objectives and attributes are complex or probabilistic, the decision maker is likely to approach this task using a simplifying heuristic strategy, which may considerably bias his evaluations (French, 1986, p. 199). Nevertheless, the evaluation of communication tools in terms of brand attributes rather than proxy attributes would be even more difficult, if not impossible. These evaluations would require the decision maker to elicit preference evaluations that he or she is not familiar with. Worse, preferences for certain consequences in terms of individual brand attributes would not be independent of each other and the decision maker's preferences in terms of brand attributes would be represented as a non-additive value function. Preferences for specific levels of recognition, for example, often depend on preferences for recall because when recognition is a brand objective, increasing recall is not usually sought (Rossiter and Percy, 1997, p. 115). On the other hand, the use of tool attributes puts fewer burdens on the decision maker, who can separately determine attribute weights and value functions over single attributes. Moreover, the use of proxy attributes provides an additional benefit, because once brand attributes and tool attributes have been meaningfully related, the most complex part of modelling the problem structure is complete, excluding periodical reviews (Keeney and Raiffa, 1976, p. 56 f.).

The problem structure discussed above ignores the costs associated with each corporate communication tool. Nevertheless, although budgetary considerations are essential when selecting corporate communication tools, evaluating the effectiveness of these tools is initially more important (Rossiter and Percy, 1997, p. 248). Additionally, playing down costs at an early stage of analysis may help gain support within the company by stressing the benefits of a corporate communication programme before raising the financial aspects of the tool selection decision (see Clemen, 1996, p. 560).

Incorporating cost considerations into the analysis is straightforward. If $X_1,\ldots, X_5$ denote the tool attributes for the consequences of corporate communication tool selection (see subsection 4.2.2) and C denotes the cost attribute, then $u''(c, \mathbf{x})$ is the overall preference score for cost c and the multiattribute consequence $\mathbf{x}$.

In most cases, the decision maker can think about these attributes separately. Regardless of the cost, a consequence that better builds the corporate brand would be preferred to a less optimal consequence in brand-building terms. If a consequence is optimal for building the corporate brand based on a cost c', that consequence will still be optimal based on a cost c'', for $c'' \neq c'$. Furthermore, a decision maker's preferences for lotteries over tool attributes will not depend on the cost incurred with each consequence. Preferences between a certain consequence $\mathbf{x}''$ and an uncertain consequence giving, say, a 0.50 chance of $\mathbf{x}'$ and a 0.50 chance of $\mathbf{x}'''$, does not depend on the level at which the attribute C is fixed. Indeed, utility independence seems to be a most reasonable assumption in decision situations that involve attributes associated to costs and attributes associated to benefits (see Keeney and Raiffa, 1976, p. 101 f., 380 f.; Clemen, 1996, p. 534, 579 f., for examples).[67] Preferences for benefits are thus very likely to be utility independent of costs, the benefits in the tool selection decision being the resulting positive brand knowledge in constituencies' minds.

From this utility independence assumption, and from results by Keeney and Raiffa (1976, p. 225 ff.), a utility function $u(\mathbf{x})$ can be defined as:

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67 Recall that utility independence is a stronger condition than preferential independence. This implies that, if X_i is *utility* independent of attribute C, then X_i is *preferentially* independent of C, for $i = 1, \ldots, 5$.

$$u''(c, \mathbf{x}) = f[c, u(\mathbf{x})] \,.$$

Hence, the decision maker may confine his efforts to the assessment of $u(\mathbf{x})$, and then, assuming that X_i, for $i = 1, \ldots, 5$, is utility independent of C, $u''(c, \mathbf{x})$ can be assessed.[68] This implies that the whole analysis in subsection 4.2.3 for assessing a decision maker's preferences for consequences of corporate communication tool selection remains unaltered. It is only necessary to additionally assess the decision maker's preferences over the already calculated utility and costs. In other words, once a value function or a utility function representing a decision maker's preferences for consequences related tool selection has been assessed, budgetary aspects can be analysed separately.

Additionally, the proposed model provides at least two mechanisms for considering budgetary aspects. Firstly, monetary aspects could be considered when evaluating consequences of communication tools in terms of time performance. For example, instead of measuring communication tools on potential frequency, these alternatives could be measured considering potential frequency *within* a certain budget. Secondly, the cardinal values associated to each communication tool could be employed in mathematical programming under budget constraints, provided these cardinal values are measured on a ratio scale (see Dyer, Forman and Mustafa, 1992, for an example).

4.2.4.3. Discussion of heuristic techniques

The managerial decision-making model developed here singles out the best communication tool using heuristic methods, which consist of multiattribute techniques that represent the decision maker's preferences for communication tools in a functional form. The use of such non-optimising techniques for solving the problem in question raises a number of theoretical concerns related to

1. general assumptions about the decision maker,
2. the relative merits of the chosen techniques and
3. the apparently overlooked considerations of interaction.

The multiattribute techniques discussed above assume a rational decision maker. This decision maker wants to make well-informed decisions, consider all information available, and exclusively pursue company goals. He is also decisive, being willing to compare all the corporate communication tools available (French,

68 It is not necessary to assume *mutual* utility independence between benefits and costs, but it is enough to assume that benefits are utility independent of costs. If, however, costs are also utility independent of benefits, then mutual utility independence holds and the complexity of the preference assessment procedure reduces considerably.

1986, p. 66). He knows the consequences of each communication tool in terms of each tool attribute and has powers of infinite discrimination (French, 1986, p. 64). If two levels of performance are distinct, then the decision maker may have a preference between them, even though the difference may not be evident. He is also able to assess preferences for specific consequences on single tool attributes, as well as specify weights for each of these attributes. The proposed heuristic techniques assume that the decision maker can value consequences numerically. That is, these techniques assume that he can measure the value of a certain or an uncertain consequence through some real-valued function, measured on an interval scale. Moreover, by being represented through an additive value model or a multiplicative utility model the decision maker's preferences are assumed to satisfy all standard expected utility axioms, as proposed by von Neumann and Morgenstern (1944). For the uncertainty case, the decision maker accepts a certain definition of rationality that is compatible with the maximisation of expected utility (Keeney and Raiffa, 1976, p. 132 ff.; French, 1986, p. 196 ff.).

The proposed heuristic techniques seem more suitable than other multiattribute methods for assisting managers in the tool selection decision. More explicitly, the proposed techniques seem superior to the analytic hierarchy process (AHP) developed by Saaty (1980), another popular decision-making technique extensively used for making marketing decisions (see Dyer and Forman, 1991, for a review), and media decisions (e.g. Dyer, Forman and Mustafa, 1992; Ngai, 2003). Despite being operationally easy, the AHP method raises some theoretical concerns that are widely documented in literature (see Dyer, 1990, for a review). Although variations of the AHP have addressed several of these concerns (e.g. direct rating assignments, more flexible attribute scales) (see Davies, 2001), its most controversial aspect still remains an issue. The AHP is criticised because of the rank reversal that occurs when an alternative is added. This has led many authors (e.g. Dyer, 1990) to deem the rank orderings provided by the AHP method as arbitrary and meaningless with respect to the underlying decision maker's preferences. In contrast, despite some philosophical and axiomatic criticism (see Saaty, 1990), the utility theory is considered the most theoretically acceptable among multiattribute decision-making methodologies (Olson, 1996, p. 2).

The proposed techniques also seem more suitable for solving the decision problem than multiattribute methods, which do not single out the 'best' alternative but sort the alternatives into a partial order of ranking. Such techniques include ZAPROS (Larichev and Moshkovich, 1995) or outranking methods such as ELECTRE (Roy, 1991) and PROMETHEE (Brans and Vincke, 1985). These techniques are particularly useful for large lists of alternatives and help the decision maker to select a short list from a larger set (Olson, 1996, p. 2). These techniques, however, are not useful for selecting the best communication tool. In short, by being theoretically sound and conceptually applicable to the decision problem in question, the proposed heuristic techniques seem more useful than other common multiattribute techniques for selecting the best corporate communication tool.

Finally, the multiattribute techniques discussed above seem to overlook interaction among factors moderating corporate communication effects. As discussed in chapter 3, interaction occurs between constituency characteristics and stimulus characteristics, as well as between variables within each category. Corporate communication effects, and ultimately, the success of a corporate communication programme depend on this interaction (Keller, 2001). This interaction does not seem to be taken into consideration by the proposed heuristic techniques. Nevertheless, the proposed heuristic techniques disentangle preference evaluations, not the effects of these characteristics. This interaction needs to be fully considered for evaluating communication tools in terms of the proposed set of attributes. Indeed, only by fully considering how stimulus characteristics interact with constituency characteristics to affect corporate brand knowledge in target audience's minds, can preference evaluations be made. For example, only by considering the moderating effects of a constituency's processing goals and the stimulus message, as well as their interactions, will the decision makers be able to assess their preferences for specific frequency performance levels, as shown by the illustrative model in the next section.

From another perspective, the proposed techniques do not seem to account for interaction among communication tools, yet integrated communication requires each tool selection decision to be made considering other communication tools in the corporate communication programme (Keller, 2001). Indeed, potential interaction may occur among the various individual means of information delivery included in a corporate communication programme, interaction that may profoundly affect the resulting corporate brand knowledge in constituencies' minds. Nevertheless, the proposed models provide useful mechanisms for considering interaction. As discussed above, a communication tool is understood here in its widest form, to include combinations of communication tools, as well as whole corporate communication programmes. The heuristic techniques discussed here also allow these alternatives to be evaluated.

4.2.4.4. Discussion of practical considerations

The proposed multiattribute techniques seem applicable for making actual corporate communication tool selection decisions. Additive models in particular, especially of a linear nature, are popular due to their transparency and intuitive appeal. They are widely cited in marketing literature (e.g. Berndt, 1995b, p. 365) and extensively applied in the industry, yet are kept unpublished as many of them are proprietary (Keeney, 1982). The proposed heuristic techniques seem particularly useful for making actual tool selection decisions under conditions of certainty and uncertainty because

1. they decrease the cognitive effort of decision-making and
2. they increase the opportunity of decision-making.

The proposed multiattribute techniques seem useful for reducing the decision maker's cognitive effort. In its most general form, multiattribute utility theory is relatively complex and best implemented by specialists (Olson, 1996, p. 2). Nevertheless, if mutually utility independence holds, the multiplicative utility model that represents a decision maker's preferences related to the tool selection decision is practical in terms of its required assessments and its general robustness. Moreover, if uncertainty is not formally built into the model, and when it can either be proved, or reasonably assumed, that attributes are mutually preferentially independent, then a simple additive value model represents the decision maker's preferences. An additive value model, but also a multiplicative utility model, reduces cognitive effort by allowing the problem to be broken down into parts and thereby allowing separate evaluations of consequences of communication tools in terms of individual attributes.

The proposed functional representations of a decision maker's preferences for corporate communication tools require the consequences of alternatives to be assessed in terms of individual attributes, which seems to be a relatively easy task for the decision maker. Although there are no studies confirming whether decision makers are able to make evaluations on tool attributes such as modality performance or time performance, they are likely to perform well because these tool characteristics are well-known among marketing and communication managers.

The proposed models also require the evaluation of preferences for attribute performances, which is realised by considering how different levels of performance in terms of individual tool attributes affect levels of achievement of brand objectives. These evaluations seem to represent a relative complex task for the decision maker. Although preference scores are assigned individually, these evaluations need to be elicited considering the effects of different levels of performance on all brand objectives simultaneously. Nevertheless, the framework developed in chapter 3 and empirical results from marketing and consumer research literature provide guidance here. Moreover, some formal assessment procedures may help in this task, including the mid-value point procedure (i.e. a conjoint scaling method) and the ratio comparison method, both of which have been described in some detail in this chapter.

The proposed models also require the decision maker to determine scaling constants, which is also a relatively complex task. The decision maker needs to consider the relative importance of brand objectives, which are sometimes difficult to recognise and quantify, as well as the ranges of the individual attributes scales, which are sometimes highly subjective. Nevertheless, the decision maker may use formal weight assessment procedures for this task, including lotteries, swing weights and rank order centroid weights. The first two procedures have been described in this chapter. The last technique is a relatively new formally justifiable weighting procedure developed by Barron and Barrett for the certainty case (see Edwards and Barron, 1994; Barron and Barrett, 1996).

All assessment procedures discussed in this chapter assume preliminaries and consistency checks (see Keeney and Raiffa, 1976, p. 188 ff.). In practice, terms and concepts must be explained to the decision maker to prepare him for the assessments. Once these assessments have been made, it will be necessary to check their consistency. Methods for eliminating inconsistencies in a decision maker's preferences over single attributes have been offered for each assessment procedure described. By checking the consistency of these single-attribute functions, the decision maker is also verifying the consistency of the scaling constants, although it is advisable to specifically check their consistency (Keeney and Raiffa, 1976, p. 310). In this regard, the decision maker should use an overdetermined system of equations for evaluating attribute weights or employ various weighting procedures simultaneously. That is, the various methods presented should be used to check each other (Keeney and Raiffa, 1976, p. 310). If the resulting scaling constants differ, the different sets of implied scaling constants can be used to verify whether the different sets would indicate that the same alternative were the best (Keeney and Raiffa, 1976, p. 302). Various weighting procedures could be also used consecutively. For instance, a common practice for decision-making under conditions of uncertainty is to rank order hypothetical alternatives, then use the probability-equivalent procedure to evaluate the largest scaling constant, and finally use the indifference-assessment procedure to evaluate the magnitude of the other scaling constants relative to the largest one (Keeney and Raiffa, 1976, p. 304).

It is also important to recognise that the various assessment procedures described in this chapter contain built-in biases (see Clemen, 1996, p. 515 f.). Empirical investigation has shown that the use of certainty equivalents — as employed in the mid-value point assessment procedure for the uncertainty case — results in more risk-averse evaluations than the probability-equivalent procedure, for increasing utility functions over single attributes (Hershey, Kunreuther and Schoemaker, 1982). For decreasing utility functions (i.e. higher amounts of an attribute are less preferred), the procedures employing certainty equivalents result in a more risk-seeking attitude. To attenuate these biases, an assessment procedure that does not compare a lottery with a certain amount, but compares two lotteries, has been proposed (McCord and de Neufville, 1986).

In short, despite the many complex tasks involved in assessing the proposed additive value function or the multiplicative utility function, their practical aspects seem manageable. Additionally, cognitive requirements could be further decreased by providing a range of values and then undertaking sensitivity analysis rather than determining fixed values.[69] An additive value model seems to be a particularly easily operable decision-making technique. Indeed, according to an empirical comparison among common multiattribute decision-making methods, additive value models are the easiest to use and the most comprehendible (Olson, 1996).

Besides reducing cognitive effort, the proposed decision-making model seems to allow for more opportune decision-making. Once the model has been constructed (i.e. the tool selection decision has been identified and modelled) it can then be applied relatively quickly. As previously mentioned, once the relationships between tool attributes and brand objectives have been assessed, the major part of the problem structure remains unaltered, excluding periodical reviews.

Moreover, additive value models and multiplicative utility models provide a mechanism for reducing the number of preference evaluations thereby speeding up the decision-making process. Particularly when communication tools are numerous, the models enable alternatives to be rated on scales, which are developed according to the range and the distribution of the consequences of the set of communication tools considered. The use of ratings will be shown in the next section.

A final word is necessary regarding the relevance of the proposed methodology in practice. The benefits of decision-making models relate more to the vocabu-

69 See Clemen (1996, ch. 5) for more information on sensitivity analysis in decision analysis.

lary and the structures of thought they offer, as well as the suggestions they make for further research, rather than the formal tools they provide (Aaker, 1975). Indeed, the most important goal of decision analysis is insight, not numerical treatment (Edwards and Barron, 1994). Any mathematical model that helps gain insight and understanding of a decision maker's preferences, including the two models developed in this chapter, should result in a good representation of the decision maker's preference structure over communication tools that can lead him to a clear preference among the alternatives (Clemen, 1996, p. 553). Decision analysis serves to corroborate, convince, communicate, advocate and reconcile (Keeney and Raiffa, 1976, p. 9 f.). Its resulting decision-making models are also useful for generating more alternatives, reaching consensuses and identifying areas where more information is necessary for decision-making (Wind and Saaty, 1980). In short, decision-making models help managers think thoroughly about the problem. Nevertheless, the methodology proposed here also provides practical assistance for corporate communication tool selection, as shown in the next section by means of an illustrative decision problem.

