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PRETESTING ADVERTISEMENTS :

EMPIRICAL VALIDATION OF PRETEST METHODS

by

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INTRODUCTION.

This study reports the results of a cross-validation attempt for several responses as measured by three advertisement pretesting methods. The three methods are instances of the Consumer Jury approach, of the Target Plan approach and of the Portfolio method. Respondent's reactions on a set of response dimensions were obtained for a set of 24 advertisements.

The initial sections of the paper contain considerations on the advertising communication process and on advertisement pretesting. The next sections present the research objectives and the framework adopted in the validation attempt. The results and conclusions are presented in the subsequent sections. The evidence for validation is minimal. This leads to a number of substantive and methodological conclusions.

Pretesting advertisements : empirical validation of pretest
methods.

1. THE ADVERTISING COMMUNICATION PROCESS.

The investigation of the processes by which advertising influences
market response ranks among the leading concerns of advertising researchers.
The response unit may be the generic market, the brand market or the indi-
vidual [1] . The advertiser, generally identified with a brand and with
brand management, has found ample academic support for the investigation of
the effectiveness of his advertising effort. These studies relate adverti-
sing effort, mainly expenditures, directly to market response (market share,
sales, revenue). By adopting a stimulus-response framework, a simple but
fruitful connection is established with psychological learning paradigms.
Learning-curve and forgetting-curve parameters can be estimated and fed to
managerial decision making [2].

The advertising effort-market response relationship is established
through the actions of many individuals who are influenced by the adverti-
sing effort. The analogy with the Katona argument that the mechanistic
process assumed to hold at the aggregate level does not necessarily occur
at the level of the individual is appropriate here [3] . Whether the aggre-
gate relationship will appear at all, and how it will be, depends on the
processes occurring at the level of the individual consumer. In comparison
with the aggregate and retrospective advertising-sales studies, the analysis
of the micro-communication processes is less developed and less coherent.
It is mainly the province of those dealing with the creative aspect of ad-
vertising. The link between the macro-process approach and the micro-process
approach is not yet established; this is also shown by the lack of communi-
cation between management science and the creative "behavioral scientists"[4]

Our study deals with the micro-communication process and the various methods used to observe, study and measure it. We proceed from some generally accepted assumptions :

- advertising is a process of mass communication, with the inherent limitations of such communication
- advertising is not the sole determinant of the individuals market response, nor is it the only marketing tool used by the advertiser
- advertising achieves its goal by fulfilling communication tasks with the audience; this communication task can be seen as creating or changing attitudes in the broad sense of the term
- the communications task at the level of a single member of the audience is not necessarily, and not as a rule, fulfilled at once.

Recent developments in the study of consumer information processing have led to a better understanding of mass communication influence as a multidimensional and partly sequential, partly concurrent, process [5] . One may roughly sketch the process as consisting of four stages. The input stage deals with the properties of the advertising stimulus (appeal, format, media environment and scheduling). The communication process stage deals with the individual's response to the advertisement itself. The decision process stage deals with the response to the object of the communication. The output stage concerns the individual's overt behavior toward the object of the communication. It is always easy to separate these stages in practice. Failure to make such a distinction in principle, however, leads to confusion in practical applications. The core of the communication process, namely the communication and decision stages, will henceforth be referred to as the microcommunication process (mcp).

Searching the literature, it is clear that all authors recognize the multiple dimensions in the mcp [6,7] . Each source mentions a series of responses generally accompanied by a description of the underlying concepts. These inventories and related definitions have the weakness of (1) containing only a limited set of reactions, biased by a particular theoretical or

methodological perspective,(2) not indicating the relationship of a concept with others from the same or from different inventories and (3) not discussing the validity of the retained constructs.

Having considered the various contributions on the mcp, we compiled the following list of reactions to advertising messages

1. attention getting : extent to which the advertising stimulus mobilizes/ focuses the individuals perceptual processes on the message (initial attention).

2. aesthetic appreciation : extent to which the advertising stimulus is experienced as perceptually agreeable.

3. new learning : extent to which the message is judged to contain hitherto unknown information.

4. interest : extent to which the message can mobilize continuing attention

5. informativity : extent to wich the message is judged to contain factual information.

6. persuasion : extert to which the advertising stimulus leads to yielding to the message's intent or content.

7. message derogation : extent to which the respondent is inclined to discount the content of the message because of perceived weaknesses proper to the message.

8. source derogation : extent to which the respondent is inclined to discount the message because of perceived weaknesses of the source (advertiser, medium or advertising in general).

9. connection : establishment of conscious links between the message and personal experience (personal relevance, involvement).

10. counterarguing : arguments against the advertised object or its use, beyond mere refutation of message components.

11. curious disbelief : benevolent skepticism w.r.t. to the content and object of the message.

12. message retention : cognitive learning of the message and its symbolic content.

13. comprehension : case of perceptual and cognitive structuring/interpretation of the stimulus.

14. object awareness : awareness of the existence of the object of the communication, (familiarity), extent to which the stimulus creates such awareness.

