Model-based development and testing of advertising messages – A comparative study of two campaign proposals based on the MECCAS model and a conventional approach

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MODEL-BASED DEVELOPMENT AND TESTING OF ADVERTISING MESSAGES –
A COMPARATIVE STUDY OF TWO CAMPAIGN PROPOSALS BASED ON THE MECCAS MODEL AND A CONVENTIONAL APPROACH

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EXECUTIVE SUMMARY

1. Traditionally the development of advertising messages has been based on "creative independence", sometimes catalysed by inductively generated empirical data. Due to the recent intensified focus on advertising effectiveness, this state of affair is now beginning to change.

2. Implementing theoretically valid and comprehensible guidelines for message development potentially enhances the effects of advertising messages and improves the possibility of measuring such effects. Moreover, such guidelines also have potential implications for the managerial communication processes (client-agency and intra-agency) involved in the development of advertising messages.

3. The purpose of the study described in this paper is to compare the development and effects of two campaign proposals, with the common aim of increasing the consumption of apples among young Danes (18 to 35 years of age). One of the proposals is the result of an inductive-creative process, while the other is based on the MECCAS model, ie, means-end based data collection employing the laddering method and subsequent use of the guidelines for message development formulated in MECCAS.

4. The comparison involved target group communication effects as well as the efficiency of the managerial communication taking place in the message development process. The target group communication was assessed by pretesting the two campaign proposals (n=500). Linear structural Elam (Elaboration likelihood) models were estimated for both proposals. The managerial communication was studied by interviews with the advertising agency and client staff involved. The project is a joint venture of the Association of Danish Fruit Growers, Odense, Denmark, and the MAPP Centre, and is financed by EU funds. The advertising agency involved is Midtmarketing, Ikast, Denmark.

5. The main results of the managerial study was that the implementation of the MECCAS guidelines for message development led to better agency-client communication, which resulted in an improved common understanding of the objective of the campaign. The pretest showed that the MECCAS-based message compared to the conventionally developed message was perceived as more focused by the target group, stimulated central processing better, and was more effective in terms of self-reported buying intention.

1. INTRODUCTION

Many advertising practitioners tend to reject the notion that theoretical models of information processing can improve the message development process. Practitioners often see creativity and message development as a magical process beyond analysis and academic interference (Johar, Holbrook & Stern, 1999). Therefore the collection of theory-based data before developing advertising messages as well as model-based pretesting of the messages are neglected by many advertising agencies (Hansen, 1998).

The concern that the use of a theoretical model would have a negative effect on creativity is mostly unwarranted. Thus, if a set of criteria, as discussed below, are satisfied, model-based message development can both inspire and direct the creative efforts. Moreover, as Hansen (1998) points out, any pretesting of advertising effects should be based on a valid model of how advertising is processed by the message recipient.

Academic research on the effectiveness of advertising messages has been based on a number of cognitive attitude models, eg, the multiattribute attitude model (Fishbein & Ajzen 1975), affective reaction models, eg, Holbrook and Batra (1987), and models that integrate affective and cognitive aspects of information processing, eg, the Elaboration Likelihood Model (ELM) (Petty & Cacioppo 1986). The integrative part of the latter model involves the description of two routes to persuasion: a central route focusing on product/brand information, and a peripheral route, involving non-product message components, such as message form, tone, style, etc. Petty and Cacioppo propose that central information processing lead to stronger and more persistent attitudes than peripheral processing.

These models provide explanations of the persuasion process, but they do not readily lead to normative guidelines for the creative process. Such guidelines have been developed by major advertising agencies, such as the Foote, Cone & Belding matrix for advertising planning (Vaughn, 1986), improved by Rossiter, Percy and Donovan (1991). These guidelines take their point of departure in what degree of involvement and kind of information processing are typical of the product in question. Thus, the fact that a given message can result in various degrees of involvement and elaboration for different recipients, tend to be ignored in these models. Also, because these models are based on an affective/cognitive dichotomy, they tend to neglect the fact that advertising can create affective and cognitive responses simultaneously.

A model that is to be used in message development should therefore satisfy the criteria of comprehensiveness, as well as normativity and flexibility and should provide a valid description of how individuals process cognitive and affective information. To a large extent, the MECCAS model (Means-ends Conceptualization of the Components of Advertising Strategy) fulfils these criteria (Reynolds & Craddock, 1988).

MECCAS is based on means-end-chain (MEC) theory, which describes the individual consumer's associations between product attributes, their consequences and the consumer's personal values. Thus, in contrast to the FCB-matrix, the outset for the MECCAS model is the individual consumer – not the type of product. Furthermore, the MEC theory does not describe cognition and affection

as a dichotomy but as interdependent aspects. The associations of concrete product attributes and their consequences are primarily cognitive, whereas affective processes are involved, when associations between consequences and personal values are created or elicited.

A number of studies, eg, Reynolds, Gutman and Fiedler (1985); Bech-Larsen, Nielsen, Grunert and Sørensen (1996) support the basic assumption of MEC theory that product attributes, which are associated with personal values, influence product preference more than attributes which are not. But more studies of the validity of MEC theory and the related laddering interviewing method are needed (Grunert & Grunert, 1995).

In the following three subsections it is discussed how the MECCAS model and MEC-based target group data may a) inspire and direct message generation and selection, b) enhance client-agency and intra-agency communication, and c) function as a pretesting framework.

Message generation and selection

As Johar, Holbrook and Stern (1999) point out, the creativity of advertising practitioners is often based on stereotypical perceptions and cultural myths. This may explain the lack of originality in many advertising campaigns. If to a larger extent, the creative efforts were founded on model-based data, ie, data which are less influenced by idiosyncratic interpretations of advertising practitioners than inductively generated data, originality as well as message relevance, both as perceived by the recipients, may be enhanced. In this respect, the MECCAS model holds considerable potential. Basically, the MECCAS model recommends that an advertising message must:

a) be based on the message-relevant knowledge (cognitive structure) of the recipients,

b) create or enforce a full means-end chain in the minds of the recipients, ie, a cognitive chain that contains product attributes and consequences as well as personal values (see, eg, Gutman 1982),

c) anchor this means-end chain to the object (product, brand, person or issue) of the message by exercising creative talent in the design of the linkage strategy and the executional framework.

ad a) The message should build on means-end chains elicited from members of the relevant target group. This is usually done by conducting laddering interviews, where respondents are probed for more abstract meanings and implications (consequences and values) of concrete product attributes by a sequence of "why" questions. As a rule the results of laddering interviews are presented as hierarchical value maps, which represent the most typical MEC structures of the target group with regard to the message object.

ad b) Based on the results of the laddering interviews, the advertising agent and the client select a means-end chain to enforce or create in the mind of the target group. As a result, the message strategy *may* involve the creation of new cognitive links, but as personal values are difficult to change, it is recommended that the attempt to create new links is concentrated on the more

concrete levels of the chain, eg, by linking an existing value-consequence link to a specific attribute of the message object.

ad c) According to MECCAS, it is the task of the creative staff to establish an executional framework and a linking strategy ("the leverage point"), by which the focal means-end chain can be enforced or created. The actual linkage between the message object, attributes, consequences and values can be based on text or picture information, by creating specific moods etc. Inspiration for the executional framework and the leverage point can be found in the results of the laddering interviews, but apart from the selection of a focal means-end chain, no limits are defined for the work of the creative staff.