4.3. Illustrative Problem: Selecting Broad Corporate Communication Tools

The last section presented a managerial decision-making model for selecting the best corporate communication tool, the one that maximises the building of the corporate brand. The model dealt with the tool selection decision in its abstract form and considered corporate communication tools in general terms, from communication schedules to communication programmes. This section illustrates the decision-making model by applying it to broad corporate communication tool selection, that is, among major means of corporate brand communication. In doing so, this section adds to the proposed managerial model, by specifying the decision goal and identifying corporate communication tools, structuring brand objectives in a hierarchy and identifying tool attributes and structuring a manager's preferences for corporate communication tools. For simplicity's sake, the attention is first confined to two common brand-building situations, after which the focus is on many conceivable decision situations where a manager may want to build the corporate brand. Based on this analysis, this section evaluates the overall significance of corporate advertising and ad-like communication activities and the significance of individual corporate communication tools for building the corporate brand. Finally, this section discusses the innovative features of the proposed methodology for communication tool selection, concluding that the managerial decision-making model proposed in the last section is applicable, and in view of the illustrative model developed in this section, that the model hitherto provides the best guidance for selecting major means of corporate brand communication.

4.3.1. Identifying the tool selection decision

Assume that a manager in charge of the corporate advertising effort is the individual decision maker. One person is thus solely responsible for the choice of action. He is responsible for a company's corporate advertising and ad-like communication activities, that is, company-initiated activities identified with the corporate brand that directly reach ultimate constituencies, as defined in chapter 2.

This manager faces the task of building the corporate brand in two different situations. These situations, often called corporate image advertising and advocacy advertising (e.g. Gregory, 1991), are referred to here as image and issue communication. Both situations are common in corporate communication planning and decision-making. Indeed, although other programmes are possible, both are considered the two most common kinds of corporate communication programmes (Rossiter and Percy, 1997, p. 336).

Assume that, for both programmes, the target audience has been already selected. According to Rossiter and Percy (1997, p. 336), the audience for image communication is a relatively large group, comprising mainly prospective investors and employees. Desired audience behaviour is relatively indirect and delayed: the communication programme seeks to encourage potential investors and employees to buy company stock or take a job with the company. The target audience for issue communication has also been selected. This is a relatively small group, which, when the company is facing a crisis, mainly consists of regulators and consumers. Desired audience behaviour in this case is almost immediate: the communication programme seeks to discourage restrictive lawmaking and avoid the company's products being boycotted.

From prior research with the target audience and review of secondary data, suppose that the characteristics of both these groups have been determined, especially their prior corporate brand knowledge and processing goals (see Rossiter and Percy, 1997, p. 336). Prospective investors and employees respectively seek intellectual stimulation (a 'wise' stock choice) and social approval (a 'good' company to work for). Hence, they bring expressive needs to the situation. Moreover, they make stimulus-based decisions and have low motivation for processing information about the company. On the other hand, the second target audience seeks to avoid a problem in the regulatory instance or remove a problem when trouble with consumers arise, which means they have utilitarian needs.

Because of the nature of the situation, they are highly motivated and make stimulus-based decisions.

Suppose also that the brand objectives for both communication programmes have been specified, based on audience characteristics and on the objectives of the total corporate communication programme. The objectives of these programmes can be described as follows (see Rossiter and Percy, 1997, p. 336). For image communication, the brand objectives are to increase corporate brand recognition and enhance the overall attitude towards the company based on expressive benefits, whereas, for issue communication, the brand objectives are to increase corporate brand recognition and enhance the overall corporate image, consistent with utilitarian benefits. Suppose also that, based on these brand objectives, creative content has been selected (see Figure 4.23 and Figure 4.24 for actual examples of image and issue adverts from the automotive industry).

Once the target audience and the creative content have been chosen, the manager is faced with the tool selection decision. He or she needs to choose the best means of information delivery for conveying the creative content to the target audience. For example, the manager needs to choose whether sports sponsorship is better than cultural sponsorship, or whether the *New York Times* is better than the *Washington Post* for delivering the creative content to the target audience. First of all, however, he or she needs to select *broad* corporate communication tools. Major broad corporate communication tools include mass media advertising, corporate design, events, exhibitions, sponsorship and websites, described in subsection 2.2.3 and briefly delineated in Table 4.7. As argued in subsection 4.1.3, corporate advertising and ad-like communication activities are prime brand-building tools because they are easy to manage and can effectively reach any company's constituency with all kinds of messages in a suitable and appealing way.

In short, the manager needs to select the single best alternative from the range of major corporate communication tools. This alternative is considered the 'best' in terms of building the corporate brand among prospective investors and employees, as well as among regulators and irritated consumers. To select the best communication tool, it is necessary to model the problem structure and then the

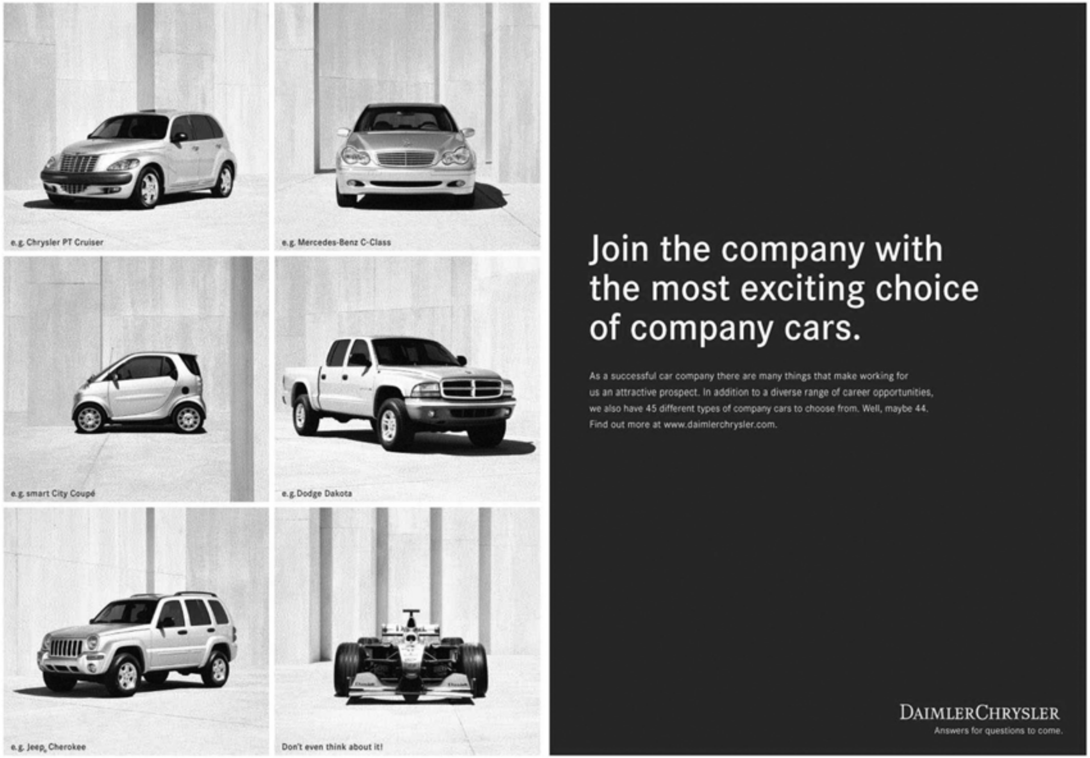

Figure 4.23. Example of a corporate advert for an image communication programme. Courtesy of DaimlerChrysler AG.

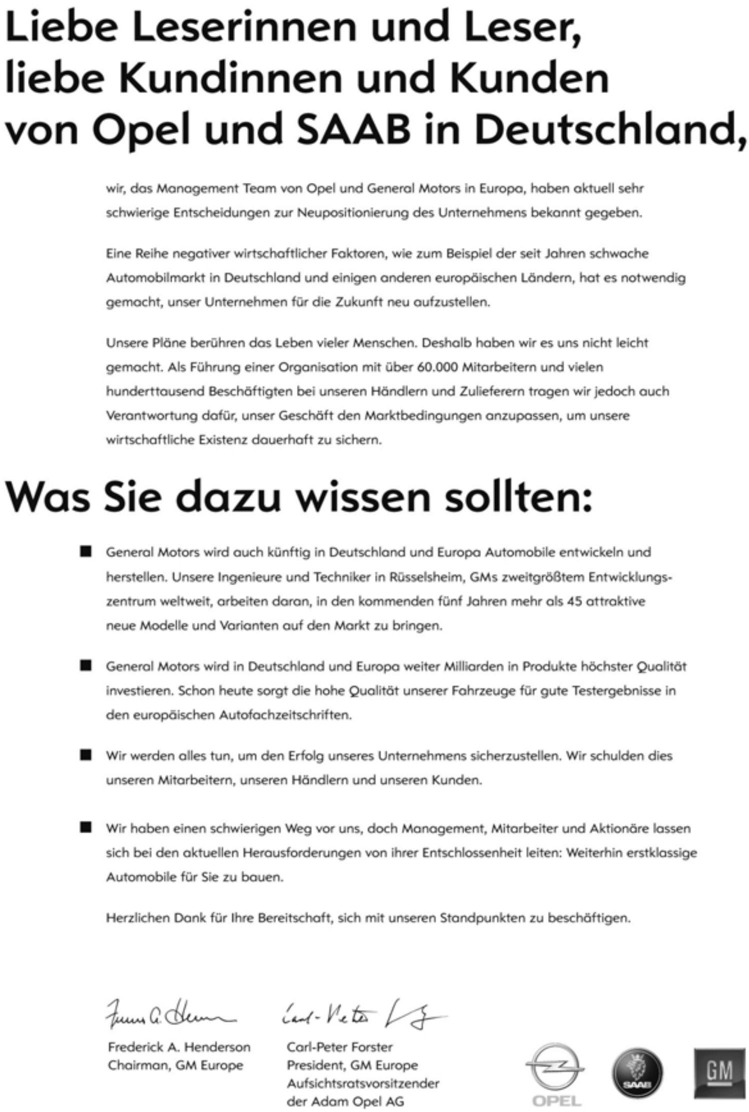

Figure 4.24. Example of a corporate advert for an issue communication programme. Courtesy of Adam Opel AG.

manager's preferences for consequences associated to the available alternatives, as shown below.

Table 4.7. Brief description of major corporate communication tools. See also subsection 2.2.3 for a more detailed characterisation of these communication tools.

Tool	**Description**
Corporate mass media advertising	Mass media space or time bought for the benefit of a company rather than its products.
Corporate design	Visual brand elements displayed in company-owned properties for the promotion of the company as a whole.
Corporate events	Experiential activities staged for the promotion of the company as a whole, overlooking or downplaying individual products.
Corporate exhibitions	Exhibits created for the benefit of a company rather than specific products.
Corporate sponsorship	Exposure in sponsored properties obtained for the benefit of a company, rather than its products.
Corporate websites	Internet presence established for the promotion of the company as a whole rather than its divisions or products.

4.3.2. Modelling the structure of the tool selection decision

This subsection details the problem structure developed in the last section to make it useful for broad corporate communication tool selection. This task is carried out based on findings from psychology and advertising research literature on learning and persuasion. Specifically, this and subsequent subsections are heavily based on the discussion on media selection provided by Rossiter and Percy (1997, p. 419 ff.; see also Percy, Rossiter and Elliott, 2001, p. 151 ff.), which explicitly considers brand objectives for tool selection (Rossiter and Percy, 1997, p. 445). Based on this analysis, corporate communication tools should be selected considering two types of awareness objectives and four types of image objectives, whose achievement is measured in terms of various tool attributes.

4.3.2.1. Structuring brand objectives

Modelling the structure of the tool selection decision requires brand objectives to be structured in a hierarchy, from the most general to the most specific. As argued in the last section, the overall brand objective in corporate communication tool selection is to build the corporate brand, namely, to build positive brand-knowledge structures in constituencies' minds. This broad brand objective may be broken down into increasing corporate brand awareness and enhancing corporate image and further subdivided, as suggested in the brand objectives hierarchy shown in Figure 4.25.

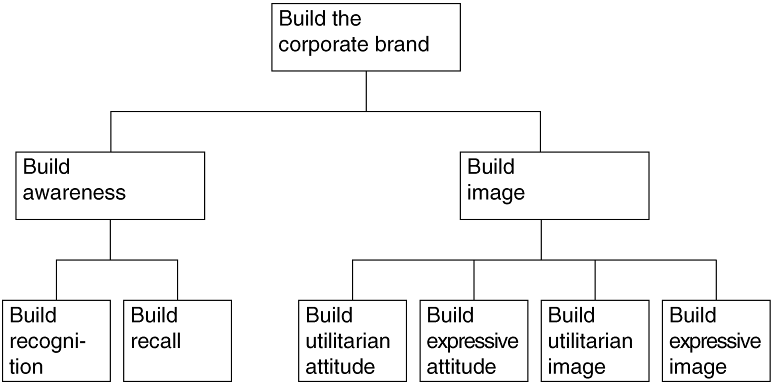

Figure 4.25. Brand objectives hierarchy for broad corporate communication tool selection. Based on Rossiter and Percy (1997).

To build corporate brand awareness, the target audience's familiarity with a corporate brand needs to be increased. Specifically, corporate brand awareness is built by increasing the corporate brand's recognition or recall, or both, among the target audience. Recognition and recall are thus the two alternative subobjectives for increasing brand awareness (Bettman, 1979b; Rossiter and Percy, 1997, p. 115 ff.). To build recognition, the constituency's ability to confirm prior exposure to the corporate brand needs to be increased when the company name or other corporate brand element is given as a cue, whereas to build recall, the constituency's ability to retrieve the corporate brand needs to be increased when industry or business nature, needs to be fulfilled, or usage situation is given as a cue.

To enhance corporate image, positive perceptions about a company need to be created among its constituencies. Corporate image is built by linking the corporate brand node stored in constituencies' minds to strong, favourable and unique mental associations — attributes, utilitarian and expressive benefits, attitudes, as well as an overall brand attitude. These types of associations, the components of corporate image, serve as a basis for the subobjectives associated to corporate image. A manager may seek to create all kinds of associations in constituencies' minds or simply an overall attitude towards the company and, simultaneously, he or she may seek to create utilitarian or expressive benefits in constituencies' minds, or both (see Rossiter and Percy, 1997, p. 124 ff.). Enhancing the overall attitude thus requires the creation of an overall favourable attitude towards the company, whereas enhancing the overall corporate image requires enhancing the complex network of meanings in constituencies' minds associated to the corporate brand node, not only the overall attitude (van Riel, 1995).

With respect to the type of benefits, a corporate brand can deliver utilitarian or expressive benefits (Aaker, 2004b; Esch, Hardiman and Mundt, 2004). To build a utilitarian image, the benefits in constituencies' minds associated to solving problems need to be created, whereas to build an expressive image, the benefits in constituencies' minds associated to symbolic or experiential fulfilment need to be created (McGuire, 1976; MacInnis and Jaworski, 1989; Rossiter and Percy, 1997, p. 121 f.). Considering this, the four alternative subobjectives for enhancing corporate image are: overall attitude based on utilitarian benefits, overall attitude based on expressive benefits, overall image based on utilitarian benefits and overall image based on expressive benefits (Rossiter and Percy, 1997, p. 420 ff.). How well these brand objectives are met is measured by five evaluators, identified below.

4.3.2.2. Identifying tool attributes

Once the brand objectives hierarchy for the tool selection decision has been specified, the modelling of the problem structure requires the tool attributes upon which communication tools are measured to be identified. The five tool attributes presented in the last section serve as a basis for measuring how well communication tools meet the brand objectives. These attributes, however, need to be specified in order to be useful for communication tool selection. A review of marketing literature on media selection produces several important observations to consider when selecting communication tools (see Rossiter and Percy, 1997, p. 420 ff.; see also Berndt, 1995b, p. 364; Batra, Myers and Aaker, 1996, p. 584 ff.). Tool attributes for evaluating broad corporate communication tools will be specified in view of these considerations.

To be useful for broad corporate communication tool selection, the five tool attributes identified in the last section can be specified as follows. Modality refers to the main avenues of sensation addressed by a communication tool. At least two aspects of modality are often considered in media selection, namely verbal and visual modality. A communication tool is said to offer visual modality when it is good at conveying optic information, attained or maintained by sight. A communication tool is said to offer verbal modality when it is good at conveying the written or spoken word.

Message refers to *that which* is said in a communication tool. In a media selection context, one aspect of message frequently considered is the capacity of a communication tool to convey complex messages. A communication tool is associated to complex messages when it gives receivers a long time to process the message. In other words, a communication tool allows for complex messages when it is capable of carrying various claims or longer, more carefully reasoned claims, or both.