15. object knowledge : evaluative and non-evaluative judgments about the object of the message; extent to which the stimulus establishes such judgments.

16. object attitude : overall affective or evaluative judgment about the
    object of the message; extent to which the stimulus establishes such
    attitude.

17. behavioral intention : extent to which the individual is likely to en-
    gage in overt behavior w.r.t. the object of the message; extent to
    which the message establishes such tendency.

18. image-building potential : extent to which the message contributes to
    the establishment of a concise symbolic meaning for the object.

19. message familiarity : extent of previous knowledge of the message.

2. TESTING ADVERTISEMENTS.
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    When testing advertisements, one investigates the micro-communication
impact of the message and evaluates the effectiveness w.r.t. some criteria
assumed to be valid for ultimate market response. According to the timing
and use in the managerial decision process, the main distinction is between
pretesting and post-testing. This study is concerned with pretesting ex-
clusively, although nothing prevents the incorporation of posttest data in
the design. We hope that posttest results will ultimately be available in
order to make the validation attempts more complete.

    Since over a variety of pretesting procedures, combining several prin-
ciples and methods, exists in practice, no effort will be made to categorize
them systematically here. Rather, the three procedures used in our research
will be presented. These three methods were selected because they are in-
stances of regularly applied pretest methods and because they allow testing
of the communication as well as of the decision stages in the mcp.

a. The Consumer Jury Method (opinion and attitude ratings).
   In this method, the respondent is asked to state his opinions concerning
   a message along a number of evaluative dimensions, presented under the form
   of rating scales. The method is simple, fast and inexpensive. Its weak-
   nesses are, a.o. that the respondent may assume an alien role in respon-
   ding, that the opinions are only indirect and verbal operationalizations

of the intended reactions, that the ratings are subject to many extraneous sources of random or systematic disturbance (the halo-effect is a danger often cited). In our version of the consumer-jury method respondents are asked to evaluate each of twelve advertisements on a set of eighteen scales (appendix 1a). The scales were rated within advertisements while the ads were kept in full view. Since the respondent rated the messages personally on a form, reactive effects due to interaction with the researcher were minimized.

b. The Portfolio Method.

The most distinguishing characteristic of the portfolio method is that the questioning takes place after exposure to a set of advertisements. All self-reports are therefore based on memory. Our application of the portfolio test makes use of written self reports after exposure to 24 advertisements. The respondent is asked to identify those messages he can recall, to remember the visual and verbal elements of the advertisement and to mention any spontaneous thoughts or reactions at the time of exposure. The advantages of this recall test are the higher face validity for a number of reactions and the limited reactivity. The disadvantages are the limited quantity of material produced and the need to interpret the written reactions with inherent weaknesses in the coding. The coded reactions are shown in appendix 1b.

c. The Target-Plan Methode (T-plan).

The target-plan methode makes use of intensive personal interviewing of a semi-structured nature. This leads to the immediate weaknesses inherent to the vagaries of semi-structured or unstructured interviews and of the subsequent interpretation and coding. The method uses sequential short- and long term exposures to the message and attempts to establish whether some target reactions of perceptual, cognitive and emotional nature are produced. The advantages of the method are the opportunity for immediate reaction and in-depth probing, which may result in valuable diagnostic information. An additional weakness is the reactivityof persond interviewing.

Our use of the target-plan method did not involve true targets (these should be known to the creative people). The questioning was directed at particular reactions after either short term exposure at unlimited exposure. These reactions are listed in appendix 1c. Four to six advertisements were dealt with sequentially; this procedure departs from the prescription by T-plan practitioners to evaluate only a single ad. Asking the respondent to repeat an identical procedure does create expectations and learning with potentially undesirable effects.

3. OBJECTIVES FOR THE STUDY.

The objectives for our study should be seen in the light of a construct and measure validation framework, involving multiple constructs, multiple measures and several methods. The intent is exploratory rather than confirmatory.

The research questions can be summarized as :
- what is the dimensionality of the advertising micro-communication process ?
- what is the nature of the constructs appearing from such research ?
- is there a correspondence between the results obtained by applying several research methods to the same stimuli ?
- can one generalize such results across advertising stimuli.

It should be stressed that these are questions dealing with the structure of the reaction process, i.e. with its correlation or covariance matrix, rather than with the mean profile.

The data for the study consist of sample averages or percentages obtained by a set of 24 print magazine advertisements on various respondent reactions as measured by the three methods described in section 2. The advertisements were selected from leading women's weeklies and contain a variety of product, appeal and format approaches. Respondents were randomly selected housewives shopping at supermarkets in the area of Leuven,

Belgium. Care was taken to systematically rotate the order of presentation of stimuli and questions where possible. The size of the sample used to evaluate an advertisement depends on the method. For the consumer-jury method, each ad is rated by 24 respondents. The sample size for the T-plan procedure numbered only 7 or 8 housewives. Approximately 50 respondents were available for the portfolio method. Separate advertisements are evaluated by respondent samples which are totally or partially overlapping. The stimuli were projected in order to allow better control of exposure time.

