

Las Ciencias, las Técnicas y el Arte Aplicadas al Marketing

Academia y Profesión

PONENCIAS ACADEMICAS

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Editores



24-26 de Noviembre de 1999



UNIVERSIDAD COMPLUTENSE DE MADRID
FACULTAD DE CIENCIAS ECONOMICAS Y EMPRESARIALES
Departamento de Comercialización e Investigación de Mercados

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MARKETING DECISION MAKING IN THE ELECTRONIC ERA: THE STATE-OF-THE-ART OF MARKETING MANAGEMENT SUPPORT SYSTEMS

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Marketing managers are exposed to an ever-growing stream of information about the markets they are operating in and the performance of their products. In the Electronic Era the supply of data has exploded and marketing management support systems are needed to transform this data into actionable knowledge. This paper deals with the nature of marketing management support systems (MMSS) and the different types of MMSS that are available. Also a *marketing management support recommender* is presented that can help to find the most appropriate type(s) of MMSS for a given decision situation.

Finally, we discuss the future of marketing management support systems in the perspective of relevant developments in ICT and of the changes in the environment of the marketing decision maker.

I. INTRODUCTION

Marketing decision makers are responsible for the design and execution of marketing programs for products or brands. They operate under different names, such as product manager, brand manager, marketing manager, marketing director, or commercial director. Marketing decision makers choose the target markets and segments for their products and services, and develop and implement marketing mixes. Because of the proliferation of products and brands, the fragmentation of markets in an ever growing number of different segments, the fierceness of competition, and the overall acceleration of change, marketing decisions are becoming increasingly complex. Furthermore, decisions have to be made under increasing time pressure. Product life cycles are getting shorter, and competition occurs not only within countries but increasingly at an international and even global level. New markets are opening up in Asia and central Europe, existing markets are being deregulated, and new distribution channels like the Internet are developing.

Marketing managers are exposed to a constant stream of information about the markets they are operating in and the performance of their products. This information consists of data from formal information systems and market research studies as well as informal cues about customers, distributors, competitors, and so forth. In the Electronic Era the supply of data has exploded. Especially with consumer goods, the amounts of data collected using customer cards and point-of-sales scanning technology have multiplied manifold. Even in business-to-business markets, however, handheld computers and sales automation systems now make it possible for sales reps to systematically collect large amounts of data about their customers. The development of the Internet, furthermore, also offers great opportunities to collect information about existing and potential customers. Although the exponential growth of available information offers great opportunities for marketers, it also has its downside. Due to cognitive limitations marketers may apply biased heuristics for interpreting the data and managers tend to experience the increased quantities of information as very stressful (Reuters 1996).

The good news is that marketing decision-makers can benefit from a quickly increasing supply of tools that support them in using data, information, and knowledge for decision making. Research in marketing science and information technology has resulted in systems like marketing models, marketing information systems, marketing decision support systems, marketing expert systems, and so on. We use the term *marketing management support systems* (MMSS) to refer to the whole set of tools that marketers can use to support their decision-making activities. Companies are quickly increasing their investments in these systems. Marketing management support systems are meant to make a marketing decision maker more effective by increasing the quality of marketing decision making. These systems are also able to compensate for the weaknesses or shortcomings of human marketers. This paper will deal with the following topics:

- What is a marketing management support system and which different types of these systems are available?
- How do these marketing management support systems match with the demand side, i.e. the decision making processes of marketing managers? How can we find the MMSS that provides the best fit with a given decision situation?
- What will be the future of marketing management support systems, in the perspective of the changes in marketing, the changes in the environment of the marketing decision maker and the ongoing developments in information and communication technology?

II. MARKETING MANAGEMENT SUPPORT SYSTEMS

A marketing management support system can be defined as follows (Wierenga and Van Bruggen 2000):

Any device combining (1) information technology, (2) analytical capabilities, (3) marketing data, and (4) marketing knowledge, made available to one or more marketing decision maker(s) to improve the quality of marketing management.