Consensus in client-agency and intra-agency communication

According to Adams, Day and Dougherty (1998) the barriers that practitioners (agency as well as client staff) have towards using market information can only be broken down if results are communicated clearly and consistently. This can best be achieved by a model-based approach.

From the perspective of the advertising agency, the advantages of model-based consensus creation are two-fold. First of all, the advertising planner must agree with the client on the message strategy. An agreement would be easier to achieve with comprehensible model-based data at hand, forecasting how the target group will perceive various message strategies. After having reached consensus with the client, the planner can use the model as a frame of reference in his discussion with the agency staff, in order to secure the retention of the selected message strategy throughout the advertising creation and production process.

Due to the graphical value of presenting MEC data as hierarchical value maps, such data are expected to be expedient for reaching agency-client consensus on message strategy. This expectation is further strengthened by my positive experience from presenting results of more than 20 MEC studies to marketing practitioners.

As regards intra-agency communication, several authors of textbooks on advertising management (eg Batra, Myers & Aaker 1996; Burnett & Moriarty 1997; Sirgy 1998) have pointed to the dilemma of the creative staff's demand for independence on the one side and the planners' need to "keep the creatives on the track" on the other. Potentially using MEC data together with the MECCAS guidelines can help overcome the independence-guidance dilemma, because such an approach allows room for creativity while at the same time ensuring that the goals of the advertising campaign are kept in mind. It is also important that the MECCAS and the MEC theory, in contrast to the host of other models used in academic advertising research, are familiar to the artistic or humanistic approaches and training common to the creative staff of an advertising agency. The first versions of MEC theory were developed by advertising practitioners (Young & Feigin, 1975).

Model based pretesting

After reviewing more than 250 studies of advertising effects, Vakratsas and Ambler (1999) concluded that there are potential bias problems when testing advertising effects, not only as concerns data collection, but also regarding the way test results are transmitted from the researcher to the client and agency staff. Hence, the probability of an efficient response to the results of a pretest being enhanced if it is conducted in accordance with a comprehensible model of how the recipients process the message.

Notwithstanding the potential advantages of model-based pretesting, a focus group or univariate standard measures such as recall, attitude and intention, have been the common answer when research agencies are asked to pretest or track the effects of advertising campaigns. Due to the recent focus on advertising effectiveness (eg, Jones, 1995), multivariate measures and model-based testing have been introduced as standard services by some of the larger research agencies. One example is the ELAM PreTest® introduced by Gallup Denmark in 1998. The ELAM pretest includes the standard measures mentioned above, and because ELAM is based on the Elaboration Likelihood Model (Petty & Cacioppo, 1986), it enables assessing the degree to which an advertising message is centrally or peripherally processed.

MEC theory and MECCAS give guidelines not only for message generation, but also for the design and interpretation of pretests. Thus, Reynolds and Craddock (1998) recommend that alternative message strategies be pretested as to their ability to create or enforce certain product-attribute-consequence-value links in the minds of the target group. This approach, although it tests whether the message gets through to the recipients as intended, is insufficient in so far as it does not relate the message content to standard effect measures such as awareness, attitude and intention. Therefore, means-end based pretesting should preferably be combined to tests such as ELAM, which include standard measures of advertising effectiveness.

Another advantage of such a combination is that it would allow an exploration of the relations between MEC theory and the Elaboration likelihood model. As discussed above, Petty and Cacioppo (1986) contend that the most effective route to persuasion is by central processing of object-related message components, and that such processing takes place when the receiver is personally involved in the message object. This contention is in accordance with the basic assumption behind MECCAS and MEC theory, ie, that the message receiver is involved in objects to the extent that they have consequences for his personal values, and hence, that the effectiveness of an advertising message is determined by its capability to create a cognitive linkage between the message object and the personal values of the message receiver. If this is true, an advertising message which is able to create a cognitive association between the product and the personal values of the recipient not only enhances the probability of communicating the message as intended, but will also improve the recall and persuasion effects of the message.

Based on the discussion above, it can be expected that an implementation of the MECCAS model can enhance the efficiency and effectiveness of message generation, production and pretesting. It is proposed that MECCAS can lead to:

4

An improvement in the efficiency of the message development process:

P1. By securing goal persistency in the creative process

P2. By creating a platform for consensus between agency and client

An improvement in the effectiveness of target group communication:

P3. By stronger associations between message object and personal values

P4. By a higher degree of central processing of the message

P5. By better performance on recall and persuasion measures

The discussion in the following sections regarding the design and implementation of the study (section 2) and the results of the study (section 3) will follow the sequence of the five propositions listed above. This outline is in accordance with the natural chronology of advertising development and testing, and also with the fact that persuasion is the final aim of most advertising.

2. DESIGN AND IMPLEMENTATION OF THE STUDY

The quasi-experimental design of the study involves the development and comparison of two advertising campaign proposals. One of the proposals is the result of an inductive-creative process employing focus group research, while the other is based on the application of the guidelines for message development formulated in MECCAS (see section 1).

The two design proposals have the common aim of increasing the consumption of apples among young Danes (18 to 35 years of age). To study the possible implications of employing MECCAS as discussed above, the two campaign proposals were pretested among 500 young Danes. Furthermore, a number of interviews with the agency and client staff was conducted.

From an academic viewpoint, the choice of a generic marketing campaign for apples, as the basis of a comparison between a MECCAS based and an inductive message development procedure, has several interesting features. First of all, the apple is undoubtedly one of the food products associated with most abstract meanings in the form of cultural symbols and values. Thus, this product lends itself easily to the elicitation of the abstract cognitive structures which form the basis of implementing the MECCAS model. Furthermore, as standard pretest analyses usually are designed for branded products, the case chosen could be used as the outset for developing pretest methods for campaigns for generic products.