4. VALIDATION FRAMEWORK.

The cross-validation of concepts and methods was carried out in the spirit of the Campbell and Fiske Multitrait-Multimethod Matrix framework [8, 9]. This requires that multiple measures be made of multiple constructs. For our study we obtain a matrix of Pearson correlations between the average score obtained by the series of 24 advertisements on one trait-method combination and another trait-method combination.

In order to demonstrate the validity of a given construct, the following conditions should be fulfilled
- the measures should have sufficient reliability in order to warrant further investigation. Lack of reliability in a measure is known to attenuate the correlation between measures to a value less extreme than the true correlation between the corresponding constructs
- the constructs should have convergent validity, i.e. the correlations between independent attempts to measure the same construct (e.g. by different methods) should be significant and in the expected direction.
- the constructs should have discriminant validity
   a. independent measures of the same construct should correlate higher than independent measures of different constructs.

b. independent measures of the same construct should correlate higher
   than measures of different constructs employing the same method.
c. irrespective of the particular method used for measurement, the
   pattern of trait intercorrelations should have some consistency.

When organizing the correlation matrix with traits within methods,
the fields of the matrix can be labeled according to whether some or dif-
ferent traits (monotrait, heterotrait) and the same or different methods
(monomethod, heteromethod) are involved.

5. ANALYSIS.

The fields of the multitrait-multimethod correlation matrix are
shown in appendix 2. The hetrotrait-monomethod half matrices appear in
tables 2.1 tot 2.3. The diagonal entries are the communalities obtained
after a clasical principal components factor analysis with Kaiser-criterion
extraction. They should theoretically serve as a lower bound for the re-
liability of the measures.

Tables 2.4 to 2.6 present the three heterotrait-heteromethod matrices
for those pairs of measures that are hypothesized to correspond to the
same construct.[x]

5.a. The monomethod matrices differ in the general level of the correlations
reflecting higher or lower correlations among true values, differences in
the correlation level of measurement errors and differences in the variance
of random error. The proportion of correlations larger than or equal to
.27 in absolute value (the .10 significance level in a directional test)
is 54 % for the consumer-jury method, 28 % for the target-plan method and
16 % for the portfolio method.

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[x] The consumer jury rating scales are coded in the opposite direction of
the expression of the item. Negative heteromethod correlations should
therefore be expected.

Reliability estimates are seldom obtained in marketing research because of inherent and practical difficulties in reliability assessment [10] Since the measures used here are sample averages or percentages the mean scores would converge to a value m if the sample size were increased indefinitely.

Let the score for advertisement j on measure k by respondent i be written as

(1) $\qquad X_{ijk} = m_{jk} + t_{ijk} + e_{ijk}$ $\qquad$ $(i=1,\ldots I; \ j=1,\ldots J; \ k=1,\ldots k)$

with e_{ijk} as random error and t_{ijk} a systematic deviation from m_{jk} specific to the respondent.

The average score for advertisement j on measure k is

(2) $\qquad X._{jk} = m_{jk} + t._{jk} + e._{jk}$

The variance of $X._{jk}$ over the J advertisements is

(3) $\qquad \underset{j}{var} (X._{jk}) = \underset{j}{var} (m_{jk}) + \underset{j}{var} (t._{jk}) + \underset{j}{var} (e._{jk})$

with the latter two terms tending to zero as the number of respondents in the sample increases.

The covariance of $X._{jk}$ and $X._{j\ell}$ over the J advertisements is

(4) $\qquad \underset{j}{cov} (X._{jk},X_{j\ell}) = \underset{j}{cov} (m_{jk},m_{j\ell}) + \underset{j}{cov} (t._{jk},t._{j\ell})$

with the latter term tending to zero as the sample size increases. This expression assumes that the random errors are independent of any systematic component in the measure and that subject-specific deviations are independent of the mean values m.

It should be noted that

1. the distribution of scores X_{ijk} around the sample mean $X._{jk}$ remains an important item of information, irrespective of the sample size I.

2. the reliability, being the ratio of systematic to total variance of the sample mean scores $X._{jk}$ can have two interpretations:

$$(5) \qquad R_{x_k} = \frac{\underset{j}{var}(m_{jk}) + \underset{j}{var}(t._{jk})}{\underset{j}{var}(X._{jk})}$$

or

$$(6) \qquad R_{x_k} = \frac{\underset{j}{var}(m_{jk})}{\underset{j}{var}(X._{jk})}$$

Both reliability definitions are for mean scores from a sample of I respondents. Formula 5 is the reliability for testing within the same sample and formula (6) for testing across independent samples. This distinction is also found in modern psychometric approaches to reliability assessment which prefer to decompose the variance into its components, rather than to make a simple distinction between systematic and error variance [11].