The term *marketing management support systems* is a collective noun for a variety of systems that have been developed since the early sixties. *Marketing models* mark the start of the use of computers to aid marketing decision making; they consist of mathematical representations of marketing problems that aim at finding optimal values for marketing instruments. The philosophy underlying these systems is that it is possible to find an objective best solution. From the mid-1960s onward, marketers could make use of *marketing information systems* for the storage, retrieval, and (statistical) analysis of data. By means of manipulating quantitative information, marketing information systems assist marketers in analyzing what has happened in the market and determining possible causes of events. Whereas marketing information systems are relatively passive systems that provide marketers only with the information they are looking for, *marketing decision support systems* are more active. They provide marketers with the opportunity to answer "what-if" questions by means of making simulations. Marketing decision support systems focus not on replacing but on supporting the marketer. Using judgment, marketers will generate ideas for possible courses of action; the marketing decision support system can then help predict the outcomes of these actions. However, the marketer's judgment will still be the decisive factor in selecting the final and most appropriate course of action.

In the mid-1930s, a new generation of marketing management support systems was developed. These systems emphasized the marketing knowledge rather than quantitative data. *Marketing expert systems* were the first of these knowledge-based systems. The basic philosophy underlying these systems is to capture the knowledge from an expert in a specific domain and make that knowledge available in a computer program for solving problems in that domain. The goal of an expert system is to replicate the performance levels of (a) human expert(s) in a computer model. These systems take a normative approach in searching for the best solution to a given problem. *Marketing knowledge-based systems*, introduced in the early 1990s, describe a broader class of systems than marketing expert systems. They obtain their knowledge from any source, not just from human experts but also from textbooks, cases, and so on. Furthermore, knowledge can be represented in multiple forms, that is, not only by means of rules, as in expert systems, but also, for example, by means of semantic networks and frame-based hierarchies. Unlike marketing expert systems, marketing knowledge-based systems do not focus on finding a best solution but emphasize the reasoning processes of decision makers. The third type of knowledge-based system, *marketing case-based reasoning systems*, first appeared in the mid-1990s. These systems focus on the support of reasoning by analogies. Analogous thinking is a way of solving problems in which solutions to similar past problems are taken as a starting point for solving a current problem. Marketing case-based reasoning systems make cases available in a case library and provide tools for accessing them.

Marketing neural networks are systems that model the way human beings attach meaning to a set of incoming stimuli, that is, how people recognize patterns from signals. They were inspired by the actual physical process that takes place in the human brain, where incoming signals are transmitted through a massive network of connections formed by links among neurons in the brain. Through this process, a human being is able to recognize patterns in sets of incoming stimuli, that is, a specific output is connected to input. The first examples of marketing neural networks have appeared only recently. Finally, *marketing creativity support systems* are computer programs that stimulate and endorse the creativity of marketing decision makers. Although the number of creativity-enhancement programs developed so far is limited, we expect these systems to become more popular in the coming years, given the increasing importance of creativity in marketing—for example, in the development of new products.

In Figure 1 we provide a summary of the characteristics of the different types of marketing management support systems currently available. A more extensive discussion of the different MMSS can be found in Wierenga and Van Bruggen (2000). Twenty years ago an account of the state-of-the-art of marketing management support systems at that moment (up until marketing decision support systems) was given by Little (1979).

Figure 1.1 Characteristics of Marketing Management Support Systems

<i>Type of MMSS</i>	<i>Characterizing Keywords</i>
Marketing Models (MM)	<ul style="list-style-type: none"> • Mathematical representation • Optimal values for marketing instruments • Objective • Best solution
Marketing Information Systems (MKIS)	<ul style="list-style-type: none"> • Storage and retrieval of data • Quantitative information • Registration of "what happens in the market" • Passive systems
Marketing Decision Support Systems (MDSS)	<ul style="list-style-type: none"> • Flexible systems • Recognition of managerial judgment • Able to answer "why" questions (analysis) and "what-if" questions (simulation)
Marketing Expert Systems (MES)	<ul style="list-style-type: none"> • Centers on marketing knowledge • Human experts • Rule-based knowledge representation • Normative approach: best solution
Marketing Knowledge-Based Systems (MKBS)	<ul style="list-style-type: none"> • Diversity of methods, including hybrid approaches • Structured knowledge representation, including frame-based hierarchies • Model-Based Reasoning
Marketing Case-Based Reasoning Systems (MCBR)	<ul style="list-style-type: none"> • Similarity with earlier cases • Storage of cases in memory • Retrieval and adaptation • No generalization
Marketing Neural Networks (MNN)	<ul style="list-style-type: none"> • Training of associations • Pattern recognition • No a priori theory • Learning
Marketing Creativity Support Systems (MCSS)	<ul style="list-style-type: none"> • Association through connections • Idea generation • Endorse creativity in problem solving