Execution refers to *how* the message is conveyed by communication tool. One simple aspect of execution, often considered in media selection, is colour capacity. A communication tool is said to be capable of colour execution when it is good at vividly conveying visual full-colour information.

Time refers to *when* a target audience is exposed to a communication tool. In a media selection context, at least one temporal aspect is always considered, namely potential frequency. Frequency refers to the number of times an individual of a target audience is exposed to a communication tool within a given period of time (AMA, 1995). A communication tool is associated to high frequency when it can deliver the creative content to the target audience many times within a given period of time, relative to the competition.

Place refers to *where* a target audience is exposed to a communication tool. At least one spatial aspect is always considered when selecting media, namely potential reach. Reach refers to the number of individuals exposed to a particular communication tool during a specified period of time (AMA, 1995). A communication tool is associated to broad reach when it can deliver the creative content to a large target audience within a given period of time. How well specific levels of place performance and other tool attributes help achieve the brand objectives specified above, is considered below.

4.3.2.3. Modelling relationships between tool attributes and brand objectives

Once brand objectives and tool attributes have been specified, modelling the structure of the tool selection decision requires tool attributes and brand objectives to be meaningfully related. Several specific relationships between levels of performance of tool attributes and levels of achievement of brand objectives are well documented in marketing and consumer research literature and need to be considered for assessing preferences for communication tools, although it ought to be noted that every stimulus characteristic may affect every brand objective (see subsection 4.2.2).

Marketing and consumer research literature provides the following insight into the relationships between tool attributes and brand objectives. Modality may serve as an attribute that reflects how well corporate brand awareness is achieved. Good visual modality is necessary for increasing corporate brand recognition because recognition requires the company logotype or other visual corporate brand elements to be depicted in the stimuli (Rossiter and Percy, 1997, p. 217 f.).

In contrast, good verbal modality is necessary for increasing corporate brand recall. Recall is primarily a verbal phenomenon that involves mental or inner speech (Rossiter and Percy, 1997, p. 220 f.). Recall usually requires the explicit mention of the category need in association with the brand, which should be prominent and is best achieved verbally. These considerations lead to the following relationships:

1. Better visual modality will help achieve the objective of increasing corporate brand recognition.
2. Better verbal modality will help achieve the objective of increasing corporate brand recall.

Message may be used as an attribute that reflects how well corporate image is enhanced. Complex messages are needed to enhance the overall corporate image because the message needs to instil confidence and be accepted, and the target audience needs to be convinced before it acts (Rossiter and Percy, 1997, p. 245). There is however one exception to this requirement, namely, when the objective is to create expressive benefits. In this situation, a complex message is not necessary for building the overall corporate image (Rossiter and Percy, 1997, p. 258 f.). Therefore:

3. A more complex message will help achieve the objective of enhancing the overall corporate image based on utilitarian benefits.

Execution may serve as an attribute that reflects how well both corporate brand awareness and corporate image are achieved. Good colour execution is necessary for increasing corporate brand recognition because recognition requires visual exposure to the company logotype and other corporate brand elements. The display of the company logotype, in particular, should be large, in colour and is best combined with other visual elements to hold constituency attention to the stimulus for longer (Rossiter and Percy, 1997, p. 218).

In addition, good colour execution is also necessary for creating expressive benefits for a corporate brand. Colour enhances sensory gratification and social approval (Rossiter and Percy, 1997, p. 229, 255 f.). These considerations suggest that:

4. Better colour execution will help achieve the objective of increasing corporate brand recognition.
5. Better colour execution will help achieve the objective of creating expressive benefits.

Time may also be used as an attribute that reflects how well both corporate brand awareness and corporate image are achieved. Although high frequency may seem desirable irrespective of the brand objectives, many repetitions are in fact unnecessary for achieving certain brand objectives. High frequency is, however, necessary for increasing corporate brand recall. Brand recall is difficult to increase, mainly because of competitive interference. Studies have shown that a brand is correctly recalled by only one-fifth of a target audience, two weeks after having been exposed four times to the average TV commercial (Singh and Rothschild, 1983). Moreover, unlike brand recognition, brand recall continues to increase with the number of exposures. To achieve a brand recall of 80 percent, a target audience could require as many as 12 exposures (Rossiter and Percy, 1997, p. 231).

High frequency is also necessary for creating expressive benefits. High frequency, within a given period of time, is usually necessary because expressive benefits are only slowly created in constituencies' minds. In fact, with positive reinforcement, as is characteristic of expressive benefits, the main factor in creating positive brand-knowledge structures is the number of exposures rather than the amount of reinforcement (Hulse, Deese and Egeth, 1975; Rossiter and Percy, 1997, p. 229 f.). Moreover, high frequency reinforces the self-image of a company's current constituencies and their feelings about the company (Raj, 1982; Rossiter and Percy, 1997, p. 230; Richins and Bloch, 1986; Ehrenberg, 2000). There is, however, one exception to this high frequency requirement. High frequency is not necessary when building the overall corporate image because the time lag between exposure to the communication stimulus and desired constituency behaviour is generally quite long (Rossiter and Percy, 1997, p. 259). These considerations suggest that:

6. Higher frequency will help achieve the objective of increasing corporate brand recall.
7. Higher frequency will help achieve the objective of enhancing the overall attitude towards the company based on expressive benefits.

Place may be used as an attribute that reflects how well both corporate brand awareness is increased and corporate image enhanced. In fact, reach is fundamental for achieving the brand-building objective. If a constituency is not reached by a communication stimulus, then corporate communication effects cannot occur. However, broad reach is only necessary when the target audience is large. Hence:

8. Broader reach will help achieve the objective of building the corporate brand when the target audience is large.

The remarks in the last few pages should have made two points clear. Firstly, these relationships postulated between tool attributes and brand objectives clearly show that specific levels of performance in terms of *several* tool attributes indicate the achievement of *every* brand objective. Figure 4.26 summarises these relationships, derived from the propositions developed above. For example, the higher the verbal modality and the higher the frequency associated to a communication tool, regardless of its levels of performance in terms of other attributes, the higher the degree to which the objective of increasing corporate brand recall will be achieved.

Secondly, the achievement of every brand objective requires specific levels of performance on various attributes. Consequently, Figure 4.26 can be interpreted in another way, namely, as a summary of the required levels of performance for achieving every brand objective. In other words, the achievement of different brand objectives requires different levels of performance from the communication tools. For example, to enhance the overall attitude towards the company, based on utilitarian benefits, the media selected need only be associated to high verbal modality; nothing further is required from the communication tool. Once the various links between brand objectives and tool attributes have been specified — that is, once the corporate communication tool selection decision has been structured — it is then possible to model the manager's preferences for broad corporate communication tools, as shown below.

4.3.3. Choosing the best communication tool

This subsection applies the heuristic technique developed in subsection 4.2.3 for the certainty case for choosing the best broad corporate communication tool for image and issue communication programmes. To choose the best communication tool, the manager's preferences for consequences associated to these alternatives need to be assessed. Assume that these consequences are certain. These consequences, evaluated in terms of the five tool attributes specified in last subsection, are summarised in Table 4.8 (see Rossiter and Percy, 1997, p. 358, 420 ff.; Kotler, 2000, p. 666 ff.). For example, corporate exhibitions are excellent for portraying visual and verbal information, simple and complex messages in either black and white or full colour, but are poor in terms of both frequency and reach.

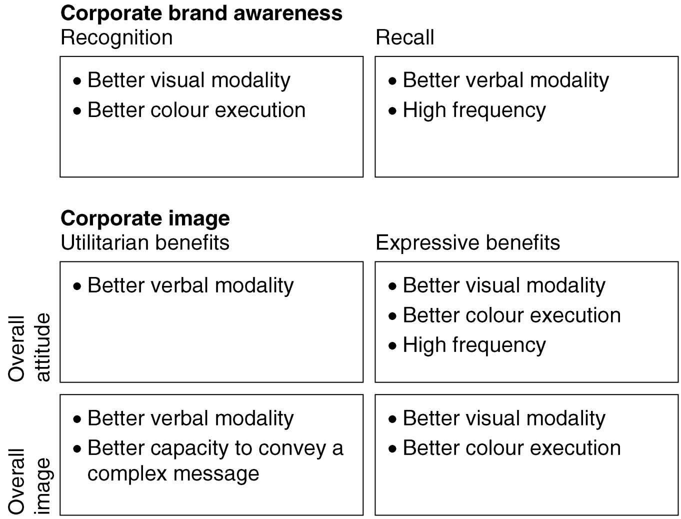

Figure 4.26. Relationships between tool attributes and brand objectives. Note: place performance (i.e. reach) is not shown in this figure because it relates to the size of the target audience, not to the subobjectives for increasing awareness or the subobjectives for enhancing image.

A few comments need to be made about the levels of performance displayed in Table 4.8. As these consequences are evaluations of broad communication tools, which may encompass various different communication tools or media types, not every communication tool within a broad communication tool will be capable of the level of performance displayed in this table. Hence, the levels of performance assumed for each broad communication tool may not be associated to every communication tool within a tool. Corporate mass media advertising, in particular, is capable of conveying both a simple and a complex message when the advertising media used is newspapers or magazines, but is capable of conveying only a simple message when the media type employed is television. Mass media advertising in newspapers usually allows solely for a black and white execution, but full colour is possible in magazines and television. Corporate advertising allows for high frequency, except for magazine advertising, which is capable of attaining only a low frequency. Similar remarks apply to corporate events. Events are generally capable of conveying a complex message. An hour-long annual shareholder meeting may convey themes such as dividends policy, company strategy and other complex issues. But some events, called brand events here, are not capable of delivering complex information to the target audience (Nufer, 2002, p. 38 f.). A company's Christmas party, for example, provides no capacity for conveying complex information to its attendees.

Table 4.8. Levels of performance of broad corporate communication tools in terms of verbal and visual modality, message complexity, colour execution, frequency and reach.

Tool	Modality	Message	Execution	Time	Place
Mass media advertising	Visual and verbal	Simple and complex	Black and white and colour	Low and high frequency	Narrow and broad reach
Corporate design	Visual	Simple	Black and white and colour	Low frequency	Narrow reach
Events	Visual and verbal	Simple and complex	Black and white and colour	Low frequency	Narrow reach
Exhibitions	Visual and verbal	Simple and complex	Black and white and colour	Low frequency	Narrow reach
Sponsorship	Visual	Simple	Black and white and colour	Low and high frequency	Narrow and broad reach
Websites	Visual and verbal	Simple and complex	Black and white and colour	Low and high frequency	Narrow and broad reach

Source: Rossiter and Percy (1997, p. 420 ff.) for consequences associated to mass media advertising, corporate design, events and sponsorship; Rossiter and Percy (1997, p. 358) for consequences associated to corporate exhibitions; and Kotler (2000, p. 666 ff.) for consequences associated to corporate websites. However, contrary to Rossiter and Percy (1997, p. 426), it is assumed here that corporate design and corporate sponsorship are only capable of visual modality, not of verbal modality.

Once the consequences associated to each corporate communication tool have been determined, the manager needs to evaluate preferences for those consequences. As discussed in subsection 4.2.3, the manager's preferences over tool attributes under conditions of certainty can be represented by an additive value function where preferences scores resulting from single-attribute value functions are scaled and added together. Therefore, to assess the manager's preferences for consequences of different broad communication tools, it is necessary to determine single-attribute value functions and their respective scaling constants. First of all, however, in order to allow the manager to assess his preferences meaningfully, the relative importance of the various brand objectives pursued needs to be determined, as shown below.

4.3.3.1. Assessing the importance of single brand objectives

The manager can meaningfully assess his preferences for corporate communication tools by basing his evaluations on how important single brand objectives are to building the corporate brand. Remember that the desirability of particular levels of tool attributes depends on the brand objectives the manager pursues in a given brand-building situation. In other words, the manager determines his preferences for different levels of performance considering how these different levels of the five tool attributes affect the achievement of lower-level brand objectives, or at least considering how these levels affect the achievement of the overall brand-building objective.

Importance of single brand objectives for image communication and issue communication can be taken from marketing literature. For instance, Rossiter and Percy (1997, p. 336) recommend increasing corporate brand recognition and enhancing overall attitude towards the company, based on expressive benefits, for building the corporate brand among prospective investors and employees. Assume that the achievement of these lower-level objectives is sought with image communication programmes.

Once judgments on the importance of single brand objectives have been made, these evaluations need to be translated into weights for lower-level brand objectives. Recall the hierarchical structure of brand objectives displayed in Figure 4.25, used for evaluating broad corporate communication tools. Suppose for a moment that the six lowest-level objectives in Figure 4.25 could be directly measured by brand attributes $Y_1, \ldots, Y_6$. For example, Y_3 would directly measure the degree to which the objective is achieved of building the overall attitude towards the company, based on utilitarian benefits. Remember that brand attributes $Y_1, \ldots, Y_6$ are different from tool attributes $X_1, \ldots, X_5$.

Let I represent the complete set of brand attribute indices and S_1 and S_2 represent subsets of I. In the brand objectives hierarchy used for evaluating broad communication tools,

$$I = \{1, \ldots, 6\},$$

$$S_1 = \{1, 2\},$$

$$S_2 = \{3, 4, 5, 6\},$$

where S_1 is the subset of attribute indices associated to the awareness objective, and S_2 is the attribute index subset associated to the image objective.

Let $w(S)$ be a function on subset S of I. This function indicates the importance or weight of brand objective subset S for achieving the overall brand-building objective. Remember that this function satisfies the usual rules of a probability measure. Also let $w(S_i \mid S_j)$ be conditional weighting functions, where S_i is a subset of S_j. These conditional weighting functions indicate the importance of brand objectives associated to the attribute index set S_i for achieving the higher-level brand objective associated to subset S_j.[70]

It is now necessary to assess the importance of single brand objectives, which can be more naturally determined by assigning weights to subsets and then making conditional weight assignments. That is, it may not be natural to assess $w(\{i\})$ directly, where $\{i\}$ is a single-element set, but it may be more appropriate to isolate components of the decision situation and to make conditional weight assessments.

In the brand-building situations at hand, it is natural to compare the importance of increasing awareness versus the importance of enhancing image, the importance of building recognition versus the importance of building recall, and lastly the importance of achieving a single image objective versus the importance of achieving any other image objective. In symbols, the manager must compare

$$w(S_1) \quad \text{versus} \quad w(S_2)$$
$$w(\{1\}) \quad \text{versus} \quad w(\{2\})$$
$$w(\{3\}) \quad \text{versus} \quad w(\{4\}) \quad \text{versus} \quad w(\{5\}) \quad \text{versus} \quad w(\{6\}).$$

For building the corporate brand through image communication programmes, Rossiter and Percy (1997, p. 336) suggest that both awareness and image should be brand objectives. In fact, both brand objectives are *always* pursued, regardless of the brand-building situation. Assume that corporate brand awareness and corporate image are equally important, which is a reasonable assumption for already introduced corporate brands, not universally known. Since S_1 is associated to the awareness objective and S_2 to the image objective, let

$$w(S_1) = 0.50 \quad \text{and} \quad w(S_2) = 0.50.$$

70 See subsection 4.2.3 for more information on the weighing function and the conditional weighting functions.

Regarding the subobjectives with respect to the awareness objective, Rossiter and Percy (1997, p. 336) remark that the main awareness objective of image communication programmes is to get the company's name recognized when constituencies are considering the company for investment or employment. These constituencies do not necessarily need to recall the company name. In other words, building recognition is considered important, whereas increasing recall does not seem important in this brand-building situation. Thus, let

$$w(\{1\} \mid S_1) = 1.00 \quad \text{and} \quad w(\{2\} \mid S_1) = 0.00.$$

Regarding the subobjectives with respect to the image objective, Rossiter and Percy (1997, p. 336) suggest that image communication programmes seek a relatively indirect and delayed audience action. Similarly, Belch and Belch (2004, p. 585) argue that image communication aims to create goodwill among external and internal constituencies, to position the company and to entice investors and employees. Hence, for image communication programmes, enhancing the overall attitude towards the company, based on expressive benefits, seems sufficient for achieving the image objective, whereas the achievement of all other subobjectives does not seem relevant in this brand-building situation. These judgments imply that

$$w(\{3\} \mid S_2) = 0.00,\ w(\{4\} \mid S_2) = 1.00,\ w(\{5\} \mid S_2) = 0.00, \text{ and } w(\{6\} \mid S_2) = 0.00.$$

When the manager has assigned conditional weights to brand objectives subsets, it is then possible to find the individual weights associated to lowest-level brand objectives. For instance, to find the weight associated to the objective of building an expressive overall attitude,

$$\begin{aligned} w(\{4\}) &= w(\{4\} \mid S_2) \cdot w(S_2) \\ &= 1.00 \times 0.50 \\ &= 0.50. \end{aligned}$$

Weights associated to other lower-level brand objectives can be found in a similar fashion. Figure 4.27 shows these weights for image communication programmes, with the weights of lowest-level brand objectives at the bottom. These weights — 0.50 for recognition, 0.00 for recall, 0.50 for expressive overall attitude and 0.00 for other image subobjectives — have very specific meanings. Weights associated to the recognition objective and to the image-related objective of building an expressive overall attitude are the same. This implies that the brand objectives of building recognition and enhancing the overall attitude towards the company, based on expressive benefits, are both equally important for image communication programmes. This also implies that recognition and expressive overall attitude are complementary brand objectives. That is, both objectives need to be simultaneously achieved to build the corporate brand in this brand-building situation. Moreover, their weights add up to 1, whereas the weight associated to any other lowest-level brand objective is zero. That is, building recognition and a positive expressive overall attitude is important, whereas, in this brand-building situation, the remaining lowest-level brand objectives are not. This might be interpreted to mean that recognition and expressive overall attitude, together, are substitutes for all other lowest-level brand objectives. That is, by achieving both these brand objectives, it is not necessary to meet any other lowest-level brand objective to build the corporate brand through image communication programmes.