3. The variance and covariance expressions 3 and 4 contain a variance or covariance component in $t._{jk}$. The subject-specific oomponents t_{ijk} are systematic and due to true opinion or to certifacts such as response tendencies or halo effects. One should be aware of the possible impact of the latter source of response consistency when a number of measurements are made on advertisements using the same sample. All of the pretest methods in this study made use of the same sample of respondents to evaluate an advertisement on multiple measures (rating measures within stimuli); since the samples used to evaluate separate ads were also partially or totally overlapping, the correlation matrices used for analysis are subject to the impact of such correlated measurement error.

If the true number of factors underlying a set of measures were known, the communality would serve as a measure of formula 5. An approximation to the reliability in formula 6 can be obtained by using the average variance of the scores X_{ijk}

$$(7) \quad \frac{1}{J} \sum_{j=1}^{J} \left\{ \frac{\sum_{i} var(X_{ijk})}{I} \right\}$$

as an estimate of the error variance in the series of sample means or proportions for measure k.

Table 1 shows the communality and the reliability, estimates for formula 5 and 6.

The figures in table 1 are of such a nature as to discourage further investigation with a strict definition of reliability (formula 6). Much larger sample sizes than those used for the present study are required in order to be able to make reliable conclusions and in order to validate measures across independent samples of respondents. The communality values tend to be higher, though not necessarily within the disirable range for reliability. Reliability estimates may exceed communalities where the factor analysis leaves some shared variance unexplained. Negative reliability estimates are obtained rather frequently and may be due to sample fluctuation. Ponounced differences between communality and reliability, if positive, tend to indicate the impact of systematic subject-specific response components.

One should conclude that the reliability of pretest measures at sample sizes often used for such research is a potential source of problems. Interpretations can be hazardous unless a comfortable sample size is secured. The negative findings on reliability forebode ill for our further analysis and indicate that future validation studies should make use of

Table 1 : Estimates for the reliability of pretest measures
obtained by three methods.

consumer jury method items	communa-lity	reliabi-lity	Target plan method items	communa-lity	reliabi-lity	Folia method item 1	communa-lity	reliabi-lity
1	.98	.53	1	.78	.74	1	.63	.88
2	.47	.83	2	.71	(——)	2	.74	.60
3	.59	.59	3	.68	.64	3	.81	.59
4	.91	.67	4	.79	.53	4	.69	.38
5	.64	.53	5	.79	.09	5	.51	.11
6	.46	(——)	6	.76		6	.79	.11
7	.57	.41	7	.19	(——)	7	.98	.50
8	.65	.73	8	.66	.15	8	.89	.32
9	.58	.25	9	.87	.80	9	.67	.42
10	.90	.40	10	.68	.62	10	.57	.19
11	.78	.61	11	.65	.61	11	.75	.42
12	.87	.46	12	.88	(——)	12	.36	.90
13	.60	.71	13	.80	(——)	13	.56	.02
14	.60	.70	14	.49	.51	14	.87	.44
15	.69	.88	15	.97	(——)	15	.55	(——)
16	.78	.56	16	.67	.49	16	.76	.64
17	.48	.15	17	.81	.45	17	.76	.79
18	.78	.19	18	.30	.31			
			19	.84	.28			
			20	.72	(——)			
			21	.79	.31			
			22	.84	.75			

note : (——) reliability estimate negative.

(1) sufficiently large sample sizes, (2) adequate measurement instruments,
a.o. in order to prevent halo effects from occurring and (3) adequate methods
for data analysis (a.o. confirmatory factor analysis) [12] in order to
model the measurement process more accurately.

5.b. Heteromethod blocks are presented separately in appendix rather than as part of a single 3-method multitrait matrix. This was done because not all the concepts have a measure in each method and because it appeared impossible to combine all blocks into a multitrait-multimethod matrix while showing a semblance of convergent or discriminant validity. We do therefore analyze the heterotrait-heteromethod blocks separately as if they were part of a 2-method study.

5.b.1. Cross-validation of Consumer-jury and Portfolio-method items.

Table 2 shows the validity diagonal value, the number of correlations equal to or exceeding the absolute value of the validity in the corresponding row and column of the heterotrait-heteromethod block and the number of correlatiens equal to or exceeding the absolute value of the validity in the corresponding rows of the monomethod triangle.

Only 7 of the 15 validity values in table 2 reach the .10 significance value of $\pm$ .27 (directional test) and at the same time perform reasonably in terms of dominating other heteromethod or monomethod correlations : previous knowledge of the advertisement, recall of the advertisement, message registration, connection, message derogation, positive product/brand evaluation and support arguing. Three of the constructs, namely previous knowledge of the advertisement, positive product evaluation and advertisement recall are rather related to pre-existing attitudes and to previous experience. Their validity cannot said to be established w.r.t. the mcp only.