It is commonly believed that the extent of central processing not only depends on the message, but also on the receiver, the media used, etc. (Petty & Cacioppo 1986). To assess whether the media had any influence on the degree of central versus peripheral processing, and to get a first grasp of whether the effects of employing MECCAS are media dependent, we chose to let each proposal consists of one print ad (magazine format) and one video commercial (developed

up to the storyboard stage). Normally, a generic marketing campaign for apples would, of course, also involve other aspects, such as point-of-purchase material and public relations efforts.

The risk of confounded results is one of the reasons why advertising pretests are neglected (Hansen, 1998). To minimise the influence of confounding factors such as differences in business culture and client relations, we organised the development of the two campaign proposals as a competition between two creative groups from the same agency. As regards the agency-client relations, it was attempted to establish a common ground, and therefore, an agency which had been working with the client on a number of occasions, was chosen. Notwithstanding these measures, it is indisputable that differences in the creative and communicative skills of the two groups potentially influenced the quality of agency-client communication and the campaign proposals, and hence the outcome of the study.

One of the two creative groups (the MECCAS group) was introduced to means-end chain theory and the principles of MECCAS. Following this, the group was given a hierarchical value map constructed from the results of 50 laddering interviews about the consumption of apples (see figure 1), and was asked to create a message strategy based on the MECCAS guidelines.

The other group (the Conventional group), while aiming at the same purpose, ie, to create a message that could sell more apples to young Danes, was asked to adhere to the agency's usual message development procedure. This group followed an inductive approach, involving the implementation of two focus groups consisting of members of the target segment. Below follows a brief discussion of the results of the studies used as input to message generation and their relation to the message strategies proposed by each of the two groups.

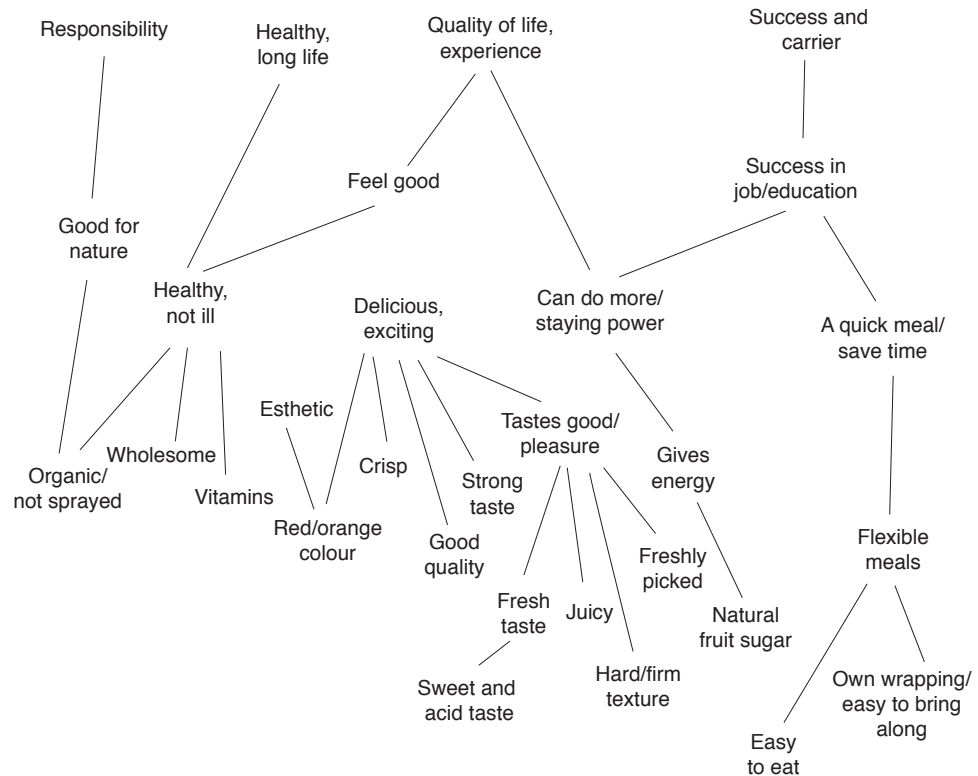## Development of campaign proposals

The work of the MECCAS group was based on 50 laddering interviews with respondents from the target group. The laddering interviews were carried out by asking each respondent to mention the differences between apples and alternative foods. For each difference the respondent was asked whether it had any importance, and if so a sequence of "why-questions" were asked. For instance "Why is it important to you that apples are easy to bring along". These questions were continued until the value level was reached or until the respondent could not give any more answers.

The analysis of the laddering data followed the content analysis procedure recommended by Reynolds and Gutman (1988), and the "Laddermap" software was employed in the construction of a hierarchical value map (figure 1), which represents all pairs of associations mentioned by more than six respondents (accounting for 48% of all associations). The concepts at the bottom and the top of the map are synonyms for laddering data which have been categorized as attributes and personal values, respectively. The concepts at the intermediary levels represent laddering data which have been categorized as consequences.

From the map in can be seen that the attributes, eg "own wrapping, "not sprayed", "easy to eat" are associated with consequences related to convenience,

taste, wholesomeness and energy. These consequences are associated with four realms of personal values, ie health, hedonism, personal success and the environment[1].