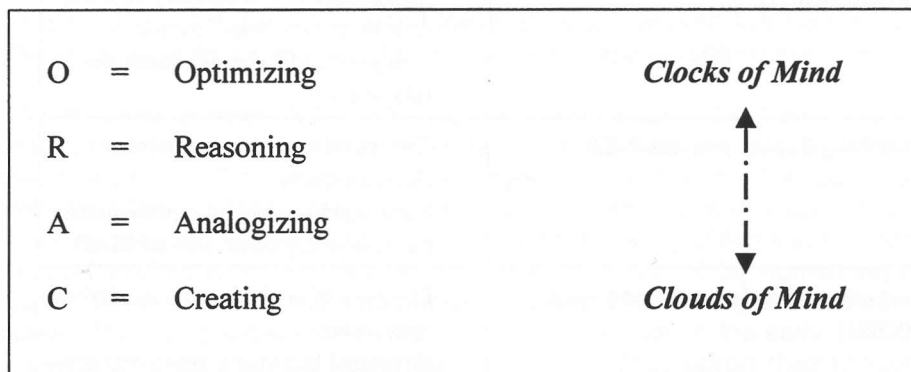
Adapted from Wierenga and Van Bruggen, 1997

III. THE DEMAND SIDE OF MARKETING MANAGEMENT SUPPORT SYSTEMS

Decision-making processes of marketers can take different forms; and it is our premise that in designing and implementing marketing management support systems (MMSS), one should start with the decision-making process that such systems are intended to support. We introduce the concept of *marketing problem-solving modes* (MPSM). A marketing problem-solving mode is a cognitive model of the decision-making process or behavior of a marketer.

Johnson-Laird (1988) observed that "human cogitation occurs in dazzling variety" (p. 217). At one extreme there is "mental arithmetic," where people deliberate and calculate in a consciously controlled way and where calculations have a goal and are deterministic. He calls this "the clocks of mind." At the other extreme there is the free flow of thoughts (dreams), mental processes without a goal, and varieties of creation, which he calls "the clouds of mind." Assuming that the thought and reasoning processes of marketing managers are not different from those of ordinary humans, we present a typology of marketing problem-solving modes, which represent the different positions between these clocks and clouds of the mind. Specifically, we distinguish four different modes, summarized in the acronym *ORAC*: optimizing, reasoning, analogizing, and creating (see Figure 2).

Figure 2 The ORAC model of marketing problem-solving modes



Stated in a different way, the four MPSM are ordered from hard optimization by means of exact calculations to soft associations and creativity. The four marketing problem-solving modes can briefly be characterized as follows.

3.1. Optimizing

In the optimizing mode the marketing decision maker acts as a scientist or engineer with a precise insight in the mechanisms behind the marketing phenomena. In a strictly analytical way he/she has a mathematical model that explains and predicts the dependent variable(s) under study. This model is then parameterized and used for optimization.

3.2. Reasoning

In the reasoning mode the marketing decision maker constructs his/her own internal representation of the marketing phenomena. This 'mental model' is the basis for reasoning about a problem. It contains the variables deemed relevant and the supposed cause-effect relationships. Mental models can be at variance with reality, are often incomplete and can contain undependable or deep knowledge.

3.3. Analogizing

The marketing decision maker, confronted with a problem, activates in his memory a similar problem which he/she solved before, or has witnessed being solved. The previous solution is taken as the starting point for the present case, and may subsequently be adapted, taking into consideration the differences between the present and the earlier problem. The solution is not constructed from first principles, but from past cases.