Low validity values for a number of constructs can be explained by the remoteness of their operational definitions. Brand name recall is operationalized as point of purchase brand recognition (consumer jury method CJM) and as unaided brand name recall (portfolio method PM); visual impact as "eye catching" (CJM) or unaided visual recall (PM); visually pleasing as "visually pleasing" (CJM) or as spontaneous positive comments on format (PM),

Table 2 : Validity results for the consumer jury - portfolio method cross validation.

construct, items (1)	validity (2)	heteromethod correlations>validity		monomethod correlations>validity	
		consumer jury	port-folio	consumer jury	port-folio
advertisement recall(33,41)	-.49	0	3	4	0
brandname recall(38,42)	-.09	11	9	12	10
visual impact(23,43)	-.14	9	10	12	10
message registration(27,44)	-.43	0	0	3	0
visually pleasing(24,45)	-.23	5	3	7	6
connection(31,46)	-.39	0	3	4	1
source derogation(30,47)	-.25	5	5	11	1
message derogation(29,48)	-.30	3	1	4	4
persuasion(28,49)	·.01	14	14	13	14
curious disbelief(32,50)	.02	14	12	13	14
support arguing(34,51)	-.28	3	4	9	2
new learning(25,52)	-.12	11	10	10	8
positive product/brand evaluation(36,53)	-.30	3	2	6	0
behavioral impact(40,55)	-.11	8	9	14	11
known advertisement(37,56)	-.51	0	1	4	0

(1) the numbering in parenthesis refers to the continuous ordering, also in parenthesis, found in appendix 1.

(2) the consumer jury ratings are scored in the opposite direction of the item. All validity values therefore have the expected sign except for the constructs source derogation, and curious disbelief.

persuasion as "persuasive" (CJM) or spontaneous counteraguing (PM); behavioral impact as "could influence my purchasing behavior" (CJM) or spontaneous motivation thoughts (PM). The operationalization for the constructs

of source derogation, curious disbelief and new learning are more closely matched but do not lead to evidence of validity.

We note that the monomethod correlations are more pronounced for the consumer jury method, which may indicate the operation of a strong method factor for that procedure. However disappointing the validation exercise, some positive conclusion can be drawn from the fact that a number of item-pairs obtained reasonable results and from the fact that these items range across responses of communication, covert responding and general attitudinal context.

5.b.2. Cross-validation of Consumer-jury and Target Plan method items.

Table 3 : Validity results for the consumer-jury method-target plan method cross-validation.

Construct, items	validity (1)	heteromethod correlations ≥ validity		monomethod correlations ≥ validity	
		consumer jury	port- folio	consumer jury	port- folio
visual impact (3,23)	-.57	0	1	1	0
visually pleasing(13,24)	-.58	0	0	1	0
new learning (11,25)	-.48	0	2	1	2
interesting (14,26)	.00	16	16	15	15
message registration(4,27)	-.05	11	13	13	14
persuation (19,28)	.18	8	9	10	10
message derogation (18,29)	.41	4	0	3	0
source derogation(17,30)	-.24	8	8	11	3
connection (16,31)	-.30	6	5	8	3
curious disbelief(20,32)	-.07	9	14	12	13
support arguing (21,34)	-.48	1	2	7	0
comprehensible (10,35)	-.27	3	6	6	9
positive product (22,36) evaluation	-.47	1	4	5	5
known advertisement(8,37)	-.31	7	2	9	7
behavioral impact (12,40)	-.01	15	15	15	15
brand name recall (1,38)	-.43	2	3	5	2

(1) note : CJM scores rated negatively. All validity values have the expected sign except for message derogation and source derogation.

Table 3 shows ten validity values exceeding the 10 significance level
for a directional test, one of these correlations having a sign opposite
to the expectation. Some of these constructs do not perform well when their
validity value is compared with their heterotrait correlations, both within
and across methods. Validity is tentatively established for visual impact
(eye-catching), visually pleasing, new learning for support arguing and
for brand name recall and to a lesser extent for connection, comprehensible,
positive product evaluation and previous knowledge of advertisement. Of
the remaining constructs, failure to establish validity may be attributed
to faulty correspondence if operationalizations for message registration
as "contains useful information" (CJM) or as "recall of message content
after brief exposure" (Target-Plan method-TPM) and for persuasion as "per-
suasive" (CJM) or "spontaneous counterarguing comments" (TPM). The fore-
going explanation is less adequate for the concepts interesting, message
derogation, source derogation, curious disbelief and behavioral impact.
Of the tentatively validated constructs, three are rather linked to pre-
existing attitudes or experience knowledge of advertisement, positive pro-
duct evaluation and brand name recall. We note a sleight tendency for the
CJM monomethod correlations to exceed the PM monomethod correlations.

In contrast with the poor results we again the fact that reasonable
validity is found for items dealing with a variety of response dimensions
impact, communication, covert responding and contextual attitudes or ex-
perience.

5.b.3. Cross-validation of Target Plan and Portfolio method items.