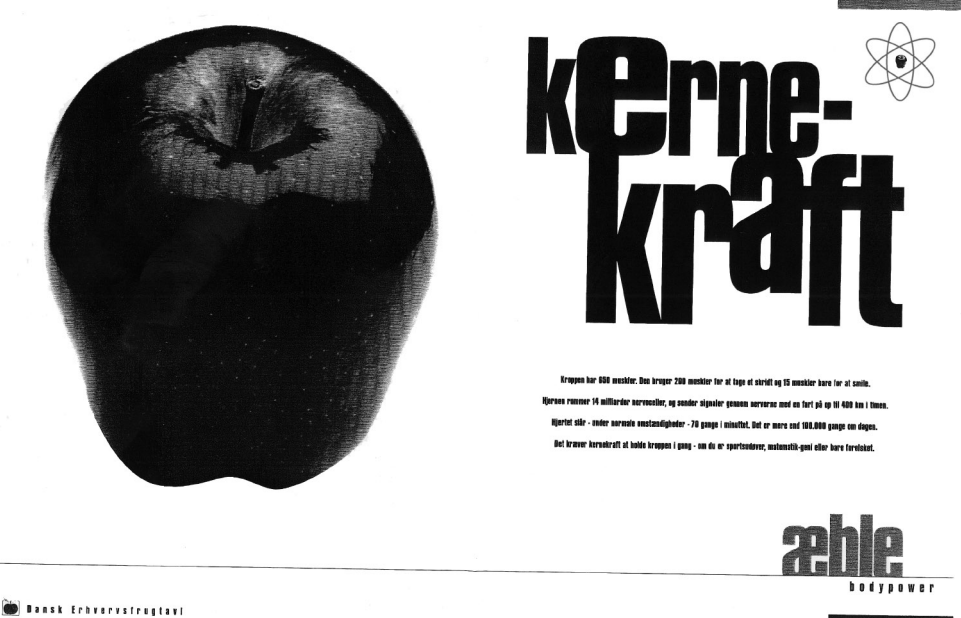*Figure 1. Hierarchical value map for apples, n=50, cut-off=6*

Responsibility

Healthy, long life

Quality of life, experience

Success and carrier

Feel good

Success in job/education

Good for nature

Healthy, not ill

Delicious, exciting

Can do more/ staying power

A quick meal/ save time

Esthetic

Tastes good/ pleasure

Gives energy

Wholesome

Crisp

Strong taste

Flexible meals

Organic/ not sprayed

Vitamins

Red/orange colour

Good quality

Freshly picked

Fresh taste

Juicy

Natural fruit sugar

Own wrapping/ easy to bring along

Sweet and acid taste

Hard/firm texture

Easy to eat

The MECCAS group was given free hands as to which MEC chain to suggest as outset for the message development. The MECCAS group based their proposal on the means-end chain (see figure 1) connecting the belief that apples contain energy, and that youngsters need energy to succeed in many kinds of activities (sport, studies etc.), and that they must have success with such activities to achieve a higher quality of life (see figure 2).

The actual procedure behind the choice of this chain involved an idea generation session, with the various chains as input, resulting in the "energy-success-quality of life" chain being chosen, because the group assessed the idea developed for this chain to be the most inspiring and effective one in terms of getting young people to eat more apples. Thus the choice of the means-end chain to be communicated was partly determined by the group's self-evaluation of the quality of its creative ideas, ie, the means-end chain selected was the one for which the best leverage point could be constructed.

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1 The relative strength of each of the pairwise associations will be studied in a quantitative study (Grunert & Bech-Larsen, forthcoming). For the purpose of message development the data represented in figure 1 were deemed sufficient.

The actual proposal developed by the MECCAS group used nuclear power and the nuclear symbol as an eye-catcher and linkage to the energy theme. In Danish, kerne is homonymous, meaning 1) nuclear (as in nuclear power) and 2) seed, pit, kernel (pome) and this offered the play on words in linking the two sources of energy: apples and nuclear power.
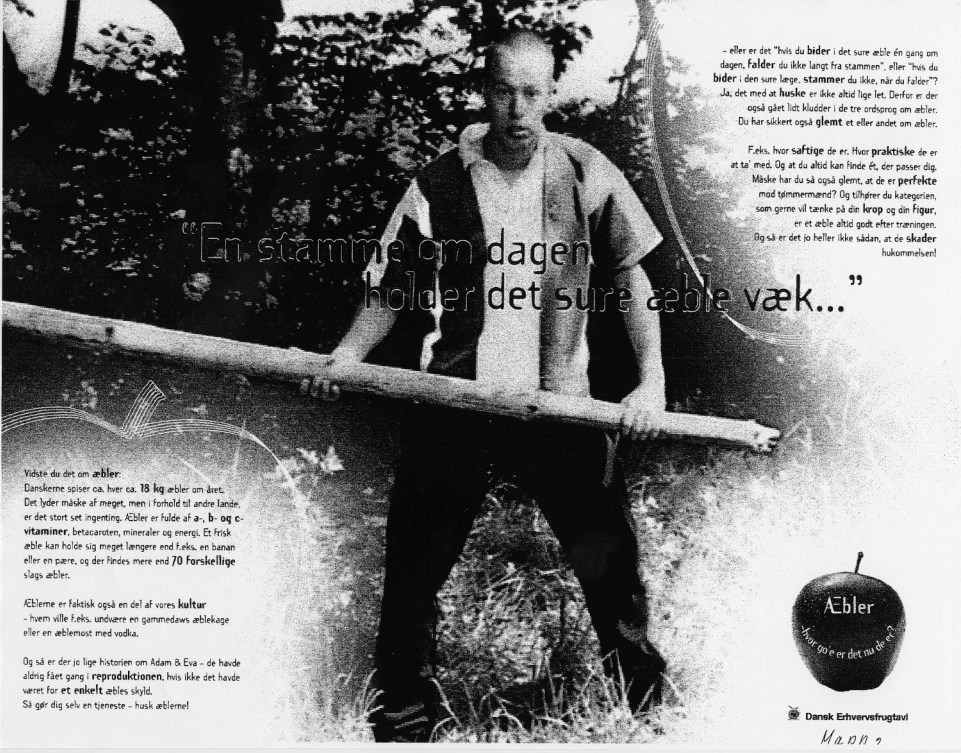
Figure 2. The print proposal of the MECCAS group

Figure 3. The print proposal of the conventional group

The main results of the two focus groups conducted by the conventional group was that many young people regard apples as a tasty snack, which is wholesome, easy to bring along, but also a bit old-fashioned. This image was produced by sayings such as "an apple a day keeps the doctor away".

Based on these results, the conventional group developed a proposal with the main proposition that apples can cure hangovers (see figure 3). Apart from that, the message contained a lot of information about apples, ie that there are many different kinds, that they contain vitamins, that they are tasty, that they are easy to bring along. The storyboard version was built around a story about a young man, who falls from an apple tree, and the print version used this character as an eye-catcher and linkage to the target group. Rewritings of the apple-related sayings were used to create a humorous note in the campaign.

Implementation of the Managerial Communication Study

This part of the study was implemented by two rounds of interviews with three members of the client staff and one interview with each of the leaders of the two creative groups.

The leaders of the two creative groups were interviewed on completing the two campaign proposals.

The first interviews with client staff were implemented shortly after their first creative briefing (from the conventional group). The second round of interviews was conducted one week later after the briefing from the group whose work was based on the MECCAS guidelines.