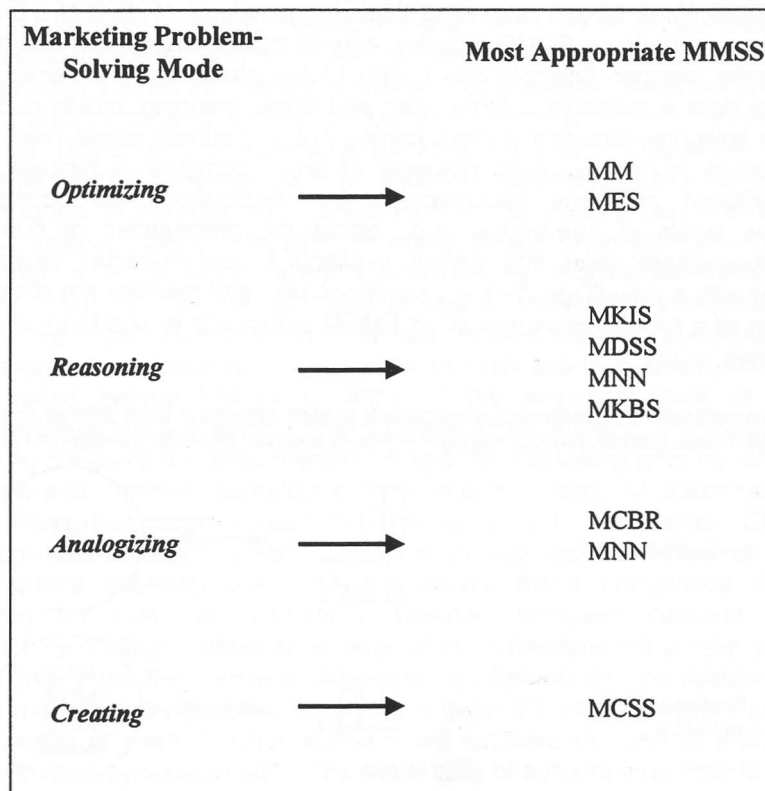
3.4. Creating

In this problem-solving mode the marketing decision maker is searching for novel and effective ideas and solutions by means of mapping, exploring and transformation of the problem's conceptual space, expanding the number of possible solutions through divergent thinking.

IV. MATCH BETWEEN DEMAND AND SUPPLY OF MARKETING MANAGEMENT SUPPORT SYSTEMS

Different marketing problem-solving modes require different types of marketing management support systems. Wierenga and Van Bruggen (1997) provide a mapping of marketing problem-solving and marketing management support systems. In a summary form this mapping is given in Figure 3.

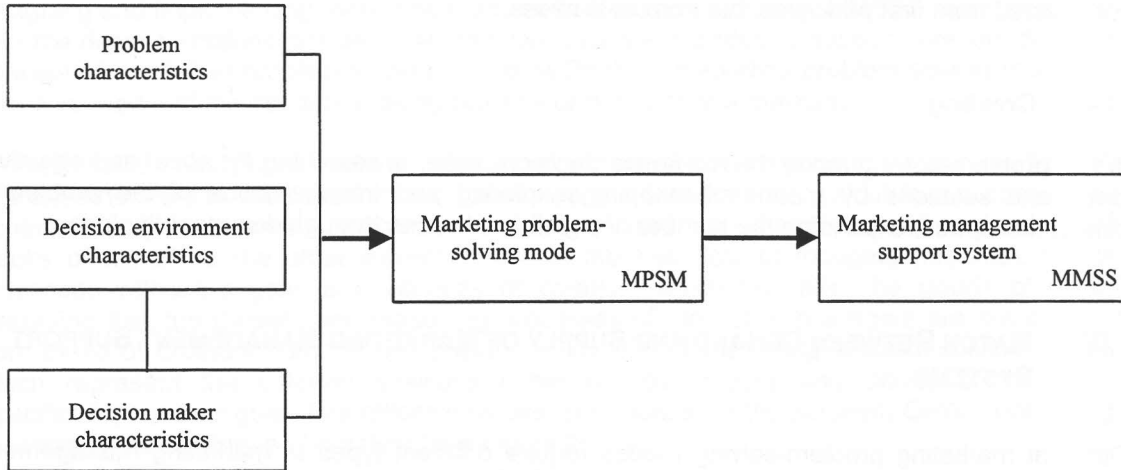
Figure 3: Mapping Marketing Problem-Solving Modes and Marketing Management Support Systems



The marketing problem-solving modes, in turn, are caused by *antecedents* that can be summarized into three categories of decision situation characteristics: problem characteristics, decision environment characteristics and decision maker characteristics. So the question of