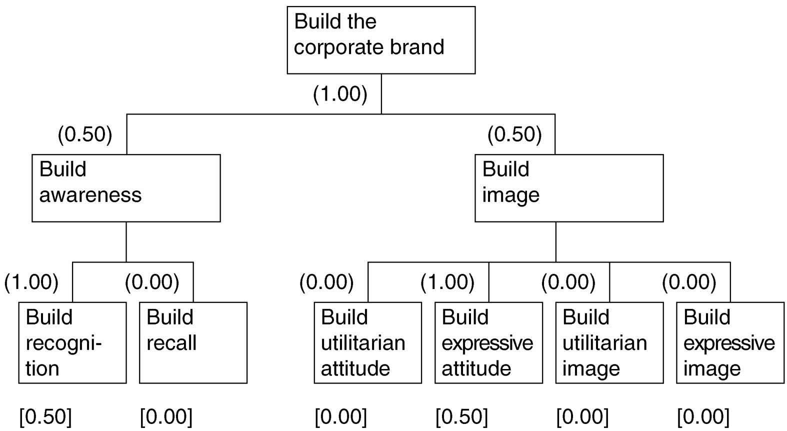

Figure 4.27. For image communication programmes, weights associated to single brand objectives. Weights of lowest-level brand objectives are shown in the bottom row.

So far the importance of single brand objectives for image communication programmes. For issue communication programmes, a different set of lower-level brand objectives seem important. In this brand-building situation, Rossiter and Percy (1997, p. 336) suggest building the corporate brand by increasing corporate brand recognition and enhancing the overall corporate image, particularly its utilitarian associations. Translating Rossiter and Percy's judgments into conditional weights associated to lower-level brand objectives means that

$$w(S_1) = 0.50 \quad \text{and} \quad w(S_2) = 0.50,$$
$$w(\{1\} \mid S_1) = 1.00 \quad \text{and} \quad w(\{2\} \mid S_1) = 0.00,$$

$$w(\{3\} \mid S_2) = 0.00, \quad w(\{4\} \mid S_2) = 0.00, \quad w(\{5\} \mid S_2) = 1.00, \quad \text{and} \quad w(\{6\} \mid S_2) = 0.00.$$

Evidently, conditional weights associated to awareness subobjectives are the same for issue communication than for image communication. However, conditional weights attached to image subobjectives are different in these two brand-building situations. For issue communication, $w(\{5\}|S_2) = 1.00$, while all other image subobjectives are associated to a zero weight. Weights associated to single brand objectives are shown in Figure 4.28. In this Figure, both the odd lowest-level brand objectives are complementary, and together are substitutive for all other lowest-level brand objectives. Once the importance of single brand objectives has been understood in both brand-building situations, it is then possible for the manager to assess preferences for consequences over single tool attributes.

4.3.3.2. Assessing value functions over single attributes

To assess the manager's preferences for broad corporate communication tools, it is necessary to determine value functions over single tool attributes. As explained in subsection 4.2.2, these assessments should be carried out by considering the extent to which different levels of single attributes affect the achievement of brand objectives. The relationships identified in last subsection and summarised in Figure 4.26 are useful here. They help decide how well brand objectives are met by specific levels of performance in terms of visual and verbal modality, message complexity, colour execution, frequency and reach.

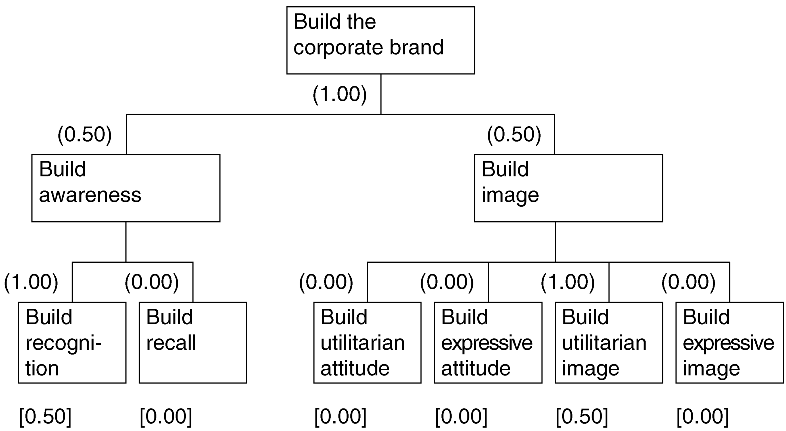

Figure 4.28. For issue communication programmes, weights associated to different brand objectives. Weights of lowest-level brand objectives are shown in the bottom row.

Returning to the example situation, for image communication programmes, it has been assumed that the manager attempts to increase corporate brand recognition and enhance the overall attitude towards the company, based on expressive benefits. The achievement of these brand objectives clearly requires some specific levels of performance in terms of single tool attributes. These requirements shape the manager's preferences over tool attributes. For building corporate brand recognition in particular, visual modality is preferred to verbal modality and an execution performance capable of colour is preferred to a black and white execution. For building a positive overall attitude towards the company, based on expressive benefits, the manager prefers a visual to a verbal modality, a colour to a black and white execution, and high to low frequency. Because corporate brand awareness and corporate image are jointly pursued, the manager must consider the media requirements that help to achieve both lowest-level brand objectives simultaneously. In fact, the manager must consider *only* the media requirements of these two lowest-level brand objectives, paying little attention to the media requirements of other brand objectives. Hence, jointly considering both the awareness and the image subobjectives, the manager would prefer better visual modality, better colour execution and higher frequency. Capacity to convey a complex message is not necessary. That is, the manager prefers a communication tool capable of conveying a simple message — or a simple and complex message — to a tool capable of conveying *only* a complex message. Moreover, because prospective investors and employees are a large target audience, manager prefers a broad to a narrow reach. The premise is that these specific levels of performance on tool attributes will help achieve the manager's brand objectives.

These manager's preferences are then to be translated into cardinal numbers. That is, preference scores must be assigned to specific levels of single tool attributes by assessing value functions over single attributes. For determining these single-attribute value functions, the ratio comparison procedure discussed in subsection 4.2.3 can be employed. This assessment procedure, which is useful for creating meaningful measurements over any discrete attribute, requires that the manager rates the different levels on the scale, indicating how much each level is worth relative to the other levels. In practice, this procedure requires arbitrary rating points to be assigned to the worst and the best levels of an attribute, and then ratings for other possible levels of performance to be assessed relative to the two levels. As proposed by the ratio comparison procedure, $v_i(x_i) = 0$ for the least preferred level of tool attribute X_i and let $v_i(x_i) = 1$ for the most preferred level of X_i, for $i = 1, \ldots, 5$. For example, $v_3(x_3) = 0$ for the worst level of execution performance (i.e. black and white execution for image communication) and $v_3(x_3) = 1$ for the best level of execution performance (i.e. colour execution). Then, for discrete attributes, the manager must indicate how the intermediate levels of single attributes rate on this scale from 0 to 1. However, as shown in Table 4.8, consequences in terms of single tool attributes are dichotomous.[71] That is, each tool attribute can take on one of two mutually exclusive levels of performance. For example, time performance as measured by frequency can be high or low, and nothing more. Hence, in the decision situations analysed, there are no other levels of time performance — or of any other tool attribute — except from the best and the worst. As a result, the assessment of preference scores for intermediate levels of each tool attribute is not necessary. The preference scores for specific levels of performance are thus dichotomous themselves. For image communication programmes, the preference scores for specific levels of single tool attributes are as shown in Table 4.9. With these preference scores in mind, it is now possible to rate corporate communication tools. For example, referring to Table 4.9, corporate exhibitions would be rated as shown in Table 4.10. That is, corporate exhibitions get the highest preference score on modality, message

Table 4.9. For image communication programmes, preference scores for specific levels of performance on single tool attributes.

Modality	Score	Message	Score	Execution	Score
Visual	1.00	Simple	1.00	Black and white	0.00
Verbal	0.00	Complex	0.00	Colour	1.00
Visual and verbal	1.00	Simple and complex	1.00	Black and white and colour	1.00

Time	Score	Place	Score
Low frequency	0.00	Narrow reach	0.00
High frequency	1.00	Broad reach	1.00
Low and high frequency	1.00	Narrow and broad reach	1.00

71 Despite only considering dichotomous consequences in terms of single attributes in the decision situation at hand, it is evident from the features of the assessment procedures discussed in subsection 4.2.3 that the proposed heuristic techniques can accommodate any number of intermediate levels. A constructed attribute scale for measuring time performance, for example, may consist of 5 levels, which would require the assessment of preference scores for three intermediate levels. See also subsection 4.3.4 for a brief example on how to make subtle preference evaluations on single attributes.

Table 4.10. For image communication programmes, preference scores for corporate exhibitions.

Attribute	Performance	Score
Modality	Visual and verbal	1.00
Message	Simple and complex	1.00
Execution	Black and white and colour	1.00
Time	Low frequency	0.00
Place	Narrow reach	0.00

and execution performance, but the lowest preference score in terms of time and place performance.

For issue communication programmes, preferences for specific levels of tool attributes are different. In this brand-building situation, the manager would prefer better visual and verbal modality, better capacity to convey complex messages and better colour execution. High frequency is not required; neither is broad reach necessary. As said before, media requirements for issue communication programmes differ from those for image communication programmes. Consequently, preference scores for specific levels of performance on attribute X_i are different. Let $v_i(x_i) = 0$ for the worst level of attribute X_i and $v_i(x_i) = 1$ for the best level of X_i, for $i = 1, \ldots, 5$. Again, because levels of performance in terms of each tool attribute are dichotomous, it is not necessary to assess preference scores for intermediate levels on each attribute scale. Table 4.11 summarises the preference scores. For example, referring to Table 4.11 corporate exhibitions would be rated as shown in Table 4.12. Here, for issue communication, corporate exhibitions get the highest preference score on every tool attribute.

4.3.3.3. Assessing scaling constants

Once single-attribute value functions have been determined, the assessment of the manager's preferences for broad corporate communication tools requires the evaluation of scaling constants. As mentioned in subsection 4.2.3, this is achieved by considering the range of measurements on single attributes and the importance of single brand objectives. Remember that the manager must keep in mind the importance of all brand objectives simultaneously for assigning meaningful values to every scaling constant. By incorporating proxy attributes into the analysis, the scaling constant respective to each tool attribute depends on the importance of every brand objective, because single attributes measure the achievement of *all* of them.

Table 4.11. For issue communication programmes, preference scores for specific levels of performance on single tool attributes.

Modality	**Score**	**Message**	**Score**	**Execution**	**Score**
Visual	0.00	Simple	0.00	Black and white	0.00
Verbal	0.00	Complex	1.00	Colour	1.00
Visual and verbal	1.00	Simple and complex	1.00	Black and white and colour	1.00

Time	**Score**	**Place**	**Score**
Low frequency	1.00	Narrow reach	1.00
High frequency	0.00	Broad reach	0.00
Low and high frequency	1.00	Narrow and broad reach	1.00

Table 4.12. For issue communication programmes, preference scores for corporate exhibitions.

Attribute	**Performance**	**Score**
Modality	Visual and verbal	1.00
Message	Simple and complex	1.00
Execution	Black and white and colour	1.00
Time	Low frequency	1.00
Place	Narrow reach	1.00

Scaling constants can be assessed in the two illustrative brand-building situations using the swing weight procedure discussed in subsection 4.2.3, which determines scaling constants by comparing the worst conceivable consequence with hypothetical consequences that are best on one attribute and worst on all others. However, instead of the worst conceivable consequence, the best consequence could be more easily delineated, especially by considering Figure 4.26, which indicates the media requirements that characterise the most preferred levels of performance for achieving each brand objective. Hence, because it may be easier in these brand-building situations to think about the best conceivable consequence, the swing weight procedure will be reversed here. That is, the best conceivable consequence will be used as a benchmark and decreases in the manager’s satisfaction from swinging tool attributes from best to worst will be evaluated (see Clemen, 1996, p. 550). The relative decreases in satisfaction will then be used in exactly the same manner as the relative utility increases are employed in the original swing weight procedure, namely as a measure of the ratios between two scaling constants.

As discussed in subsection 4.2.3, the swing weight procedure first requires some hypothetical consequences to be created. The benchmark consequence, the one that would simultaneously maximise the achievement of all brand objectives pursued, is at the best level on every tool attribute. Other hypothetical consequences need to be created, which are worst on one attribute, best on all others. Let $\mathbf{x}^{\{i\}}$, for $i = 1, \ldots, 5$, be a hypothetical consequence worst on attribute X_i, best on all other tool attributes, so that

$$\mathbf{x}^{\{i\}} = \begin{cases} x_j = \text{worst}\, x_j, & \text{for}\, j = i \\ x_j = \text{best}\, x_j, & \text{for}\, j \neq i. \end{cases}$$

Of course, that which is deemed the best levels and the worst levels of performance depend on the brand-building situation. For example, for image communication programmes, hypothetical consequence $\mathbf{x}^{\{4\}}$ will be best on modality, message, execution and place performance, but worst on time performance. That is, this hypothetical consequence would offer visual and verbal modality, simple message, colour execution and broad reach, but would be capable of only low frequency. However, for issue communication programmes, the same hypothetical consequence $\mathbf{x}^{\{4\}}$ would also be capable of visual and verbal modality, complex message, colour execution and narrow reach, but would not be capable of low frequency.

Once the manager has delineated the hypothetical consequences $\mathbf{x}^{\{1\}}, \ldots, \mathbf{x}^{\{5\}}$, these consequences must be rank-ordered. Suppose that, after careful consideration, the manager thinks that the range of possible levels of performance on every tool attribute is equally important for building the corporate brand. That is, going from best to worst on each attribute is equally preferred to going from best to worst on any other attribute. Assume also that these judgements are valid for both image communication and issue communication. For image communication programmes in particular, fewer expositions is as undesirable as a narrow reach, and as undesirable as changing any other tool attribute from best to worst. For issue communication programmes, changing a low frequency for a high frequency is as undesirable as changing any other tool attribute from best to worst. This would imply that, for both image communication and issue communication,

$$\mathbf{x}^{\{1\}} \sim \mathbf{x}^{\{2\}} \sim \mathbf{x}^{\{3\}} \sim \mathbf{x}^{\{4\}} \sim \mathbf{x}^{\{5\}}.$$

The decrease in satisfaction of changing the level of an attribute from best to worst is thus the same for every tool attribute. These judgments seem the most reasonable for these decision situations because the manager is evaluating corporate communication tools that are qualitatively very dissimilar. Consequently, the range of levels of each attribute, as well as the repercussions on the manager's satisfaction, are considerable. As said before, scaling constants are determined by considering the range of the scales for single attributes. In the two decision situations evaluated, the range between the most preferred and the least preferred level of performance on every attribute is wide and the decrease in value experienced by swinging every tool attribute from best to worst is likely to be considerable. For example, considering the most common broad corporate communication tools, the range of capacity to convey a message is vast, ranging from capacity to convey a very simple message such as the corporate logotype alone (e.g. at an external signage), to a very complex message such as detailed financial information (e.g. at a corporate website). Similar wide scale ranges are common for any other tool attribute.