The design and implementation of the Pretest Study

To study the effects on target group communication (proposals P1, P2 and P3), a modified version of the ELAM PreTest® was implemented (Hansen 1998). The standard ELAM pretest involves an estimation of a structural linear model. As ELAM is designed for brands and not for generic products, the standard structural model required a number of modifications before it could be used for the purpose of the study. Furthermore, based on theoretical reasoning some elements were added to the standard ELAM measurement model. More specifically, the ad-liking and information elaboration measures of the ELAM-model were modified, in order to be more in accordance with the characteristics of generic products and with MEC theory.

Regarding the MEC theory, the standard ELAM measurement of elaboration involves a coding of answers to open-ended recollection questions. The respondents who remember message elements related to the product are coded as central processors, whereas respondents who only remember message elements related to the format and execution of the message are coded as peripheral processors. This coding procedure is insufficient in so far as the processing of concrete characteristics of products can be done without much involvement on behalf of the message receiver (Reynolds & Craddock, 1988). According to Petty and Cacioppo (1986), central processing is more likely to take place when the receiver is interested in the message, and this is the case when the ad communicates values which are essential to the receiver.

The critique of the ELAM coding procedure is especially relevant for generic products, which are known to most consumers, and as a consequence easy to remember. It was therefore decided to base the elaboration measure not only on the standard ELAM coding procedure but also on the extent to which the respondents felt that the ad communicated issues that were central to their lives, ie. personal values.

Whether the attitude to the ad as such has any influence on subsequent behaviour, and whether such influence is due to the perception of the informational content of the ad or the perception of its entertaining qualities, has been heavily debated in the academic literature (Hansen, 1998). With the MECCAS procedure setting the guidelines for the informational part of the ad, and letting the creatives decide about the entertaining qualities, the intention was to study the extent to which the attitude to the ad was influenced mostly by the informational or the entertaining qualities of the two proposals, and whether the attitude to the ad had any influence on buying intention.

The fact that everybody knows what apples are also meant that the "brand knowledge" construct had to be removed from the standard ELAM model. The considerations described above led to the model depicted in figure 4.

Figure 4. Modified Elam model for testing advertising for generics
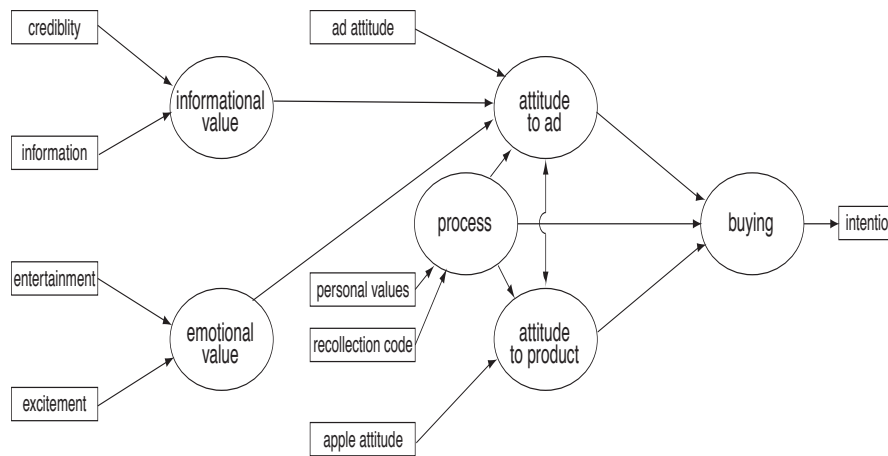
Excitement:	"To which extent (1-6) do you agree that the ad is exciting?"
Entertainment:	"To which extent (1-6) do you agree that the ad is entertaining?"
Information:	"To which extent (1-6) do you agree that the ad is informative?"
Credibility:	"To which extent (1-6) do you agree that the ad is credible?"
Ad attitude:	"On a scale from 1-6: what is your overall attitude to the ad?"
Personal value:	"Do the ad communicate issues which are central to your life?"
Intention:	"On a scale from 1-6: how likely is it that you will buy more apples than you used to?"
Recollection code:	The respondent remembers only peripheral cues vs. remember both peripheral and central cues.
Emotional value:	Emotional value of add
Information value:	Informative value of add
Process:	Central or peripheral processing
Attitude to ad:	Overall attitude to add
Attitude to product:	Overall attitude to product
Buying:	Buying intention

In addition, the procedure recommended by Reynolds and Craddock (1988) for testing advertising messages which have been developed according to the MECCAS guidelines was implemented. Thus, apart from the closed questions related to the measurement model described above, the respondents were asked a number of open questions concerning the recollection of the contents of the ads, ie, a test of whether the message got through as intended.

Testing the two elements (magazine ad and storyboard) of each of the two campaign proposals required four hall-tests, each with 125 young people (18-25 years of age). The 500 respondents were evenly and randomly distributed between the four groups. Each group was shown one of the four video and print versions of the two campaigns. There were no significant differences in the distribution of age, sex, educational background and apple consumption among the respondents in the four groups.

The storyboards were videotaped (still-pictures) and the music suggested by the advertising agency was recorded on these tapes. The interviewer read the "Voiceovers". The magazine as well as the storyboard version was tested by showing them along with other magazine ads and video commercials. After this, recall measures and answers to open questions were obtained. Then the proposals were shown again, and closed questions were asked.

3. RESULTS

The outline of this section follows the chronology of the message development and pretesting, ie, first the results of the intra-agency and client-agency communication studies are discussed and subsequently the pretest results related to whether the intended messages got through to the respondents. Finally the results of the standard pretest effectiveness measures and model estimations are described.

The Managerial Communication Study

The study of the quality of the MEC model as a management communication tool was based on interviews with the two leaders of the creative groups and three members of the client staff. Below the main findings from these interviews are discussed.

In general, the leader of the MECCAS group was very positive about his experience with the MECCAS guidelines. Especially, he stressed that the method had kept the team from diverting and from forgetting the importance of linking the message to the product in the minds of the target group. He recognised that often the product is lost in the creative process, because – as he said – *"the more abstract and emotional message components consume a lot of creative energy – and because those elements are more fun to work with"*.

Although the leader of the MECCAS group appreciated the many relevant strategy alternatives represented in the hierarchical value map, he also felt that the information provided, ie the hierarchical value map and the results of the laddering interviews, was insufficient. He proposed that the laddering interviews be supplemented with other kinds of consumer studies and contextual information, eg, focus group interviews.