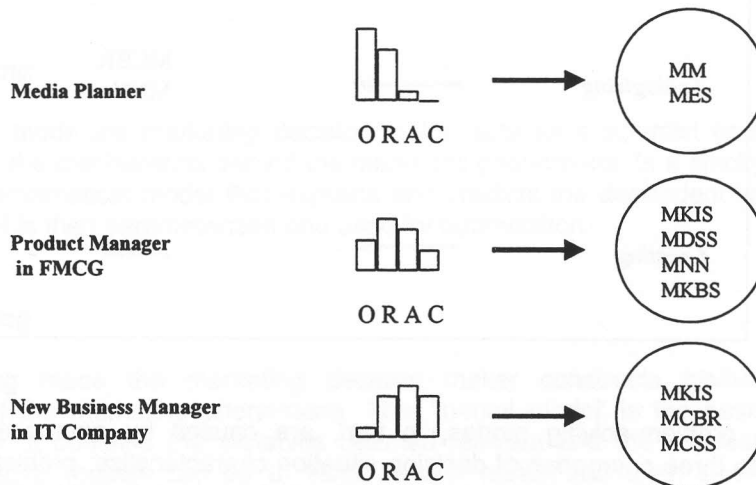
which MMSS is most appropriate for a given situation is answered in two steps: (1) from decision situation to marketing problem-solving mode and (2) from marketing problem-solving mode to the most appropriate MMSS. This is illustrated in Figure 4.

Figure 4: From Decision Situation to Marketing Management Support System



Based on the relationships depicted in Figure 4, a *Marketing Management Support System Recommender* has been developed that helps to make recommendations for the most appropriate MMSS in a given situation. As an example of how this *MMSS Recommender* can be used we consider three typical marketing decision situations: (1) that of a media planner, (2) that of a product manager in an FMCG industry, and (3) that of a new business manager in an IT company. A media planner typically deals with highly structured problems and has ample knowledge, much data is available to him or her, and media planning usually does not take place under significant time pressure and is often carried out in relatively stable markets. At the other end of the spectrum, a new business manager of an IT company is typically confronted with relatively unstructured problems (technologies and applications are constantly changing). Furthermore, low levels of knowledge (e.g., about the preferences of customers and the capabilities of competitors) exist, little data is available to that manager, severe time pressure exists (being first with a new IT product is very important), and markets are dynamic. Finally, the decision situation of a product manager in an FMCG industry is positioned somewhere between these two extremes.

Figure 5: Recommendations for marketing management support systems in three different marketing decision situations: media planner, product manager in FMCG and new business manager in IT company



The MMSS Recommender translates the characteristics of these different decision situations into different weight profiles for the four ORAC marketing problem-solving modes. As can be seen in Figure 5, the task of a media planner is primarily of an optimizing nature, a product manager in FMCG mainly applies reasoning and analogizing, whereas for the new business manager in IT, creating is an important problem-solving mode.

The MMSS recommendations are then straightforward and follow directly from Figure 3. The media planner needs marketing models and marketing expert systems (for the quantitative and qualitative aspects of mediaplanning respectively), the product manager in FMCG can adequately be supported with marketing information systems, marketing decision support systems, marketing neural nets and marketing knowledge-based systems, whereas for the new product manager in IT, marketing information systems, marketing case-based reasoning systems and marketing neural nets are the most appropriate marketing management support systems.

V. THE FUTURE OF MARKETING MANAGEMENT SUPPORT SYSTEMS

The developments on the demand side of marketing management support systems indicate a further *growing need* for such systems. The explosive growth of data and information will motivate a strong demand for systems that can help marketing managers transform this information into actionable marketing decisions. While the sheer volume of available data has grown exponentially, the human brain has not advanced in any comparable way to process and interpret this data (Simon 1997). The demand will come not only from those who are traditionally most interested in MMSS, that is, manufacturers of FMCG. But because of the rapid growth in database marketing and electronic commerce, companies in a much larger set of industries will develop a need for marketing management support systems, most notably in the business-to-business sector and in service industries. The Internet will increasingly be used to communicate with customers, to effectuate transactions, and, for specific products such as software and other information products (e.g., entertainment, news, consulting, and so on) even to deliver the products to the customers. Since each contact with a customer can be registered electronically, increasing use of the Internet will generate enormous amounts of data. The advent of scanner data has been called "The Marketing Information Revolution" (Blattberg, Glazer and Little 1994), but Internet will cause a "second" marketing information revolution that will have even more impact than the first. This new data will have an acceleration effect on the use of more advanced approaches in areas such as business-to-business and services, which until recently trailed behind FMCG in terms of the analytical level of their marketing. Customization will generate a specific demand for marketing support. Transaction data will have to be analyzed to measure the effectiveness of specific marketing actions, and algorithms will be needed to develop optimal marketing propositions for individual customers. Organizations such as the virtual bookstore Amazon(www.amazon.com) and virtual CD shop CDNow (www.cdnw.com) are among the first to apply such approaches. Based on their analysis of individual customer's interests and buying histories, these companies develop personal recommendations for individual customers. Besides increased demand we also expect increased impact from MMSS, because several of the developments on the supply side match very well with those on the demand side. The availability of sophisticated data analysis techniques will make mass-marketing activities in data-rich environments more effective. The increased availability of user-friendlier software will facilitate the use of MMSS by marketers themselves rather than by support staff. The availability of autonomous agents as part of MMSS will be especially effective in environments where customized marketing activities are being applied. Furthermore, the emergence of group support software and organization-wide systems will facilitate the coordination of activities across departments, while the availability of supply-chain management procedures will facilitate interorganizational coordination.