Because the five hypothetical consequences that are worst on one tool attribute, best on all others are preferentially equivalent, it is not necessary to rate them to determine scaling constants. Instead, scaling constants are such that

$$k_1 = k_2 = k_3 = k_4 = k_5 .$$

Therefore, for both image and issue communication programmes, let

$$k_i = 0.20; \qquad \text{for } i = 1,\ldots,5.$$

Scaling constants, attained by assessing trade-off weights based on the relative importance of different tool attributes to achieve the manager's brand objectives, are thus equally valued in the two illustrative brand-building situations. Incidentally, if there is no prior reason for preferring certain weights to others, it would be natural and error-minimising to assign equal-valued scaling constants to each attribute (Edwards and Barron, 1994). Having assessed the scaling constants, it is finally possible to determine the additive value function that represents the manager's preferences for consequences associated to the corporate communication tool selection decision, as shown below.

4.3.3.4. Assessing the value function

Once the five single-attribute value functions and their respective scaling constants have been determined, it is then possible to assign an overall preference score to each broad corporate communication tool. These preference scores indicate the manager's preferences for different means of corporate brand communication. For example, for image communication programmes, the overall preference score associated to corporate exhibitions is the sum of:

Modality	(Visual and verbal	$= 0.20 \times 1.00 = 0.20$)
Message	(Simple and complex	$= 0.20 \times 1.00 = 0.20$)
Execution	(Black and white and colour	$= 0.20 \times 1.00 = 0.20$)
Time	(Low frequency	$= 0.20 \times 0.00 = 0.00$)
Place	(Narrow reach	$= 0.20 \times 0.00 = 0.00$)

or a total preference score of 0.60. For image communication programmes, the overall preference scores for each broad corporate communication tool are shown in Table 4.13. For issue communication programmes, these preference scores are shown in Table 4.14.

Table 4.13. For image communication programmes, overall preference scores associated to broad corporate communication tools.

Tool	**Score**
Mass media advertising	1.00 [a]
Corporate design	0.60
Events	0.60
Exhibitions	0.60
Sponsorship	1.00
Websites	1.00

Note: [a] Only television advertising, excluding advertising on newspapers or magazines.

Table 4.14. For issue communication programmes, overall preference scores associated to broad corporate communication tools.

Tool	**Score**
Mass media advertising	1.00 [a]
Corporate design	0.60
Events	1.00 [b]
Exhibitions	1.00
Sponsorship	0.60
Websites	1.00

Note: [a] Only magazine advertising, excluding advertising on television or newspapers; [b] Only informational events, excluding brand events.

Once overall preference scores have been calculated, the manager should choose the corporate communication tools associated to the highest overall score. In this way, the manager will have found the communication tools that, in the two brand-building situations analysed, maximise the building of the corporate brand.

Note that the brand-building situations portrayed above — image communication and issue communication — are only two of the many possible situations where a manager may want to build the corporate brand. Assuming that

1. corporate brand awareness and corporate image are complementary brand objectives,
2. recognition and recall are substitutive brand objectives,
3. the four image subobjectives identified in subsection 4.3.2 (utilitarian overall attitude, expressive overall attitude, utilitarian overall image, expressive overall image) are substitutive for each other, and
4. the target audience is either small or large,

there are $2 \times 4 \times 2 = 16$ conceivable brand-building situations. These situations are briefly described in Table 4.15. For example, Situation 1 requires building corporate brand recognition and a positive overall attitude towards the company, among a small target audience, based on utilitarian benefits. Achieving these brand objectives allow the corporate brand to be built in this specific brand-building situation. Of course, two of these 16 hypothetical brand-building situations will look familiar: Situation 3 has already been discussed above referred to as 'issue communication', and Situation 10 is nothing more than 'image communication' (see subsection 4.3.1).

In each conceivable brand-building situation, the tool requirements will be different. In other words, depending on the brand objectives pursued, the manager will prefer different specific levels of single tool attributes. Considering the tool requirements summarised in Figure 4.26, it is then possible to assign preference scores to levels of single tool attributes and overall preference scores to consequences over the five tool attributes in each of the 16 hypothetical brand-building situations. Assuming equal-valued scaling constants regardless of the brand-building situation, the overall preference scores associated to communication tools in each conceivable brand-building situation are shown in Table 4.16, for a small target audience, and in Table 4.17, for a large target audience.

An overall preference score of 1 assigned to a broad corporate communication tool implies that the communication tool is a most preferred alternative for

Table 4.15. Description of sixteen hypothetical brand-building situations where the target audience is either small or large, awareness and image are complementary objectives, and the two awareness subobjectives are substitutive for each other, to the same extent as the four image subobjectives. See also subsection 4.3.2 for a discussion of these brand objectives.

Brand-building situations
1. Increase corporate brand recognition and enhance the overall attitude towards the company, consistent with utilitarian benefits, among a small target audience.
2. Increase corporate brand recognition and enhance the overall attitude towards the company, based on expressive benefits, among a small target audience.
3. Increase corporate brand recognition and enhance the overall corporate image, consistent with utilitarian benefits, among a small target audience (i.e. issue communication).
4. Increase corporate brand recognition and enhance the overall corporate image, based on expressive benefits, among a small target audience.
5. Increase corporate brand recall and enhance the overall attitude towards the company, consistent with utilitarian benefits, among a small target audience.
6. Increase corporate brand recall and enhance the overall attitude towards the company, based on expressive benefits, among a small target audience.
7. Increase corporate brand recall and enhance the overall corporate image, consistent with utilitarian benefits, among a small target audience.
8. Increase corporate brand recall and enhance the overall corporate image, based on expressive benefits, among a small target audience.
9. Increase corporate brand recognition and enhance the overall attitude towards the company, consistent with utilitarian benefits, among a large target audience.
10. Increase corporate brand recognition and enhance the overall attitude towards the company, based on expressive benefits, among a large target audience (i.e. image communication).
11. Increase corporate brand recognition and enhance the overall corporate image, consistent with utilitarian benefits, among a large target audience.
12. Increase corporate brand recognition and enhance the overall corporate image, based on expressive benefits, among a large target audience.
13. Increase corporate brand recall and enhance the overall attitude towards the company, consistent with utilitarian benefits, among a large target audience.
14. Increase corporate brand recall and enhance the overall attitude towards the company, based on expressive benefits, among a large target audience.
15. Increase corporate brand recall and enhance the overall corporate image, consistent with utilitarian benefits, among a large target audience.
16. Increase corporate brand recall and enhance the overall corporate image, based on expressive benefits, among a large target audience.

building the corporate brand in a given brand-building situation. That is, the communication tool has the best features for achieving the brand objectives that are pursued in that situation. Note that there could be more than one communication tool with the same degree of preference. For that reason, it is referred to as ‘a most preferred’ instead of ‘the most preferred’ communication tool.

An overall preference score of less than 1, however, implies that a corporate communication tool is not a most preferred communication tool for building the corporate brand. The closer an overall preference score to zero, the less apt a communication tool is for building the corporate brand. Less-preferred communication tools will have some kind of limitations as brand-building tools. For example, in Situation 1 (first column in Table 4.16), the following communication tools serve well as primary brand-building tools: mass media advertising in magazines and television, brand and informational events, exhibitions and websites. Each of these corporate communication tools is associated to an overall preference score of 1. On the other hand, mass media advertising in newspapers, corporate design and sponsorship show some limitations in this brand-building situation. An overall preference score smaller than 1 associated to these communication tools indicates their less-preferred status. Obviously, the overall preference scores of corporate communication tools for image communication (see Table 4.13) are the same as those in the second column in Table 4.17, and the preference scores of communication tools for issue communication (see Table 4.14) can be found in the third column in Table 4.16. Having assessed overall preference scores for major broad corporate communication tools in various brand-building situations, their implications for using corporate advertising and ad-like communication activities in corporate brand management can be discussed.

4.3.3.5. Discussion of the results

This illustrative application of the managerial decision-making model developed in this chapter has singled out the best broad corporate communication tool for building the corporate brand. Specifically, this illustrative model identified primary brand-building tools among mass media advertising, corporate design, events, exhibitions, sponsorship and websites in various brand-building situations. These primary brand-building tools are capable of better achieving all the brand objectives pursued in each specific selection decision situation on their own.

Table 4.16. Overall preference scores associated to major broad corporate communication tools — and to their communication tools or media types, if applicable — in different brand-building situations (see Table 4.15), when the target audience is small.

	Recognition				Recall			
	Attitude		Image		Attitude		Image	
	Utilitarian	Expressive	Utilitarian	Expressive	Utilitarian	Expressive	Utilitarian	Expressive
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Mass media advertising								
Magazines	1.00	0.80	1.00	1.00	0.80	0.80	0.80	0.80
Newspapers	0.80	0.80	0.80	0.80	1.00	0.80	1.00	0.80
Television	1.00	1.00	0.80	1.00	1.00	1.00	0.80	1.00
Corporate design	0.80	0.80	0.60	1.00	0.60	0.60	0.40	0.60
Events								
Brand	1.00	0.80	0.80	1.00	0.80	0.80	0.60	0.80
Informational	1.00	0.80	1.00	1.00	0.80	0.80	0.80	0.80
Exhibitions	1.00	0.80	1.00	1.00	0.80	0.80	0.80	0.80
Sponsorship	0.80	1.00	0.60	1.00	0.80	0.80	0.60	0.80
Websites	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table 4.17. Overall preference scores associated to major broad corporate communication tools — and to their communication tools or media types, if applicable — in different brand-building situations (see Table 4.15), when the target audience is large.

	Recognition				Recall			
	Attitude		Image		Attitude		Image	
	Utilitarian	Expressive	Utilitarian	Expressive	Utilitarian	Expressive	Utilitarian	Expressive
	(9)	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**
Mass media advertising								
Magazines	1.00	0.80	1.00	1.00	0.80	0.80	0.80	0.80
Newspapers	0.80	0.80	0.80	0.80	1.00	0.80	1.00	0.80
Television	1.00	1.00	0.80	1.00	1.00	1.00	0.80	0.80
Corporate design	0.60	0.60	0.40	0.80	0.40	0.40	0.20	0.40
Events								
Brand	0.80	0.60	0.60	0.80	0.60	0.60	0.40	0.60
Informational	0.80	0.60	0.80	0.80	0.60	0.60	0.60	0.60
Exhibitions	0.80	0.60	0.80	0.80	0.60	0.60	0.60	0.60
Sponsorship	0.80	1.00	0.60	1.00	0.80	0.80	0.60	0.80
Websites	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

The results of this illustrative model help managers decide on corporate communication programmes using corporate advertising and ad-like communication activities. Specifically, when managers target a large audience and attempt to increase corporate brand recognition and enhance the overall attitude towards the company, based on expressive benefits, any of the following broad corporate communication tools may serve as a primary medium: mass media advertising (when using television advertising), sponsorship and websites. The following communication tools have limitations: corporate mass media advertising (when using newspaper advertising due to lack of colour execution, or when using magazine advertising due to low frequency), as well as corporate design, corporate events and corporate exhibitions, because they are incapable of achieving high frequency or broad reach.

When the manager targets a small audience and aims to increase corporate brand recognition and enhance the overall corporate image, based on utilitarian benefits, the recommendations provided by the illustrative model are different. In this situation, any of the following broad corporate communication tools are jointly best as a primary medium: mass media advertising (when using magazine advertising), events (when using informational events), exhibitions and websites. The remaining communication tools have some limitations: mass media advertising (when using TV advertising due to lack of capacity to convey a complex message, or when using newspaper advertising due to black and white execution), events (when using brand events due to incapacity to convey a complex message), as well as corporate design and sponsorship, which are neither capable of verbal modality nor of conveying a complex message.

These results clearly show that the corporate communication tool selection is of major importance for building the corporate brand (see Esch, Hardiman and Mundt, 2004). Despite the simple problem structure (i.e. a rather generic brand objectives hierarchy and a reasonably abstract set of attributes) and the simple preferences structure (i.e. dichotomous attribute evaluations and equal-valued attribute weights), the model recommends, in different situations, different communication tools for building the corporate brand. In other words, communication tool selection relies heavily on the brand objectives pursued. Moreover, it is clear that a communication tool exists which maximises the building of the corporate brand, implying that any other communication tool may be suboptimal.

Additionally, the illustrative model confirms the significance of corporate advertising and ad-like communication activities for building the corporate brand. The illustrative model developed here allows a thorough analysis of the brand-building capacity of these communication activities in general, as well as an analysis of individual corporate communication tools. The model has assessed overall preference scores for major broad corporate communication tools in several brand-building situations (see Table 4.16 and Table 4.17). The implication of these preference scores for the tool selection decision are summarised in Table 4.18, which lists only those communication tools associated to an overall preference score of 1. That is, Table 4.18 includes only those communication tools that are most preferred for building the corporate brand in different brand-building situations. These tool recommendations help assess which individual communication tool serves as a primary medium for building the corporate brand in which circumstances and also help assess the overall significance of corporate advertising and ad-like communication activities as a brand-building tool.

As these results show, corporate advertising and ad-like communication activities is a form of communication always able to create the desired brand-knowledge structures in constituencies' minds. Indeed, regardless of the brand objectives pursued, there may always be a communication tool that can effectively build the corporate brand in that situation. However, neither public relations nor marketing communication is always able to serve as a primary brand-building tool. As argued in subsection 4.1.3, public relations may fail to attain high frequency, because the manager cannot directly control exposure repetition. Press coverage, for example, is difficult to obtain and even more difficult to sustain. Likewise, marketing communication does not serve as a primary brand-building tool in every situation because marketing communication is not capable of broad reach. That is, marketing communication is not likely to serve a broad, disparate audience; this form of communication targets customers exclusively. Hence, corporate advertising and ad-like communication activities serve as a primary brand-building tool in every brand-building situation, also in situations where high frequency or broad reach is needed. In other words, corporate advertising and ad-like communication activities are always sufficient in the brand-building effort.

In addition, corporate advertising and ad-like communication activities are sometimes the only form of communication capable of building the corporate brand. As argued above, public relations may not provide sufficient repetition; marketing communication may not reach a broad audience. Hence, at least in brand-building situations where high frequency and broad reach are both needed (e.g. image communication), corporate advertising and ad-like communication activities are the preferred form of communication for building the corporate brand. Therefore, because this form of communication is always sufficient and sometimes necessary for building the corporate brand, it is considered a prime brand-building tool, as previously argued in subsection 4.1.3.

Individual broad corporate communication tools can serve as a primary brand-building tool in different situations. **Corporate mass media advertising** can always be employed as a primary brand-building tool (see Bender and Farquhar, 1996; Esch, 1999, p. 340 ff.; Esch, Hardiman and Mundt, 2004). Even black-and-white adverts in newspapers can serve as primary stimuli for building the corporate brand, assuming that the target audience is expected to recall the company name and that it has utilitarian needs. Corporate mass media advertising can also be used as a primary tool with smaller audiences because the placement of adverts in local newspapers is always a possibility. Nevertheless, mass media advertising can always be substituted by other communication tools, which may be less expensive. This is particularly evident with corporate design, which does not require placement costs to be paid when displaying company-related information in company-owned properties.

Also **corporate websites** may be employed as a primary brand-building tool in all situations, regardless of target audience size or its involvement and needs. Websites are known, not without reason, as the most powerful medium for building brands (Aaker and Joachimsthaler, 2000, p. 237; Fantapié Altobelli, 2001; Lindström, 2001; Marken, 2001; Topalian, 2003).

Despite the cardinal importance of corporate mass media advertising and corporate websites for building the corporate brand, other major broad corporate communication tools can, under certain circumstances, also be employed as primary brand-building tools. **Corporate design**, contrary to the opinion of some authors (e.g. Esch, 2001, p. 612), is capable of building both awareness and image on its own. Corporate design may serve as a primary brand-building tool when a small or very localised target audience, which is highly involved with the company and has expressive needs, is expected to recognise the corporate brand. This is the case, for example, when a small company aims to gather support from the community or recruit a local workforce. In fact, corporate design should always be used, if not as a primary brand-building tool, then as a secondary medium, because some sort of visual identification is employed by all companies anyway.

Additionally, corporate design as a function is often responsible for branding, that is, the creation of the visual elements that are employed in all communication activities. Branding is fundamental to all brand objectives. Indeed, without effective use of corporate brand elements, brand objectives cannot be achieved

(Percy, Rossiter and Elliott, 2001, p. 53). Therefore, because corporate design is always employed and has repercussions on the achievement of all brand objectives, corporate design should be regarded as fundamental in the brand-building effort.

Corporate events can serve as a primary brand-building tool, assuming that a small target audience, which has either low involvement and utilitarian needs or high involvement and expressive needs is expected to recognise the company. Besides, informational events can also be employed as a primary brand-building tool, assuming that the target audience has high involvement and utilitarian needs.