Only five constructs reach a validity level in excess of the .10
significance value for a directional test, with two of these constructs
performing relatively weakly in comparison with other heterotrait correla-
tions ad recall, brand name recall, source derogation, previous knowledge
of advertisement and product/brand usage. With the exception of source
derogation, these measures are rather influenced by previous attitudes and

Table 4 : Validity results for the Portfolio and Target Plan methods.

construct, items	validity	heteromethod correlations ⩾ validity		monomethod correlations ⩾ validity	
		portfolio	target plan	portfolio	target plan
ad recall (41,10)	.29	6	3	4	10
brand name recall(42,1)	.39	3	3	3	4
visual recal (43,3)	.16	13	7	10	4
message content recall (44,4)	.21	5	7	8	8
positive format evaluation (45,13)	-.13	8	9	12	10
connection (46,16)	.19	9	8	6	10
source derogation(47,17)	.84	0	0	0	0
mesage derogation(48,8)	.07	14	14	13	12
counterargoing (49,19)	.17	4	9	7	9
cirious disbelief(50,20)	-.16	9	10	7	12
support arguing (51,21)	.00	16	16	16	16
new learning(52,11)	.15	6	9	6	13
positive product evaluation (53,22)	-.05	15	14	15	14
interest (54,12)	.21	6	6	10	6
motivation (55,15)	-.03	16	13	15	14
advertisement known (56,8)	.43	0	0	0	2
product/brand usage (57,9)	.63	0	0	0	1

experience. Of the remaining constructs, only interest, operationalized as interest in further product knowledge (PM) or as impact of message on purchasing behavior (TPM) shows an obvious weakness in the correspondence of operationalization which can explain the lack of validity. The remark made for the previous cross-validation attempts, namely that although only a minor part of the item-pairs lead to a conclusion of validity, these pairs cover a range of response types, is less applicable here.

5.c. Conclusions.

The previous analyses are not encouraging since the reliability of the sample mean scores for the advertisements is questionable and the method-by-method cross-validation shows definite weaknesses. This becomes even more apparent when the data are put in a 3 method-multitrait matrix; this matrix does not display the properties of convergent and discriminant validity at all. For this reason, the last step in the discriminant validation program, i.e. investigation of the reproducibility of trait intercorrelations in the various half-matrices, was not attempted. Among the traits displaying some validity, those pertaining to the individual's pre-existing attitudes and behavior, rather than those pertaining to the mcp, are relatively numerous.

Several reasons can be given for the negative results :

(1) poor reliability of test scores. This situation can be remedied by means of larger sample sizes in the first place. In addition, knowledge of the random and correlated error components is necessary.

(2) operation of confounding factors, a.o. response tendencies and method effects which tend to inflate monomethod correlations in comparison with heteromethod correlations [13] .

(3) lack of care in the definition and especially in the operationalization of constructs and in the correspondence of such constructs across methods.

(4) lack of independence of the constructs, leading to high heterotrait correlations, this may most markedly be the case for the intercorrelation between product/brand familiarity or message familiarity and the othe constructs.

(5) different constructs may be measured by different methods.

Finally, on the positive side, we should note that some correspondence was established between the methods. Although these correspondences can be accounted for by contextual attitudes and experience, there is

some indication that other, mcp-specific constructs of varying nature can be validated.

6. EXPLORATORY STUDY OF THE MONOMETHOD CORRELATIONS.

Low monomethod-heterotrait correlations are desirable for multitrait-multimethod validation. Otherwise the procedure will be rendered difficult because of the redundancy in the measurement. The monomethod matrices were analyzed separately by means of factor analysis in order to reduce the redundancy and in order to study the underlying structure of the responses.

6.a. Consumer Jury Method.

The monomethod correlations are often pronounced in comparison with those for other methods. The eighteen items lead to four factors, implying a rather simple structure for the reaction process. Loadings of at least .40 are shown in table 5.

Factor I correlates with items expressing information transfer, attitude creation and behavioral impact. It unites the components of the decision hierarchies or of the attitude. Factor II contains items expressing familiarity with the product and/or its advertisement, leading to less transfer of new information but associated with brand name recognition and personal relevance. Factor III contains the attention-getting power, hence higher memorability and some behavioral impact. FIV correlates with negative covert responses, which is associated with less familiarity and with a negative impact on attitude. The four concepts obtained from the analysis are therefore hypothesized to be perceptual impact (FIII), covert cognitive responding (FIV), attitudinal hierarchy effects (FI) and general attitudinal context (FII).

Table 5 : Varimax loadings for the CJM-monomethod correlation matrix.

items	F I	F II	F III	F IV	communality
1. eye catching			.97		.98
2. visually pleasing			.68		.47
3. new learning	.54	-.49			.59
4. interesting	.93				.91
5. informative	.79				.64
6. persuasive	.48				.46
7. credibility				.60	.57
8. positive source evaluation		.73			.65
9. connection		.73			.58
10. curious disbelief				.89	.90
11. advertisement recall			.79		.78
12. creates favorable attitude	.79			-.40	.87
13. comprehensible		.74			.60
14. positive product evaluation	.47	.49			.60
15. known advertisement		.63		-.40	.69
16. brand name recognition		.82			.78
17. provides good image	.58				.48
18. purchasing influence	.67		.51		.78
% of variance	43 %	28 %	16 %	13 %	% of total variance 75 %

Some items are not clearly associated with a particular factor or have a complex factorial structure

- new learning : the complexity is due to the confusion between the informative nature of the message as such and the extent to which its information is already known to the respondent.