There will be a strong *differentiation* in the types of marketing management support systems needed by different companies and within companies in different decision situations. It makes a big difference whether a company is active in a more or less stable FMCG market or in a very turbulent market in the IT or telecommunications industry. As we have seen earlier, stable markets can benefit from modeling and optimization, whereas more turbulent markets need MMSS that support reasoning, analogizing, and creating. Also, customization and interactive marketing pose their own requirements for MMSS. Following classical marketing principles, we might divide the market for MMSS into *segments* with relatively homogeneous needs for such systems within each segment. A more tailor-made approach to the design of marketing management support systems will definitely foster their success.

There is a clear tendency toward *integrated systems*. We distinguish two types of integration here. The first is the integration of different data processing and knowledge-processing technologies in one and the same system. Optimization models and expert systems used to be very different from each other as technologies but are now coming together in the same marketing management support system. A marketing decision maker is not interested in technologies as such, but in what systems offer in terms of functionality. The second type of integration is integration over functional areas of management. We have seen already that companies increasingly strive for intra-organizational cooperation and approach their activities from a *business process* point of view. Such a view emphasizes the integration of such different areas as marketing, production, logistics, finance, and so on. This process orientation is stimulated when the customer database is taken as the starting point for all the sales and consecutive transactions and delivery activities of a company. In such a situation there is a need for integrated information systems, systems that cover all the relevant functional areas. These integrated systems are often referred to as *enterprise resource planning* (or ERP) systems. Increasingly, these ERP systems also contain so-called front-office components, which support the commercial activities of companies. The emergence of ERP systems implies that marketing management support systems should be accessible and useful to a wider set of decision makers, including nonmarketing ones. Similarly, MMSS should be able to tap information from the systems of other departments.

Marketers typically are not in the forefront in embracing new computer systems that are meant to make them more effective and efficient decision makers. More *research* is needed of how the adoption and implementation of marketing management support systems can be stimulated. From the research so far it has become clear (Wierenga, Van Bruggen, Staelin 1999), that the success of marketing management in companies depends on the following factors: the match between supply and demand of decision support, the design characteristics (e.g. accessibility, user interface, etc) and the implementation process (e.g. top management support, user involvement). Further insights are needed, for example with respect to the nature of the managerial decision processes that the MMSS is supposed to support, the use of MMSS in the context of time pressure, the optimal combination of managerial judgment and marketing management support systems, and the organizational validation of MMSS, i.e. its ultimate impact on company's results.

VI. REFERENCES

- BLATTBERG, R. C., R. GLAZER AND J. D. C. LITTLE, Eds. 1994. *The Marketing Information Revolution*. Boston, Harvard Business School Press.
- JOHNSON-LAIRD, P.N. 1988. *The Computer and the Mind, an Introduction to Cognitive Science*. Cambridge (MA): Harvard University Press.
- LITTLE, J.D.C. 1979. "Decision Support Systems for Marketing Managers," *Journal of Marketing*, Vol 43 (Summer), 9-26.
- REUTERS. 1996. *Dying for Information*, Reuters Business Information.
- SIMON, H.A. 1997. *Administrative Behavior, A Study of Decision-Making Processes in Administrative Organizations*, 4th edition, New York: The Free Press.
- WIERENGA, B. AND G.H. VAN BRUGGEN. 1997. "The Integration of Marketing Problem-Solving Modes and Marketing Management Support Systems," *Journal of Marketing*, Vol 61, (July), 21-37.
- WIERENGA, B., G.H. VAN BRUGGEN AND R. STAELIN. 1999. "The Success of Marketing Management Support Systems," *Marketing Science*, forthcoming.
- WIERENGA, B., AND G.H. VAN BRUGGEN. 2000. *Marketing Management Support Systems: Principles, Tools and Implementation*. Boston: Kluwer Academic Publishers.