Corporate exhibitions, too, can serve as a primary brand-building tool assuming that a small target audience is expected to recognise the corporate brand, and has either a high level of involvement with the company or a low level but utilitarian needs.

Finally, **corporate sponsorship** can serve as a primary brand-building tool when a target audience is expected to recognise the corporate brand and has expressive needs, regardless of target audience's level of involvement (see Cornwell, Roy and Steinard Ii, 2001). This is also true regardless of the target audience size because local sponsorship is always an option.

In summary, the illustrative application of the managerial decision-making model in the previous section shows its relevance for corporate communication tool selection. This model was applied here relatively effortlessly to a specific tool selection decision, which was easily identified, whose problem structure was constructed with reputed knowledge taken from marketing and consumer research literature, and whose preferences structure was assessed as equal-valued attribute weights and dichotomous preference evaluations on single attributes. Despite the simplicity of the illustrative model, the resulting media recommendations were similar to those provided by Rossiter and Percy (1997, p. 419 ff.), which proves the model's potential for assisting decision makers in tool selection. In fact, the illustrative model seems to outperform Rossiter and Percy's heuristics for media selection, as argued below.

4.3.4. Comparative critique of the illustrative model

This subsection discusses the relative merits of the illustrative model developed here.[72] The features of the illustrative model are compared with those of the set of heuristics provided by Rossiter and Percy (1997, p. 419 ff.; see also Percy, Rossiter and Elliott, 2001, p. 151 ff.), which hitherto seems to be the most advanced discussion in marketing literature for selecting qualitatively dissimilar communication tools and is, according to its authors, the only reference that adopts a 'true' brand-building approach to tool selection (Rossiter and Percy, 1997, p. 445).

The illustrative model effortlessly accommodates Rossiter and Percy's heuristics. Firstly, the model accommodates Rossiter and Percy's decision problem, which refers to selecting capable media alternatives. Secondly, the model suits Rossiter and Percy's implicit problem structure, which considers objectives such as brand awareness and brand attitude, and attributes such as visual and verbal capacity, colour content and processing time. Thirdly, the model accommodates Rossiter and Percy's dichotomous preference evaluations on single attributes and equal attribute weights. Lastly, with the same inputs provided (i.e. specific preference evaluations on single attributes, specific brand attribute weights, and specific tool attribute weights), the model replicates Rossiter and Percy's media recommendations. Indeed, the most preferred broad communication tools in every brand-building situation, as assessed in the illustrative model and summarised in Table 4.18, are analogous to the tool recommendations made by Rossiter and Percy, which are listed in Table 4.19.

The illustrative model, however, outperforms Rossiter and Percy's heuristics in many ways. Specifically, the illustrative model provides useful features that are not available in the Rossiter and Percy's heuristics, which are related to

1. its methodological approach,
2. its conceptual foundations,
3. its problem identification,
4. its problem structure,
5. its representation of a decision maker's preferences and
6. its adaptability.

72 Only the suitability of the illustrative model for selecting among qualitatively dissimilar communication tools is discussed here. For a discussion of the actual recommendations of this illustrative model for designing corporate communication programmes, see subsection 4.3.3. For a general discussion of the managerial decision-making model developed in this chapter, see subsection 4.2.4.

Table 4.18. Most preferred broad corporate communication tools in different brand-building situations, according to the illustrative model developed in section 4.3.

	Recognition				Recall			
	Attitude		Image		Attitude		Image	
	Utilitarian	**Expressive**	**Utilitarian**	**Expressive**	**Utilitarian**	**Expressive**	**Utilitarian**	**Expressive**
Small audience	Magazine advertising Television advertising Brand events Informational events Exhibitions Websites	Television advertising Sponsorship Websites	Magazine advertising Informational events Exhibitions Websites	Magazine advertising Television advertising Corporate design Brand events Informational events Exhibitions Sponsorship Websites	Newspaper advertising Television advertising Websites	Television advertising Websites	Newspaper advertising Websites	Television advertising Websites
Large audience	Magazine advertising Television advertising Websites	Television advertising Sponsorship Websites	Magazine advertising Websites	Magazine advertising Television advertising Sponsorship Websites	Newspaper advertising Television advertising Websites	Television advertising Websites	Newspaper advertising Websites	Television advertising Websites

Note: This table includes only those corporate communication tools associated in Table 4.16 and Table 4.17 to an overall preference score of 1.

Table 4.19. Recommended communication tools in different brand-building situations, according to Rossiter and Percy (1997, p. 424, 429).

Recognition				Recall			
Attitude		Image		Attitude		Image	
Utilitarian	**Expressive**	**Utilitarian**	**Expressive**	**Utilitarian**	**Expressive**	**Utilitarian**	**Expressive**
Magazine advertising	Television advertising	Magazine advertising	Magazine advertising	Newspaper advertising	Television advertising	Newspaper advertising	Television advertising
Television advertising	Sponsorship		Television advertising	Television advertising	Sponsorship [a]		Sponsorship [a]
Exterior signage (i.e. corporate design) [a]			Exterior signage (i.e. corporate design)	Sponsorship [a]			
Event marketing (i.e. brand events)			Event marketing (i.e. brand events)				
Sponsorship [a]			Sponsorship				

Note: The denominations used in this thesis are mentioned in parentheses if they differ from those used by Rossiter and Percy. [a] Other than in this thesis, Rossiter and Percy (1997, p. 426) assume that corporate design and sponsorship are communication tools capable of verbal modality.

Firstly, the illustrative model follows a proven method, known as decision analysis. In contrast, Rossiter and Percy do not follow a model-building approach, but provide ad hoc, heuristic simplifications for making tool selection decisions. By being better-formalised, the model presented here is likely to result in sound decision-making (see Keeney and Raiffa, 1976, p. 16 f.).

Secondly, the model's behavioural basis is well-structured, taken from the behavioural framework developed in chapter 3. Rossiter and Percy, however, do not always justify the basis for structuring brand objectives, identifying tool attributes, evaluating specific levels of performance and determining brand and tool attribute weights. By being behaviourally better grounded, the illustrative model is likely to result in well-reasoned decisions.

Thirdly, the illustrative model assists the manager to design suitable corporate communication programmes that use corporate advertising and ad-like communication activities. Specifically, the model explicitly aims to single out the best communication tool among all available alternatives. Rossiter and Percy's heuristics, on the other hand, are only useful for narrowing down the communication tools that have the ability to convey the creative content in a way that meets the brand objectives (Rossiter and Percy, 1997, p. 419). Hence, capacity, not suitability, is the main criterion of these heuristics for selecting communication tools. For selecting the best alternative, Rossiter and Percy (1997, p. 428) suggest that it is then necessary to consider reach separately.

Moreover, the illustrative model allows for a varied range of different communication tools to be considered, including broad communication tools, but also tool combinations (e.g. mass media advertising vs. sponsorship and websites) and even whole communication programmes. The model is even useful for selecting communication vehicles and communication schedules, whereas Rossiter and Percy's heuristics mostly serve to examine communication tools or media types (Rossiter and Percy, 1997, p. 419). Therefore, by allowing the decision maker to address the tool selection decision with one single model, the model allows for more transparent decision-making.

Fourthly, the illustrative model fully articulates the structure of the tool selection decision. Indeed, the brand objectives are explicitly structured in a hierarchy. Rossiter and Percy (1997, p. 420), however, only mention that 'the two types of brand awareness . . . and the four types of brand attitude strategy . . . largely dictate media selection', without recognising the hierarchical nature of these objectives and without articulating them meaningfully.

Moreover, the illustrative model addresses all relevant aspects of the decision situation simultaneously, including target audience size. The model considers this and other factors transparently. In contrast, although recognising that tool selection depends fundamentally on target audience size, Rossiter and Percy do not include reach in their heuristics. Their set of attributes is thus incomplete. Interestingly, Rossiter and Percy consider reach either after or before tool selection. For marketing communication programmes, reach is considered only once the communication tools have been narrowed down (Rossiter and Percy, 1997, p. 428). For corporate communication programmes, target audience size is considered before tool selection and different tool recommendations are made for small audiences and for medium to large audiences (Rossiter and Percy, 1997, p. 438 f.). In short, by fully structuring brand objectives and identifying a complete set of tool attributes, the model structures the qualitative anatomy of the tool selection decision better.

Fifthly, the illustrative model allows the scaling constants, the single-attribute value functions, and the importance of single brand objectives to be determined in a subtle way. The illustrative model allows for subtle determination of weights associated to lower-level brand objectives, whereas Rossiter and Percy implicitly consider values of 0.00, 0.50 or 1.00 for conditional weights and do not allow other weights within brand objectives subsets to be apportioned.

Consequently, in Rossiter and Percy's heuristics, brand objectives subsets are either complementary or substitutive; more complex relationships among brand objectives cannot be modelled with their heuristics. In other words, Rossiter and Percy consider fixed ratios among brand objectives weights. In particular, awareness and image are always complementary in their heuristics (i.e. they are always equally important brand objectives), whereas lowest-level brand objectives (e.g. recognition and recall) are always substitutive, that is, they are always mutually exclusive (Rossiter and Percy, 1997, p. 212 f.). These heuristics do not allow for other relative weights. Nevertheless, awareness and image are not equally important in some brand-building situations. For example, awareness is more important than image early in the product cycle, in the introduction phase, when amount of prior brand knowledge is low (Park, Jaworski and MacInnis, 1986). Later, corporate image may play a greater role as a brand objective. Moreover, alternative lower-level brand objectives may be simultaneously pursued. For example, in certain circumstances, recognition and recall are both brand objectives (Rossiter and Percy, 1997, p. 213), and building a positive image based on both utilitarian *and* expressive benefits is a brand objective when a target audience is highly involved with the product and also has expressive needs, as in the case of consumers buying cars or booking luxury vacations (Rossiter and Percy, 1997, p. 255 f.). In fact, building utilitarian and expressive benefits simultaneously is argued to be the right communication strategy for a corporate brand in order to appeal to its various and disparate constituencies effectively (see Esch, Hardiman and Mundt, 2004, p. 232). Despite recognising these situations, Rossiter and Percy do not transparently address them in their heuristics. A subtle weighting of brand objectives with these heuristics is not possible.

The illustrative model also allows for subtle preference evaluations on single tool attributes, whereas Rossiter and Percy only implicitly consider dichotomous preference assessments (i.e. best or worst) on single attributes, not allowing for more detailed evaluations. Subtle preference assessments on single tool attributes are easily made with the model proposed here, which is better shown by way of example. Returning to the illustrative situation where the decision maker wishes to build the corporate brand using issue communication programmes, suppose that an additional corporate communication tool becomes available: internet advertising. The internet is indeed an advertising medium, as much as broadcast or print (Belch and Belch, 2004, p. 496).[73] Internet advertising is still playing only a minor role in the promotion mix of most companies, accounting for approximately 3.7 percent of total US advertising spending in 2004 (IAB, 2005b). However, its use as a promotional medium is growing fast. Spending on internet advertising in the US was estimated at \$9.6 billion in 2004, with an increase of nearly 33 percent over 2003 (IAB, 2005b). The effectiveness of this medium is also increasing: click-through rates, usually less than 1 percent, have surged in recent years (Belch and Belch, 2004, p. 496).

Internet advertising as a communication tool is capable of visual and verbal modality, black and white and colour execution, low and high frequency, narrow and broad reach, and is capable of conveying a relatively complex message. This advertising medium is thus not capable of portraying a complex message. Indeed, standard rectangular internet adverts permit a more complex message to be conveyed than corporate design or sponsorship, but a less complex message than, say, print advertising. Banner ads, perhaps the most ubiquitous form of internet advertising today, have usually the standard size of 728 × 90 pixels, according to the guidelines recommended by the Interactive Advertising Bureau (2005c), the

73 Corporate mass media advertising on the internet is different than corporate websites. The former refers to company promotion on third-party web pages, the latter consists of self-promotion on the company-owned website. Internet adverts are placed on third-party websites and are usually linked to the company website (Belch and Belch, 2004, p. 486). See subsection 2.2.3 for a closer characterisation of corporate websites.

association of largest online advertising companies, which includes members such as AOL, MSN, and Yahoo.[74] This small display surface does not allow for a complex message but a relatively complex one.

The decision maker would now like to assess his preferences for the additional corporate communication tool for issue communication programmes. That is, he must assign preference scores to the different levels of performance of internet advertising on single attributes. These preference scores are the same as those shown in Table 4.11. That is, visual and verbal modality, colour execution, low frequency and broad reach are the most preferred levels of performance for issue communication. Moreover, referring to Table 4.11, the decision maker thinks that a complex message and a simple message are the most preferred and the least preferred level of message performance, respectively. Additionally, the decision maker needs to determine a preference score for the intermediate level of message complexity (i.e. a relatively complex message), which can be assessed using the ratio comparison procedure described in subsection 4.2.3. Assume that after careful thought, the decision maker concludes that a 'relatively complex' message is 3/4 times as good as a complex message, and that a simple message is only 1/4 times as good as a complex one. That is, the decision maker thinks that the decrease in satisfaction of going from 'complex' to 'relatively complex' is half as undesirable as going from 'relatively complex' to 'simple'. Scaling these assessments so that they range from 0 for the worst performance level to 1 for the best performance level implies that the following preference scores are associated to specific levels of message performance:

Simple	0.00
Relatively complex	0.67
Complex	1.00.

Considering these preference scores for different levels of message performance — and the scores shown in Table 4.11 for specific levels of performance in terms of modality, execution, time and place —, the overall preference score associated to internet advertising in this brand-building situation can be calculated:

$$0.20(1.00) + 0.20(0.67) + 0.20(1.00) + 0.20(1.00) + 0.20(1.00) = 0.93 .$$

74 Banner ads accounted for almost one-fifth of total internet advertising revenues in the US during 2004, second only to search advertising (IAB, 2005b). Banner ads are small signs on web pages, advertising an offer or company that can be reached by clicking on the banner (Kotler, 2000, p. 565). These signs take a variety of forms: banners, side panels, skyscrapers, or verticals (Belch and Belch, 2004, p. 496). The standard rectangular ads found at the top most webpages are still the most common.

For issue communication programmes, the overall preference scores associated to corporate communication tools are now shown in Table 4.20. Clearly, the internet is better than newspapers or television and almost as good as magazines for issue advertising. Advertising on the internet is also more effective than corporate design, brand events and corporate sponsorship as a brand-building tool in this situation, because the message conveyed by these other communication tools is often limited to the corporate logotype. However, online advertising is not as good as informational events, corporate exhibitions or corporate websites for issue communication owing to the greater capacity of these other communication tools to convey a complex message. Therefore, advertising on the internet seems quite appropriate for issue communication programmes. Indeed, Belch and Belch (2004, p. 467) suggest that internet marketing is useful for building brand recognition and for triggering behavioural responses from the target audience, precisely the objectives pursued with issue communication. Remember that issue communication programmes seek to discourage restrictive lawmaking or avoid the company's products being boycotted (see subsection 4.3.2), two very tangible behavioural responses.

Table 4.20. For issue communication programmes, overall preference scores associated to broad corporate communication tools, including internet advertising.

Tool	Score
Mass media advertising	
Magazines	1.00
Newspapers	0.80
Television	0.80
Internet	**0.93**
Corporate design	0.60
Events	
Brand	0.80
Informational	1.00
Exhibitions	1.00
Sponsorship	0.60
Websites	1.00

The assessment of a decision maker's preferences for an additional communication tool confirms that subtle preference assessments are easily made with the illustrative model proposed here. A more preferred level of performance must simply be assigned a higher preference score than less preferred levels, attentive to the true increase in satisfaction that a particular level of performance gives related to the other. In this way, it is possible to assess preferences for every conceivable level of performance, so that the illustrative model makes subtle preference evaluations possible.

Besides allowing subtle preferential assessments over single attributes, the illustrative model also permits the subtle determination of scaling constants. Rossiter and Percy, on the other hand, implicitly give all tool attributes in their heuristics equal weights, despite recognising that some attributes may be more or less important in some brand-building situations. For example, Rossiter and Percy (1997, p. 217) argue that 'for increasing an ad's capacity to produce brand recognition and brand recall, encoding specificity (i.e. modality: note added) is the most important principle.' Contemplating this and similar considerations is difficult, if not impossible, with their heuristics.

In contrast, the proposed illustrative model offers a transparent and intuitive way for subtly evaluating scaling constants. Returning to the illustrative situation, for issue communication programmes, suppose that the decision maker has already chosen corporate mass media advertising as his primary brand-building tool — mass media advertising can *always* serve as a primary brand-building tool, as argued in subsection 4.3.3 — and now wants to select different advertising *media*. Suppose that each advertising medium can be evaluated in terms of five tool attributes. Levels of performance of each advertising medium, taken from Table 4.11 and the surrounding discussion, are shown in Table 4.21. Note that internet advertising, an additional advertising medium briefly evaluated above, is also included among the corporate communication tools.