- persuasive : the low loadings and communality may be due to response tendencies restricting the true range of variance, since there may be social pressures against acknowledging an advertising stimulus as being persuasive.

- positive product evaluation : the factorial structure is complex due to the confusion of attitude change effects and existing attitudes w.r.t. to the product or brand.

- provides good image : the item was intended as a measure of the image-building effect of the ad. It is likely that it was not well understood and confused with the comprehensibility of the stimulus.

The consumer-jury method correlations show a reaction process which is simple in its structure, implying that there is substantial shared variance between constructs. It is the question whether the dimensionality thus revealed reflects the true complexity of the mcp or whether strong method factors have an overriding, simplifying influence.

The familirity with the message factor absorbs more than a fourth of the shared variance. Adding brand or product familiarity to the evaluation scales would likely have lead to an even larger proportion of variance attributable to familiarity. The three remaining factors are appealing, since the contain the input process (impact), the central processing (covert responding) and the out put process (awareness-knowledge-attitude-behavior).

6.b. Target plan method.

The factor analyzed scores are sample proportions for the occurrence of certain reactions. As noted above, the general level of the correlations is lower than in the case of the consumer jury method.

The number of factors obtained is large relative to the number of items, showing a reaction pattern of a richer structure, but with components which are often hard to define FI contains a number of reactions pointing to previous product/brand knowledge or experience, connected with less communication of new information and with the occurrence of positive and absence of negative covert cognitive responding. FII points to recall (after brief exposure) of verbal message components, enhanced by previous message knowledge. FIII relates impact to visual recall and to derogatory source comments; this may be the reaction pattern to a visually intrusive message.

Table 6 : Varimax loading for the TPM-monomethod correlation matrix.

items	FI	FII	FIII	FIV	FV	FVI	FVII	FVIII	Communa-lity
1. brand name recall				.66					.78
2. headline recall		.78							.71
3. visual recall			.75						.68
4. message recall		.83							.79
5. continued attention								.83	.79
6. message-related continued attention			.79						.76
7. occurrence of spontaneous responses									.19
8. advertisement known		.41							.66
9. user of product/brand	.86			.63					.87
10. message comprehension	.42								.68
11. new learning	-.67								.65
12. contribution of ad to purchasing							.86		.88
13. positive format evaluation						.82			.80
14. interesting	-.62								.49
15. motivation					.91				.97
16. connection	.65				.48				.67
17. source derogation			.60					-.55	.81
18. message derogation				.41					.30
19. counterarguing				.75					.84
20. curious disbelief	-.59			-.51					.72
21. support arguing	.48					.44	.46		.79
22. positive product evaluation.	.88								.84
% of variance	30%	16%	15%	12%	9%	7%	6%	6%	total 79%

FIV has a difficult interpretation : brand name recognition and brand usage are associated with unfavorable cognitive responding; a message for a known brand is received skeptically for reasons pertaining to message content. FV has an easy interpretation as motivating and personally relevant, FVI as a positive response to the message as such (mainly its format elements) FVII combines support arguing and the evaluation of a message as potentially contributing to purchasing behavior. FVIII cannotes continued attention without source derogation.

The factors are tentatively labeled as product/brand familiarity (I), message familiarity (II), intrusive visual impact (III), personally motivating (V), visually pleasing (VI), interest or continued attention (VIII), purchase relevant (VII) and skeptical response to message for familiar object (IV).

Some items have a complex factorial composition or a low communality
- direct questioning on the extent of covert cognitive responding has low communality, though questioning on specific types of cognitive response often leads to good communality values. The difficulty of the question and/or response tendencies created by personal interviewing may explain this.
- the complex factorial structure of product/brand usage is to be expected in view of the influence of existing attitudes and experience on the mcp; the same holds for the response of connection.
- response message registration has 'few' strong loadings but a respectable communality, pointing to the complexity of the communication of information in the mcp.
- complex factorial structure is observed for several covert response reactions : source derogation, curious disbelief, support arguing; message derogation and counterarguing have a simple structure, which is not at all pronounced for message derogation (low communality). The latter is surprising in view of the pattern for the closely related response of counterarguing. The complexe structure for certain aspects of cognitive responding may point to the interactive effects of such mediators.
The Target-Plan method shows a rich and varied reaction process. Unfortunately, the small sample sizes used for the investigation make any generalization hazardous, except for the predominant shared variance accounted for by product/message familiarity.

6.c. Portfolio-Method.

The factoranalyzed scores are sample proportions for the occurrence
of certain reactions. Since the respondents were not specifically asked
for particular responses, the response protocols yield limited information
restricted to those advertisements which are recalled. The respondent
lists only the first reaction coming to his mind; these responses are
presumably rather strong and significant in order to be elicited.