When presented with the method and result of the MECCAS group, the leader of the other creative group had only positive comments. She told us that she seriously considers using the MECCAS guidelines to develop a strategic communication platform for major customers.

The creative group which used the agency's usual message development procedure presented their first proposal to the agent on the standard briefing form used by the agency. This form consists of two A4 sheets with a host of information under the headlines: *What is the goal?, How can this be accomplished?, Who does the campaign address?, What do they do/buy today?, What do they think of the product?, What is the primary element that the campaign is supposed to change? The USP of the apple, Style and tone of the message, Proposition*.

This briefing caused confusion at the client headquarters. Few hours after receiving the briefing, the manager of the client company was on the line with the agency. According to the client manager, the content of the briefing *"was very far from what he had expected"*. A telephone meeting between the agency and the three involved members of the client staff was set up, and the controversies were settled. It was revealed that the confusion was due mainly to misperceptions of the contents of the briefing.

A few days later, each of the three client staff members was interviewed. The basic objective of the interview was to ascertain how the client staff perceived the presented message strategy and the quality of the briefing.

Although the controversies had been settled in the telephone meeting, the general impression was that the three members of the client staff were uncertain of the goals and measures of the proposed strategy. In general, they agreed that the briefing contained a good description of the target group, but they felt confused as to the strategic intent of the message. Typical comments were: *"what is it they really want", "lack of precision", "they ask more questions than they answer", "where is the governing idea", "too many clichés and psychic interpretations"*.

Furthermore, more specific criticisms were raised, eg *"what do they mean by USP", "is it really possible to convince teenagers that an apple can cure hangovers"*.

The following week the three informants received a briefing from the group using the MECCAS guidelines. This briefing consisted of written information (1 1/2 pages) and a copy of the hierarchical value map shown in figure 1. The material basically contained a description of the selected means-end chain, and the proposed message strategy.

A few days later the second round of interviews with the three members of the client staff was conducted. The basic objective was the same as in the first round of interviews, but apart from this, the interview also included questions about perceived qualities of the two campaign proposals.

Although one of the informants felt that the use of a figure such as the hierarchical value map required *"a little more explanation"* than a written briefing, they all agreed that the proposal of the MECCAS group was considerably more precise and consistent than the proposal of the Conventional group. Typical comments were *"I can see the purpose", "Now I get the point", "It is clear that the agency has committed themselves and that they have consciously chosen a strategy", "an attractive way of presenting a proposal"*.

The usefulness of the hierarchical value map as a managerial communication instrument was further underlined by the fact that one of the informants used it as the basis for a discussion with his assistants.

In contrast to the agency's usual procedure, the first briefing of the groups did not involve a face-to-face presentation. Had this been the case, it is conceivable that the differences as regards the perceptions of the qualities of the briefing between the two groups would have been smaller. Although it was attempted to keep the discussion of theoretical matters with the project partner (the Association of Danish Fruit Growers) at a minimum, it should also be acknowledged that the interaction with the project partner in the project application and planning stages, may have interfered with their conception of the two campaign proposals.
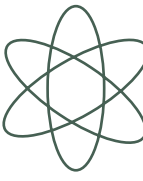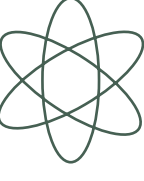
The Advertising Pretest

The MECCAS-based test of message content (Reynolds & Craddock, 1988) implies that the respondents are asked to assess to which extent the message conveys the intended linkages between attributes, consequences and values.

Table 1 illustrates the percentage of respondents who totally or almost agreed, when asked closed questions, that the campaign communicates the messages as intended by the MECCAS group. The results of the same questions given the respondents presented with the campaign proposed by the Conventional group are included as a basis for comparison.

The results in table 1 indicate that the MECCAS proposal communicates as intended by the group. For both media, most of the respondents totally or almost agree that the MECCAS proposal communicates that apples give more energy, and that young people need energy. As regards the value level (which generally is more difficult to convey) approximately one third of the respondents totally or almost agreed that the MECCAS proposal communicates as intended.
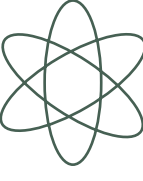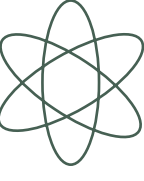
To an open question as to the contents of the Conventional message 49% (print) and 56% (video) of the respondents mentioned that it conveyed that apples can cure hangovers. Together with the results described in table 2 this indicates that the conventional proposal communicates as intended. For both media, most of the respondents totally or almost agreed, when asked closed questions, that the Conventional proposal communicates that apples can cure hangovers, contain many vitamins, are easy to bring along and comes in many varieties. More than 40% of the respondents totally or almost agreed that the Conventional proposal conveys that apples are tasty.

Table 1. Percentage of respondents totally or almost agreeing that the MECCAS proposal communicates the intended message

	MECCAS print	Conventional print	MECCAS video	Conventional video
	------ Totally or almost agree ---------			
That apples give energy	61%	32%	53%	19%
That you need energy	76%	41%	83%	29%
That more energy gives higher quality of life	35%	18%	30%	14%

(n=500), 1= totally agree, 5=totally disagree. For all questions there are significant differences (.05) between the means of the MECCAS and Conventional proposals.

Table 2. Percentage of respondents totally or almost agreeing that the Conventional proposal communicates the intended message

	MECCAS print	Conventional print	MECCAS video	Conventional video
	------ Totally or almost agree ---------			
Can cure hangovers	-	52%	-	84%
Easy to bring along	16%	48%	10%	65%
Taste good	20%	42%	12%	47%
Contain vitamins	35%	82%	27%	11%
There are many different varieties of apples	3%	64%	4%	53%

(n=500), 1= totally agree, 5=totally disagree. For all questions there are significant differences (.05) between the means for the MECCAS and Conventional proposals.

The fact that the Conventional campaign is better at communicating the message elements proposed by the MECCAS campaign than vice versa (compare tables 1 and 2) indicates that the message communicated by the conventional group is less focused than the message of the MECCAS proposal. It has often been stressed (eg Batra, Myers & Aaker 1996; Burnett & Moriarty 1997) that lack of message focus can have detrimental effects on the memory and persuasion effects of the message. Below we compare the two proposals on recollection and persuasion measures.

Table 3 contains the percentages of respondents who were able to recall (unaided) the print and video versions of each of the two campaign proposals. Furthermore, the table shows the Gallup Index for printed material (the average scores of 14 other campaigns tested by the same method). No index for video ELAM tests was available.