Table 4.21. Levels of performance of corporate advertising media in terms of verbal and visual modality, message complexity, colour execution, frequency and reach.

Medium	Modality	Message	Execution	Time	Place
Magazine	Visual and verbal	Simple and complex	Brand and white and colour	Low frequency	Narrow and broad place
Newspaper	Visual and verbal	Simple and complex	Black and white	Low and high frequency	Narrow and broad place
Television	Visual and verbal	Simple	Brand and white and colour	Low and high frequency	Narrow and broad place
Internet	Visual and verbal	Simple and relatively complex	Brand and white and colour	Low and high frequency	Narrow and broad place

Assume that single-attribute value functions have been determined. Preference scores for specific levels of performance on single tool attributes are the same as those shown in Table 4.11. Assume also that a simple message performance gets 0.00, a complex message performance gets 1.00 and, as discussed above, a relatively complex message performance gets a preference score of 0.67.

The decision maker must now assess five parameters for scaling the single-attribute value functions. Given that tool attributes are discrete evaluators, scaling constants can be better determined employing the swing weight procedure discussed in subsection 4.2.3. According to this weighting procedure, the decision maker must first rank hypothetical consequences that are at the worst level on one tool attribute and at the best level on all other attributes.[75] Suppose that after careful thought, the decision maker concludes that swinging message performance from best to worst results in the largest decrease in satisfaction and that changing a black and white execution for a colour one ranks second. Suppose also that his satisfaction does not decrease by individually swinging other tool attributes. These indifference judgements are a reasonable assumption because the least preferred and the most preferred levels of performance in terms of these other attributes are about the same. That is, changing modality, time or place performance from best to worst represents no loss in value for the decision maker. Modality performance of different advertising media is very similar in this case, with all communication tools being equally good at conveying verbal and visual contents. Similarly, place performance of advertising media is about the same, since all communication tools considered can adequately reach a narrow audience. And, although time performance as measured by frequency differs among the advertising media evaluated, all possible levels of time performance are equally preferred because a low frequency is sufficient in this brand-building situation. That is, a high frequency is not more preferred than a low frequency, because few repetitions are adequate for issue communication and all communication tools evaluated are equally capable of reaching low frequency. Hence, the advertising media evaluated are equally good in terms of modality, time and place performance for issue communication programmes, but differ in terms of message and execution performance. These subjective judgments imply that

$$k_2 > k_3 > k_1 = k_4 = k_5 .$$

75 Remember that the swing weight procedure has been reversed in the illustrative model. As argued, it might be easier for the decision maker to consider the best conceivable consequence as a benchmark and then to assess satisfaction decreases by changing a best level for a worst level of performance on a tool attribute. See subsection 4.2.3 for a thorough description of this weight assessment procedure.

Once the decision maker has ranked the hypothetical consequences, he must then rate them. Considering the decrease in satisfaction that results from swinging message performance as 100 percent, suppose that the decision maker thinks that changing execution performance from best to worst is worth 25 percent of the dissatisfaction he gets by changing a complex message performance for a simple one. That is, the decrease in satisfaction from changing message performance from complex to simple is four times as undesirable as the dissatisfaction the decision maker experiences from changing execution performance from colour to black and white. Obviously, the decrease in satisfaction of swinging modality, time and place performance one at a time is nonexistent. Remember that as best and worst levels of performance on a single attribute become closer and closer, the value of the respective scaling constant approaches zero. This all implies that

$$0.25k_2 = k_3,$$
$$k_1 = k_4 = k_5 = 0.00.$$

From these proportional relationships and the fact that scaling constants in an additive value model add up to 1, the decision maker concludes that

$$k_1 = 0.00, \quad k_2 = 0.80, \quad k_3 = 0.20, \quad k_4 = 0.00, \quad \text{and} \quad k_5 = 0.00\ .$$

Clearly, message performance and execution performance are the most important considerations for choosing advertising media for issue communication, whereas other tool attributes are not relevant in this brand-building situation. Hence, modality, time and place performance would have little influence on the final choice of an advertising medium for issue communication. Again, remember that the values of these scaling constants do not lead to the conclusion that message performance is more important than execution performance, or that modality, frequency or reach are unimportant to the decision maker in this brand-building situation. As argued in subsection 4.2.3, scaling constant k_i, for $i = 1, \ldots, 5$, does not indicate the relative importance of attribute X_i but rather the increase in satisfaction a decision maker experiences from changing the worst level for the best level of X_i. If the most desirable and the least desirable levels of attribute X_i are close together, then the value of scaling constant k_i is small. Still attribute X_i is highly important for selecting advertising media.[76]

After assessing single-attribute utility functions and their scaling constants, it is then possible to calculate an overall preference score for each advertising me-

76 See subsection 4.2.3 for a detailed interpretation of scaling constants.

dium. For example, the overall preference score associated to internet advertising is

$$0.00(1.00) + 0.80(0.67) + 0.20(1.00) + 0.00(1.00) + 0.00(1.00) = 0.74 .$$

For issue communication programmes, the overall preference scores associated to advertising media are shown in Table 4.22. Evidently, magazines are the best advertising medium for issue advertising because they effectively build corporate brand recognition and a positive corporate image based on utilitarian benefits. The remaining advertising media are ranked in the following order: newspaper, internet and television. The absence of colour in newspaper advertising does not impair the enhancement of the utilitarian aspects of a corporate image, yet the black and white execution hinders the corporate brand recognition objective. For this reason, black-and-white adverts in newspapers are less preferred for issue communication programmes than full-colour magazine adverts. Internet advertising has also its limitations as a primary medium for issue communication because online advertising cannot convey a complex message. Lastly, television advertising is the least effective medium for issue advertising due to its incapacity of conveying a complex message. In accordance with these results, Schumman, Hathcote, and West (1991) suggest that printed media may have an advantage over broadcast media for corporate promotion, especially pertaining to issue communication. Similarly, results by Heath and Douglas (1986) suggest that issue communication would probably be more effective when used in printed media because television tends to inhibit the processing of information.

Table 4.22. For issue communication programmes, overall preference scores associated to corporate advertising media.

Medium	Score
Magazine	1.00
Newspaper	0.80
Television	0.20
Internet	0.74

Interestingly, the media recommendations that can be made from the results in Table 4.22 are the same as those based on the results in Table 4.16. However, the overall preference scores associated to various advertising media are not the same in both tables. Evidently, changing the set of communication tools considered will necessarily change the range of the scales for single attributes and this will necessarily change the values of the respective scaling constants. And, because of the consistency conditions, other scaling constants will also change, as well as the overall preference scores associated to the communication tools.

The illustrative assessment of a decision maker's preferences for advertising media demonstrates that subtle weight assessments can easily be made with the illustrative model proposed here. More satisfaction of progressing from the worst level to the best level of performance on a tool attribute is simply represented by a higher value of the respective scaling constant, relative to the values of the other scaling constants. Therefore, determining subtle scaling constants is relatively straightforward with the illustrative model proposed here. And, because the model also allows for subtle preference evaluations on single tool attributes and subtle judgments about weights of brand objectives, the model better represents a decision maker's preferences related to the tool selection decision, which, in turn, leads to more precise and unambiguous tool recommendations.

The sixth and final useful feature of the proposed illustrative model which is not available in Rossiter and Percy's heuristics relates to its adaptability. The model's structure of the tool selection decision is flexible, both in terms of its objectives and its attributes. It allows adaptations in the objectives hierarchy, that is, brand objectives can be added or eliminated, whereas Rossiter and Percy's heuristics consider a fixed set of brand objectives. Adapting their objectives set is far from apparent. Nevertheless, other brand objectives may be necessary in the analysis. For example, van Riel (1995, p. 84 ff.) distinguishes three levels of corporate image, based on an image's degree of elaboration: image as a complex set of associations, image as an attitude and image as a general impression.

Additionally, the model allows for adaptations of the attribute set, whereas the attribute set is fixed in Rossiter and Percy's heuristics. And, despite recognising that the attribute set is the least a manager should consider when selecting communication tools (Percy, Rossiter and Elliott, 2001, p. 60), extending this set is far from apparent. However, other attributes can be fundamental for evaluating communication tools. For example, interactive modality is believed to profoundly affect communication effectiveness (Deighton et al., 1996; Liu and Shrum, 2002) and thereby may need to be incorporated into the analysis. The model developed here can be easily adapted and extended. More tool attributes can be considered in the illustrative model because levels of performance can either be single levels of performance or vectors of performance levels (see Keeney and Raiffa, 1976, p. 298). In other words, the model is still valid when tool attributes are vector attributes. In the last example, single-attribute value functions would turn into multiattribute value functions and it would be necessary to verify independence assumptions of these component functions to break them down, as discussed in subsection 4.2.3.

In short, the illustrative model developed here has many innovative features, which offer various benefits in comparison to the heuristics presented by Rossiter and Percy (1997; Percy, Rossiter and Elliott, 2001). As a result, the decision-making model developed here thus far seems the best approach for selecting not only major means of corporate brand communication, but also all kinds of qualitatively dissimilar communication tools.

Chapter 5: Summary and Conclusions

This chapter summarises the findings of the research, discusses their managerial implications, assesses their contributions to theory relating to corporate brand management and corporate communication and suggests future research directions on using corporate advertising and ad-like communication activities in corporate brand management.

5.1. Summary of the Thesis

Much attention has been devoted recently to corporate brands. Companies go to great lengths to enhance their image in the minds of consumers, investors, employees, community members and any other relevant constituencies. Companies are increasingly targeting these constituencies using corporate advertising and a whole array of communication activities, including events, sponsorships and exhibitions, rather than relying on the press and other third parties (e.g. financial analysts and governmental officials) to inform and persuade. Despite the important role of corporate advertising and ad-like communication activities in building a corporate brand, there has been a dearth of research on how corporate communication works. Worse still, extant research fails to explain how corporate communication programmes for building corporate brands should be designed. Managers need a more thorough understanding of how to select among means of enhancing the image of a company and increasing its awareness. These means of corporate brand communication extend well beyond conventional advertising media and include events, sponsoring activities, trade shows, websites, and many more. These ad-like means of corporate brand communication have been regarded in this thesis as if they were additional communication tools, like the traditional advertising media. The purpose of this research has been to provide guidance for using corporate communication in corporate brand management by developing a decision-making model to assist managers in corporate communication tool selection.

In this thesis, a corporate brand has been defined as a name, term, sign, symbol or design or a combination of these elements intended to identify and differentiate the company behind the entire product offering in the minds of a company's constituencies. Today, companies attempt to identify and differentiate their corporate brands due to internal changes, as well as increased competition for consumers, but also increased competition in supply markets, which seems to be better faced by companies with strong corporate brands. A useful way in which companies identify and differentiate their corporate brands is by using corporate advertising and ad-like communication activities, characterised by the goal-oriented transmission of information identified with the corporate brand, or not any one specific product brand, aimed at eliciting responses from a company's main constituencies and addressed directly towards them. This form of communication directly targets a company's main constituencies (i.e. consumers, investors, employees and community members), without mediation of the press or any other third parties. The relationship between the company and its ultimate constituencies is thus immediate and the communication process is single-staged. More importantly, the message that constituencies receive is controlled by the company, which makes this form of communication a prime tool for shaping beliefs and evaluations of the company. Corporate communication stimuli from a company to its ultimate constituencies is indeed an important form of corporate promotion, which is employed by an increasing number of companies and accounts for a rising share of the corporate communication budget.

How corporate advertising and ad-like communication activities create constituencies' psychological and behavioural responses, that is, how it works, has been explained using behavioural science theory for developing a conceptual S-O-R framework. The framework, which focuses on long-lasting memory effects from communication, explains how communication works as follows: corporate communication stimuli (e.g. a corporate advert) affect knowledge structures in constituencies' minds, that is, corporate brand knowledge, understood as a corporate brand node in memory linked to a variety of associations, and operationalised in terms of corporate brand awareness and corporate image. Resulting corporate brand knowledge from communication is moderated by both characteristics of the targeted constituency and characteristics of the communication stimulus itself. This thesis specifically identified and reviewed two constituency-related moderators — a constituency's prior corporate brand knowledge and processing goals — as well as five stimulus-related moderators — modality, message, execution, time and place — that demonstrably and systematically enhance or lessen corporate communication effects. In turn, corporate brand knowledge may favourably affect constituencies' behavioural responses to a firm as considerable research confirms. Indeed, a growing number of empirical studies have demonstrated positive behavioural responses due to positive corporate brand knowledge in constituencies' minds, including stimulation of consumers' buying intentions, better relationships with suppliers and distributors, acceptation and legitimacy in society, increased employee motivation and greater support from investors. Compared with previously developed models, the proposed framework seems more appropriate for explaining how corporate communication works because it applies to all persuasive communication stimuli from the company and fully considers moderators of corporate communication effects.

Corporate communication effects were then advanced from the viewpoint of a manager, keen to make sound decisions for developing corporate communication programmes that build the corporate brand. Corporate brand management was defined as the process of planning and executing activities that build a strong corporate brand. A corporate brand is said to be strong if constituencies hold brand-knowledge structures in memory that produce a positive response to stimuli identified with the corporate brand. From among the many activities that build the corporate brand, corporate advertising and ad-like communication activities are considered the prime one because it is an easily manageable antecedent of corporate brand knowledge and can effectively reach any company constituency with all kinds of messages in a suitable and appealing way. Using this form of corporate communication in the management of the corporate brand, managers are confronted with three major decisions, tool selection being one of them.

Tool selection, the last of these major decisions, consists of selecting the single best corporate communication tool among all available means of information delivery. Corporate communication tools included traditional advertising media as well as ad-like means of corporate brand communication, which were thought of as communication tools, like advertising media. For selecting the best corporate communication tool, this thesis applied decision analysis theory to the development of a managerial decision-making model. The model was built on the basis of the proposed behavioural framework: the model's objectives relate to brand-knowledge structures stored in constituencies' minds and the model's multiple attributes, upon which achievement of brand objectives is measured, relate to stimulus-related moderators. Specifically, the model evaluated communication tools in terms of achievement of brand objectives, such as increasing awareness and enhancing image, which were indirectly measured in terms of modality, message, execution, time and place performance. The model then singled out the 'best' alternative using a non-optimising decision-making method. For making tool selection decisions under conditions of certainty, a multiattribute heuristic technique was proposed that represents a decision maker's preferences for corporate communication tools using an additive value function. Under conditions of uncertainty, a decision maker's preferences for lotteries over consequences of the tool selection decision were represented using a multiplicative utility function. Besides capturing the uncertainty of the tool selection decision, this multiattribute utility function served to model some interaction among tool attributes, where levels of one attribute affect the values of other attributes. A critical examination of the proposed model showed its suitability and relevance for selecting means of corporate brand communication.

The model developed was illustratively applied to selecting major broad corporate communication tools — that is, mass media advertising, corporate design, events, exhibitions, sponsorship and websites. These communication tools were evaluated in terms of the overall objective of building the corporate brand, which was operationalised as increasing corporate brand awareness and enhancing corporate image. These lower-level objectives were further broken down: increasing awareness required increasing recognition and recall; enhancing image required enhancing overall attitude towards the company and overall corporate image, as well as linking utilitarian and expressive benefits to the corporate brand node in constituencies' minds. The level of achievement of these brand objectives was measured according to levels of performance of communication tools in terms of visual and verbal modality, message complexity, colour execution, frequency and reach. The relationships between tool attributes and brand objectives were generated on the basis of research findings taken from marketing and consumer research literature and formalised in a form similar to testable propositions. The model's multiattribute technique for the certainty case was then applied, structuring the decision maker's preferences in the form of equal-valued attribute weights and dichotomic preference evaluations on single attributes. The illustrative model demonstrated the applicability of the proposed decision-making method. In fact, the illustrative model appeared to be superior to previous approaches for selecting qualitatively dissimilar communication tools because it follows a proven method, rests on a strong behavioural basis, allows for more transparent decision-making, structures the tool selection decision better, reflects manager's preferences better and can easily be adapted and extended.

This research contributes to theory and practice for using corporate communication in corporate brand management in a number of ways. For practitioners, it provides a proven process and a well-reasoned model for designing corporate communication programmes, particularly for making tool selection decisions. For academic researchers, the findings of this research supplement previous academic work on corporate brand management and corporate communication by confirming the importance of the tool selection decision for building a corporate brand and by recognising the relevance of a brand-building approach to selecting means of corporate brand communication. This research concluded by suggesting future research directions where managerial guidance is needed, but where no academic findings are available.