The results in table 3 illustrate that both proposals have a higher unaided recall score than the index, ie, the average score of the campaigns previously tested by the ELAM method (Hansen, 1998). To which extent this is caused by the quality of the proposals or by the nature of the product is an open question (most of the previous tests concern heavily advertised branded products, whereas generic advertising for apples is unusual). In any case, is it likely that the high recall measures for the videotaped storyboard versions is related to the fact that they were compared to fully developed video commercials, and thus stood out from the rest.

Table 3. Percentage of respondents with unaided recall

MECCAS print	Conventional print	Index print	MECCAS video	Conventional video
94%	85%	64%	98%	98%

(n=500)

Table 4 shows the average scores regarding attitude to apples, overall liking of the ad (both scaled as 1. "very positive" to 5. "very negative"), and the propensity to buying more apples in the future (scaled as 1. "much higher" to 5. "much lower"). Also, the table shows the ELAM print indexes for ad-liking and buying propensity.

Regarding the attitude to apples, the results in table 4 indicate that there were no significant differences between the respondents in the four groups. This is probably related to the fact that apples are an established product category, and that most people (also young ones) have a positive attitude towards apples.

When it comes to the print versions, MECCAS scores higher than the conventional campaign on propensity to buy and ad-liking, whereas the opposite is the case for the video versions. It is only the difference in ad-liking for the print version that is significant, however.

For the print versions, the results in table 4 show that both proposals have higher ad-liking and buying propensity scores than the average for campaigns previously tested by means of the ELAM method.

Table 4. Average ad-liking and propensity to buy

	MECCAS print	Conventional print	Index print	MECCAS video	Conventional video
Attitude to apples	1.78	1.74		1.71	1.60
Ad-liking	2.92a	3.24a	3.03	2.85	2.69
Propensity to buying more apples	2.71	2.85	3.15	2.72	2.55

(n=500), significant differences (.05) between the two campaigns are marked a.

So far, only modest differences between the pretest measures of the effectiveness of the two campaigns have been found. As discussed in section 1, the MECCAS method contends that a higher effectiveness can be achieved through a cognitive linkage strategy, where product attributes and consequences are connected to the recipients' personal values. The subject of the discussion below is to compare the two campaign proposals regarding the creation of such linkages.

Table 5 illustrates the percentages of respondents who agree that the proposals convey attributes, consequences and personal values. The latter measure was obtained by asking each respondent whether (or not) the messages related to elements that was important to his or her life. The results in table 5 show that a higher proportion of the respondents agree that the conventional proposal (print as well as video), when compared to the MECCAS proposal, convey concrete attributes of apples and consequences of eating apples. For the personal values, the opposite is true. Especially the conventional video is very ineffective as regards the conveyance of personal values.

Table 5. Percentage of respondents who agree that the proposals convey information on: attributes, consequences and personal values

	MECCAS print	Conventional print	MECCAS video	Conventional video
Concrete attributes	37%	84%	29%	66%
Consequences	63%	86%	57%	74%
Personal values	42%	36%	50%	20%

(n=500)

In section 2, a positive relationship between the extent to which an advertising message conveys personal values relevant to the recipients, and the extent of centrally processing, was proposed. Thus, based on the results above, it is to be expected that the MECCAS recipients, compared to the recipients of the conventional proposal, are more prone to process the information centrally.

For each of the proposals, table 6 illustrates the share of respondents who only processed the proposals peripherally and the share that processed peripherally as well as centrally. The analysis was based on the categorization of the respondents' answers to open recollection questions as regards the contents of the messages. All elements related to the product (apples) were categorized as central elements, whereas elements related to the ad, eg, colours, symbols and persons used, were categorized as peripheral.

The results presented in tables 5 and 6 together tend to confirm the expectation of a positive relationship between conveyance of personal values and central processing. In accordance with our expectation, the print version of the MECCAS proposal implicates central processing for a larger proportion of respondents, than does the conventional proposal. That this it not true in the case of the video version is in accordance with the contention that central processing is more common in print than in video advertising (Petty & Cacioppo, 1986).

Table 6. The percentage of respondents with Central and Peripheral processing and only Peripheral processing of the two campaign proposals

	MECCAS print	Conventional print	MECCAS video	Conventional video
Only Peripheral	57%	78%	83%	73%
Central & Peripheral	43%	22%	17%	27%
	100%	100%	100%	100%

Model estimation

Although the analysis above disclosed differences between the MECCAS and the Conventional proposals as regards the degree of central processing, only modest differences between the proposals were found as regard the standard pretest measures, ie, recall, ad-liking, attitude to apples and buying intention. The estimations of the modified ELAM model (see section 3) was performed with the intention of analyzing if these measures and the measures of processing mode influenced each other in the way suggested by the ELM and the MEC theories (see section 2).

Jöreskog and Sörbom (1993) list three different strategies for the analysis of linear structural models "strictly confirmative", "alternative models" and "model generation". Because the elaboration likelihood model has been

validated on a number of occasions (eg Petty & Cacioppo, 1983; 1986) the strictly confirmative strategy was chosen. A modified ELAM model (see figure 4) was estimated for each of the four data sets. Following this, it was the intention to test for structural identity, with the prospect of analyzing the pooled data set. But as it will be clear from the following, this testing strategy could not be implemented.

The multinormal assumption was not satisfied for any of the four groups of respondents. As this was still not the case after implementing the normalization procedure recommended by Jöreskog and Sörbom (1993), we chose to base the estimations on the non-normalized data.

The reliability of the single-item measures (att-ad, att-prod, intent) was fixed at 0.90. Apart from the "inform" item for the print version of the conventional campaign, all manifest variables were significant measures of the corresponding latent variables "Emo-ad" and "Info-ad ". As regards the latent variable "Process" there were considerable differences between the reliability of the manifest variables for the four groups of respondents. Only in the case of the MECCAS print group, both manifest measures of "process" were reliable. That is, in the strictly confirmative mode, all four estimated models except the model for the MECCAS print version, had to be rejected. We therefore chose to remove the unreliable items and estimate the model for each group. Because different items had to be removed it made no sense to test for structural identity.

The conventional video version was excluded from further analysis, because of the lack of a reliable measure of the "process" variable. For the three remaining versions table 7 illustrates the reliabilities for the measurement models and table 8 shows the results of the estimations of the structural models.

Table 7. Reliabilities for the measurement models

Latent variable	Manifest Variable	MECCAS print	MECCAS Video	Conventional print
Emo-ad	Exciting	0,58	0,65	0,57
	Entertaining	0,39	0,37	0,49
Info-ad	Inform	0,44	0,59	0,90
	Credible	0,46	0,42	
Process	Mem-code	0,15		0,90
	Pers-val	0,30	0,90	

From Table 8 it can be seen that neither processing mode nor the attitude to the ad had any influence on the attitude to apples for any of the four groups of respondents. If it is true that most people (also young ones) have a positive attitude to apples (see above), and that it is difficult to lift this attitude further, this may explain why the two proposals were unsuccessful in this respect – according to the pretest results.

The attitude to the conventional print campaign was positively influenced by the attitude to the emotional content of the ad as well as the attitude to apples. The latter was also true for the MECCAS video version, whereas the attitude to the MECCAS print version was left unaffected by all of the related measures. The attitude to the informational content did not influence the attitude towards any of the ads.

The group of respondents that were shown the conventional print proposal had lower average scores for "ad-liking" than the group that was shown the printed version of the MECCAS proposal (see table 4). It was only the buying intention of the later group, however, which was not significantly influenced by the attitude to the ad (table 8). This result corresponds well with the results regarding processing mode reported in table 5, and with the contention that central processing when occurring, diminishes the effects of peripheral processing (Petty & Cacioppo, 1986).

For the MECCAS print version both the attitude towards apples and the processing mode had a significant positive influence on buying intention. Together with the fact that the MECCAS print version had higher average scores for value association, central processing and buying intention, than any of the other versions (see tables 4, 5 and 6), this tends to confirm the expectation that implementation of the MECCAS guidelines can lead to a higher extent of value-based central processing and consequently a better performance on persuasion measures such as buying intention.

From a MEC perspective, the fact that the MECCAS print version does not influence the attitude towards the product, but that the buying intention is influenced by this attitude as well as the processing mode can be interpreted as a result of the MECCAS print version's ability to activate an existing positive association between apple attributes and the personal values of the respondents.

In general the results presented in table 8 indicate that the structural relationships for the conventional print version and the MECCAS video version tend to be similar, and that they both are different from the MECCAS print version. In section 4, the possible explanations and implications of this observation are discussed.

Table 8. Significant Beta-coefficients for the structural models

Dependent variable	Independent Variable	MECCAS print	MECCAS video	Conventional print
Att-ad	Emo-ad			0.91
	Info-ad			
	Process			
	Att-prod		0.19	0.24
Att-prod	Process			
	Att-ad			
Buy	Att-prod	0.25		
	Att-ad		0.43	0.34
	Process	0.50		

4. DISCUSSION

In the introductory discussion it was proposed that implementing the MECCAS procedure for advertising planning could improve advertising efficiency and effectiveness by creating:

P1. A higher level of goal persistency in the creative process

P2. A common ground for communication between agency and client

P3. Stronger target group associations between product and personal values

P4. A higher degree of central processing of the message

P5. A better performance on recall and persuasion measures

As regards P1 and P2, the interviews conducted with client and agency staff tended to confirm our expectations. Likewise we found a clear indication that the MECCAS procedure led to stronger product-value associations (P3), and a higher level of central processing (P4), and that these constructs are positively related. There were no clear indications, however, of whether a clearer perception of a product-value chain and a higher degree of central processing leads to better performance on memory and persuasion measures.

As discussed in section 2, the potential influence of confounding factors must not be neglected. The results presented in this paper can thus only be seen as

an indication of the possible advantages of using a model-based approach to the development and testing of advertising campaigns.

It should also be recognized that the pretest situation is very different from an authentic message reception context, because the respondent is placed in a laboratory environment, and because (s)he is asked to consider the contents of the ads in question. Thus, it must be expected that the amount of information conveyed in the pretest situation is affected in a positive direction. There is no reason, however, why this bias should affect the relative performance of the two proposals.

A generic campaign for apples was selected as the basis of the study because the apple is linked to many abstract symbols and values. The study also disclosed a disadvantage of the selection of a generic product. After being exposed to the ads, there were no differences between the average attitude to apples among the four groups of respondents, ie, the groups shown each of the two by two proposals and media versions. There was no before-after measure of product attitude in the study, but it is doubtful that such a measure would have made any difference. Most people have a well-established attitude to a generic product like apples, and hence it is difficult to measure/obtain any change of attitude to the product by any campaign or any type of message development procedure.

Another disadvantage of selecting a generic product was that this made it necessary to modify the ELAM pretest. As the estimations based on the modified version of the ELAM model were incongruent, not much can be said about the modified model's qualities as a pretest instrument for generic campaigns as such. As pointed out in section 3, especially for generic products it is insufficient to base the assessment of the extent of central processing on product-related recollection statements alone as it is done in the traditional ELAM pretest.

In the study presented in this paper, the standard coding procedure was therefore supplemented by a measure of value association. An alternative to this approach would be to integrate the two measures of central processing, ie, by only coding respondents as central processors if their answers to open recollection questions include product-related statements that are associated to consequences or personal values, ie, by combining open recollection questions with the laddering approach.

In general, the results of the pretest study indicate that the structural relationships for the conventional print version and the MECCAS video version tend to be similar, and that they both are different from the MECCAS print version. This is especially true regarding the effects of attitude to ad and extent of central processing. As such the findings are in accordance with the contention that printed advertising in general lends itself easier to central processing than does video advertising, and that the latter compared to the former is more influenced by aspects related to the execution and format of the message. Whether such media effects are generally more important than the effect of using model-based versus inductive procedures for advertising development, should be researched more thoroughly, however.

The results of the study substantiate the apriori expectation that model-based data in general and MECCAS-based data in particular can be used to improve the effectiveness and efficiency of advertising. As such the results should be used as an argument in an attempt to convince advertising agencies about the value of a model-based message development approach. A potential disadvantage for the advertising agency is that a model-based approach as MECCAS will expose the executional and creative qualities of the campaign. At the same time, however, it is conceivable that a client's extended involvement in the development of message strategy, which is made possible by MECCAS, may increase the client's propensity to assume part of the responsibility for the success – or failure – of the campaign.

Although the propositions which was the outset for this study were supported, we also acknowledge that the study is based on one case only, and because of this, and because of the validity problems related to advertising pretests in general, the findings have a tentative character. It is therefore recommended that the study be replicated on a broader scale, involving more products, media and agencies.

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