5.2. Implications for Practice

Tool selection should be seen as an important decision that managers face when using corporate advertising and ad-like communication activities for building a corporate brand.

This research guides the management of a corporate brand using corporate communication. Specifically, this research provides a structure for managers designing corporate communication programmes by proposing a process and a model for selecting corporate communication tool selection. The process, broadly based on the decision analysis's paradigm and process proposed by Keeney and Raiffa (1976, p. 5 ff.), consists of identifying the tool selection decision, modelling its structure and modelling the decision maker's preferences for communication tools. This research also offers a flexible managerial decision-making model. The model aims to help the decision maker make better decisions regarding communication tool selection (see Clemen, 1996, p. 473). It helps him construct a model of the decision situation. It also helps the decision maker construct a mathematical model or representation of his preferences. This representation is then included in the overall decision-making model and used to analyse the decision situation at hand. A perfect representation of the decision maker's preferences is not necessary; the representation of preferences should be good enough to understand and analyse the current decision situation. The model is normative. At a minimum, the model helps managers learn more about the tool selection decision so that they can make decisions as they normally would, but in a more informed way (see Olson, 1996, p. 6). At most, the model establishes how rational individuals should choose between competing corporate communication tools.

Managers facing corporate communication tool selection must consider four key aspects. Firstly, once a target audience and a creative content have been selected, managers must select the single best corporate communication tool from all available means of information delivery. The tool selection decision is made with the aim of building positive brand-knowledge structures in target audience's minds. This decision is made among corporate communication tools, that is, all those identified with the corporate brand — not only mass media, but also company-owned properties, events, exhibitions, sponsored properties, websites and any other medium, or combination of these, available to the company for carrying the creative content to the target audience. Hence, managers must have a broad view of corporate communication tools and evaluate the increasing number of options available — from corporate campuses to blogs — for building the corporate brand.

Secondly, managers must structure objectives that will guide the building of the corporate brand and must identify comprehensive and measurable ways for assessing their achievement, based on behavioural science theory. Hence, managers must consider how corporate communication works for specifying brand objectives and identifying tool attributes. Brand objectives relate to the desired corporate brand knowledge in target audience's minds, its dimensions and their components. These brand objectives are to be structured in a hierarchy, which operationalises the vague overall brand objective of 'building the corporate brand' in lower-level brand objectives. These lower-level objectives can be thought of as a means to the overall brand-building objective. Specifically, managers must aim to increase corporate brand awareness and enhance corporate image, and to increase alternative types of awareness performance and create different corporate associations, depending on the target audience and creative content selected.

Moreover, managers must specify attribute scales for measuring the degree to which communication tools meet the brand objectives. Tool attributes are also identified on the basis of how corporate communication works. They relate to the stimulus-related moderators, that is, stimulus characteristics that moderate corporate communication effects. Specifically, managers must measure levels of performance of corporate communication tools in terms of modality, message, execution, time and place.

Thirdly, managers must distinguish the relationships between tool attributes and brand objectives. They must first identify these relationships on the basis of research findings taken mostly from marketing and consumer research literature on communication and persuasion. Taking into account the relationships identified, managers must then generate propositions that link specific levels of performance on single tool attributes to specific levels of achievement of brand objectives. Although speculative, these propositions must provide insight into the consequences associated to corporate communication tools.

Fourthly, managers must evaluate their preferences for consequences associated to corporate communication tools. These preferences are translated into an overall preference score by assessing preferences on single tool attributes and by assessing tool attribute weights. More specifically, managers' preferences for specific levels of performance in terms of single tool attributes are translated into cardinal values. Managers' convictions about the relative importance of tool attributes are then translated into scaling constants which are combined into an overall preference score. Managers must then choose the communication tool associated to the maximum overall preference score. This alternative is expected to maximise the building of the corporate brand. Based on the behavioural framework presented here, this alternative is expected to be superior to others in its ability to increase corporate brand awareness and create strong, favourable and unique corporate associations among members of the target audience.

5.3. Contributions to Theory

This thesis advances the theory of using corporate communication in corporate brand management by synthesising the previously separated literature on corporate brands and the literature on corporate communication. The literature is synthesised in the form of a conceptual framework and summarised in fourteen conclusions. The framework integrates constituency's psychological and behavioural responses to corporate communication, as well as the potential constituency-related and stimulus-related factors which moderate these corporate communication effects. Although many of these ideas are familiar, the value of the framework resides in integrating them in a way useful for making managerial decisions.

This thesis further advances the theory of using corporate advertising and ad-like communication activities in corporate brand management by developing a better decision-making model for corporate communication tool selection. The model originates from an interdisciplinary approach to the tool selection decision, taking notions from the fields of brand management, corporate communication, decision analysis and consumer behaviour. Brand management theory assists in the identification of the tool selection decision, which is analysed from a corporate brand-building perspective. Corporate communication and PR theory serve to identify available corporate communication tools. Decision analysis theory provides a useful methodology for constructing the model. Finally, behavioural science theory helps structure the tool selection decision.

This thesis advances academic research in four major areas. Firstly, it identifies the tool selection decision as selecting the single best brand-building corporate communication tools from all available means of information delivery. As such, the decision problem follows a branding approach to selecting corporate communication stimuli, an issue seldom considered in corporate brand management or corporate communication literature. The decision problem is consistent with the rise of corporate brands and reflects the increased priority put on corporate brand management, a viewpoint rarely previously considered in media selection. The decision problem is also identified considering the growing importance of corporate communication activities under a company's direct influence and the challenging task of selecting from among them, a decision also rarely previously considered in corporate brand management.

Secondly, the research structures a complete hierarchy of brand objectives upon which corporate communication tools are evaluated and it identifies a comprehensive and measurable set of tool attributes for measuring the degree to which these brand objectives are achieved. The tool selection decision is thus fully structured on the basis of behavioural science theory. The problem structure demonstrates a high degree of formalisation, which results from applying decision analysis to the tool selection decision. Hence, the research moves away from simple heuristics and instead follows a model-building approach to the decision situation in question, which, for the first time, seems to be fully formalised.

The structure of the tool selection decision reflects the complexities of how corporate communication works by explicitly introducing behavioural science theory into corporate communication tool selection. Behavioural science theory provides a theoretical foundation for identifying factors that explain how corporate communication works and for incorporating these factors into the tool selection decision. These factors are identified with the help of a conceptual framework that guides the study of corporate communication effects. These factors are then incorporated into a managerial decision-making model in the form of brand objectives and tool attributes. Specifically, the behavioural framework's psychological responses to communication help to develop operational brand objectives, whereas the framework's stimulus characteristics, which moderate corporate communication effects, serve to identify comprehensive and measurable tool attributes.

Thirdly, the research formalises the relationships between stimulus characteristics and brand-knowledge structures stored in individuals' minds. These relationships, which explicitly link levels of performance on tool attributes to brand objectives achievement, are identified on the basis of established cognitive results and straightforward speculations about their implications for communication effectiveness, and formalised in the form of testable propositions.

Fourthly, the research fully structures the decision maker's preferences for consequences associated to corporate communication tools, employing an additive value function for the certainty case and a multiplicative utility function for the uncertainty case. A preferences structure is formalised in a functional form, whose benefits are manifold: it (1) allows for subtle preference evaluations, (2) improves the coherence in decision maker's assessments, (3) gives control of the decision situation to the decision maker and (4) makes subjective judgments explicit. Assuming a set of independence conditions over a decision maker's preferences, his preferences structure is represented as an additive value model, when there is little or no uncertainty in the tool selection decision, or as a multiplicative utility model when uncertainty enters the decision situation, both models allowing preferences on single tool attributes to be assessed separately and a combination algorithm to be applied, which decreases the decision maker's cognitive effort and increases decision-making opportunity (MacGregor, 2001; Keeney, 2002). These rather simple, but rigorous mathematical models developed here to represent a decision maker's preferences related to the tool selection decision can be used as a foundation for a very delicate and subtle form of decision analysis, which may be used to explore the tool selection decision and guide the decision maker.

The results of an illustrative example demonstrate the applicability of the managerial decision-making model for selecting the best corporate communication tool for building the corporate brand. These findings supplement previous work on corporate brand management and corporate communication. They confirm the importance of the tool selection decision for building a corporate brand. They also reaffirm the relevance of a brand-building approach for selecting means of corporate brand communication.

5.4. Suggestions for Further Research

The managerial decision-making model developed here provides some guidance for designing corporate communication programmes for building the corporate brand. However, a vast range of research is needed to fully exploit the features of the proposed model.

Above all, further research is necessary to validate the decision-making model with managers and communication experts. Their expectations need to be compared with the results of the model to ensure that results are adequate and that tool recommendations are reasonable (see Sommerhäuser, 2000, p. 227 ff.; Ngai, 2003).

The analysis of the research findings points towards various promising directions of inquiry. Further research could concentrate on the four areas identified in the last section. Firstly, further research could apply the decision model developed here to analyse more detailed selection decision situations and evaluate other kinds of communication tools. The illustrative model is particularly useful for selecting from among qualitatively dissimilar communication tools such as from among media types. Nevertheless, the goal of the proposed model consists of selecting the single best alternative among all available means of information delivery. The model could thus assist managers to make all types of decisions about selecting means of corporate brand communication. The model could be expanded for more detailed tool selection decisions such as communication scheduling (i.e. to assign communication tools to fixed dates and positions in a publication or time of day) or budget allocation (i.e. to apportion resources to particular corporate communication tools).

Other fruitful avenues of research relate to the selection of communication tools that are unrelated to corporate advertising and ad-like communication activities. The model could provide insight into other tool selection decisions such as the selection among PR activities (i.e. press releases vs. press conferences). The model even allows alternatives ascribed to different forms of communication to be compared, a feature mentioned in subsection 4.1.3 when corporate advertising was briefly contrasted to public relations and marketing communication. These are useful avenues of research which could be further explored.

Secondly, further investigative work on the tool selection decision could refine the brand objectives hierarchy and develop specific attribute measurement scales. Further research could specify more detailed lower-level brand objectives and explore the relationship between constituency characteristics and brand objectives more thoroughly. The interaction among constituency characteristics ought to be taken into account when refining the brand objectives hierarchy. For example, lack of ability, which in turn affects processing goals, implies that knowledge structures necessary for performing more complex operations on a communication stimulus either do not exist or cannot be accessed (Alba and Hutchinson, 1987). Further research could concentrate on how this and many other empirical findings taken from marketing and consumer research literature reflect on brand objectives.

Considerable work is also needed to develop comprehensive measures for assessing the achievement of brand objectives. Further research could develop and validate measurement scales based on subjective judgments and qualitative variables. Advances in the specification of brand objectives and the development of their measurement scales are necessary for structuring the tool selection decision more precisely and thereby drawing the proposed model more pertinently.

Thirdly, the proposed structure for the tool selection decision raises several previously unaddressed questions about the relationships between tool attributes and brand objectives, which could be systematically studied in a useful way for making tool selection decisions. Further research could generate and empirically test propositions that explain the strength and direction of these relationships. Propositions could be formulated either on the basis of established results on communication effectiveness, mostly from advertising research, or on the basis of straightforward speculations. Extensive research on advertising effectiveness provides an excellent basis for articulating the links between stimulus characteristics and psychological responses. Because many of these research findings are also applicable to other forms of communication, these results could easily be incorporated into the model.

Additionally, these relationships could be generated on the basis of straightforward speculations. Speculations are particularly useful for hypothesising moderating conditions that have only recently received academic attention in advertising research literature. Empirical findings such as those reported by Liu and Shrum (2002) about either the useful or detrimental moderating effects of interactive modality on advertising effectiveness could be readily incorporated into the model. These speculations are also useful when no previous communication research is available. In this case, results from other disciplines such as consumer and social psychology could provide useful results, which could be tentatively applied to persuasive communication. For example, the number of presentation modalities is believed to affect knowledge structures stored in individuals' memory (Coupey and Sandgathe, 2000). These speculative aspects need to be considered for designing corporate communication programmes. As such, they could be incorporated into the proposed model by developing testable propositions that cover these relationships. In short, the challenge is to uncover factors that affect how companies are perceived and how these perceptions can be shaped, which constitutes a wide topic for empirical research.

Further research could also empirically test these relationships. The propositions formulated in the illustrative example of chapter 4 are in particular need of empirical investigation.

Fourthly, future research could address the practical concerns presented by the decision-making model, related to the cognitive effort and the opportunity of its application. Further research could attempt to reduce the decision maker's cognitive effort of eliciting preferences for communication tools, which requires additional analysis, at least on proxy attributes and eliciting techniques. This thesis makes heavy use of proxy attributes, which require complex inferences from decision makers that may be beyond human's cognitive capacity for making consistent judgments (Keeney and Raiffa, 1976, p. 60). Indeed, an experimental study has shown that decision makers reveal a near universal bias to overweight proxy attributes relative to non-proxy attributes (Fischer et al., 1987). The results of this experimental study imply that decision makers would assess tool attributes differently to brand attributes, leading to biased preference evaluations. Further research could detect and correct these biases.

Additional research that attempts to decrease managers' cognitive effort could also be directed towards developing better procedures for assessing managers' preferences for corporate communication tools. This thesis briefly mentions some formal procedures for eliciting decision makers' preferences (see subsection 4.2.4). Explicitly incorporating these procedures into the model seems sensible for reducing cognitive effort. Specifically, elicitation procedures that do not require the decision maker to make difficult judgments are desired for assessing preference scores on single tool attributes. Moreover, less demanding and more accurate methods are wanted for determining attribute weights. A previously mentioned advance in this direction is the formally justifiable weighting procedure developed by Barron and Barrett (see Edwards and Barron, 1994). In short, the development of elicitation procedures which allow precise preference evaluations and, at the same time, are simple to use, represent an area of research which is in much need of further study.

Further research could also attempt to enhance opportunity for applying the decision-making model presented here. The proposed model is flexible and structured in a way which makes it easily extensible. Specifically, further research could explore eliciting techniques that consider decision-making in groups, formal forecasting and decision support systems.

A fruitful extension to the proposed model could accommodate group decisions. The proposed decision-making model assumes a unitary decision maker. However, in an organisational context, many tool selection decisions are usually made collectively. The additive value model proposed can be effortlessly extended to decision-making in groups, assuming that there is a reasonable level of agreement on objectives in the organisation (see Edwards and Barron, 1994). In addition, more formal procedures for making tool selection decisions in groups could be developed. In the words of Keeney and Raiffa (1976, p. 26), it is necessary to determine 'a process-oriented strategy by which the group decision is to be made.' Additional research could thus explore procedures for aggregating individual preferences.

Another fruitful extension to the proposed model relates to the incorporation of formal forecasting techniques. The proposed model requires that the decision maker assesses preferences for some future consequences, which is accomplished by forecasting, in an informal fashion, the effects of specific stimulus characteristics on brand-knowledge structures stored in constituencies' minds. In other words, the model does not explicitly consider a formal forecasting technique. Nevertheless, the model can be easily extended, for example, to incorporate bootstrapping, a combination of subjective and objective forecasting methods which uses the decision maker's rules for efficiently making repetitive decisions (Armstrong, 1985, p. 274 ff.). Such a formal forecasting technique would employ the advantages of statistical predictions while benefiting from experience and subjective judgments (Makridakis, Wheelwright and Hyndman, 1998, p. 503 ff.).

Similarly, further research could extend the model presented here into a decision support system (DSS). The extension is feasible because the decision problem in question is characterised by logical rather than numerical key relationships and incomplete problem-solving knowledge. Similar problem structures, strongly founded on behavioural science theory, have already been successfully integrated into a DSS. The DSS developed by Burke (1990) for advertising design is a good example here. His model assists advertisers of consumer products with the formulation of advertising objectives, copy strategy and the selection of communication approaches. In the same way, a DSS based on the proposed model could gather and interpret relevant information from business and the environment and turn it into a basis for corporate communication tool selection. The extension to a DSS is also encouraged because various easy-to-use software products such as Logical Decisions are available to assist in the use of multiattribute techniques (see Logical Decisions, 2004). The extension of the proposed model into a DSS would speed up decision-making and enable the increasing number of corporate communication tools available to be evaluated more expeditiously. Hence, it represents an extension to the proposed model worth exploring.

In short, the analysis of the research findings suggests various fruitful avenues for further research that would adequately supplement the research presented here. Together, these findings would result in a better understanding of corporate communication effectiveness and thereby in a much-needed better managerial decision-making.

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