Table 7 : Varimax loadings for the PM-monomethod correlation matrix.

items	F I	F II	F III	F IV	F V	FVI	F VII	Communality
1.ad recall					.74			.63
2.brand name recall		.63						.74
3.visual recall	.76							.81
4.message content recall			.79					.69
5.positive evaluation of format	-.42							.51
6.connection				.85				.79
7.source derogation							.96	.97
8.message derogation	.89							.89
9.counterarguing	.79							.67
10.curious disbelief						.68		.57
11.support arguing						.68		.75
12.new learning		-.55						.36
13.positive product evaluation					.43			.56
14.interest for product	.46					.63		.87
15.motivation			.57					.55
16.advertisement known		-.48		.60				.76
17.product/brand usage					.76			.76
% of variance	25%	20%	16%	13%	12%	8%	7%	% of total variance 81%

The factors underlying the reactions to advertisements as measured
by means of the portfolio method are multiple but obscure. In FI the
frequency of visual recall is associated with the frequency of negative

covert responding against the message; this may be the reaction to visually intrusive messages. FI contains loadings which are in apparent conflict (ads leading to brand name recall are judged unknown or new and uninformative); one may conjecture that this would indicate the response to new noninformative ads for known brands. FIII connotes motivating communication. FIV is related to familiar messages (in the sense of known and personally relevant ads), while FV denotes product/brand familiarity. FVI contains supportive cognitive responses. FVII correlates strongly only with source derogation. One can tentatively label the factors as intrusive (I), uninformative reminder (II), motivating message (III), message familiarity (IV), product familiarity (V), positive cognitive responding (VI) and source derogation (VII).

Except for interest and ad knowledge, the factorial composition of the items is rather simple. The communality is particularly low for new learning. One of the responses with very limited incidence in the response protocols.

The Portfolio method shows a complex pattern for the reaction process. Since the questioning is least structured, a minimal pattern is imposed on the respondent's reactions. In addition, these freely elicited responses have to be coded, with the inherent danger for loss of information. The appeal of unguided and unstructured interviewing is balanced by the paucity ·, heterogeneity and unclear nature of the information thus obtained.
Compared to the previous methods, the shared variance accounted for by product or message familiarity is restricted. This is contrary to expectation since one would expect familiarity to be a strong response determinant in recall tests.

6.d. Conclusion: Multitrait-Multimethod validation of factor score coef-
      ficients.

The three factor analyses performed on the monomethod correlation
matrices lead us to hypothesize different numbers of factors with various
definitions according to the method. In order to study the correspondence
between the three factor-analytic solutions, the correlations between the
factor score coefficients are organized into heteromethod-heterotrait
blocks. We opted for a factor-analytic solution with six factors for
each method, in the hope of recovering similar factors across methods.

The varimax factor loadings are shown in appendix 3. Table 7 con-
tains the verbal interpretation given to the factors.

Table 7 : Labels for six factors obtained from a factor analysis
          of monomethod correlation matrices.

Consumer jury method		Target Plan method		Portfolio method	
CF I	familiarity	TF I	familiarity	PF I	intrusive impact
CF II	attitude formation	TF II	communication/mes-sage familiarity	PF II	communication
CF III	eye catching	TF III	motivation	PF III	positive cognitive responding
CF IV	negative covert res-ponding	TF IV	negative response to known message	PF IV	familiarity with message
CF V	product evaluation	TF V	intrusive visual impact	PF V	product/brand familiarity
CF VI	persuasion	TF VI	positive response to message	PF VI	response to unin-formative message for known brand.

The correlations among these 18 factor scores across methods appears
in table 8. The labels tentatively given to the factors in table 7 suggest
some correspondences, although these might have been more pronounced after
a suitable rotation of the factors for some or for all methods.

Table 8 : Heteromethod correlations for 6 factor score coefficients
and three methods.

	TFI	TFII	TFIII	TFIV	TFV	TFVI	CFI	CFII	CFIII	CFIV	CFV	CFVI
CFI	-.28	-.10	.37	.08	.17	-.26						
CFII	-.04	.09	.22	-.10	.61	.07						
CFIII	-.07	-.13	.27	.27	-.30	.20						
CFIV	-.06	.28	.14	.12	.12	-.27						
CFV	-.22	-.10	.14	-.51	.18	.12						
CFVI	-.60	-.30	-.15	.34	.02	.06						
PFI	.28	-.05	-.26	-.14	-.26	-.22	-.32	-.20	.08	-.36	-.09	-.24
PFII	.19	.11	.25	-.15	.01	-.07	.09	.01	.18	.30	.01	-.48
PFIII	.36	.20	.00	-.41	.22	.07	.01	.19	-.50	.16	-.11	-.30
PFIV	.25	.25	-.15	-.12	-.27	-.23	-.05	.07	-.09	-.08	-.12	-.26
PFV	.13	.10	-.12	-.02	-.31	-.10	-.16	-.26	.04	-.25	-.10	-.09
PFVI	.30	.28	-.06	.10	-.10	-.16	.14	-.29	-.33	.06	.10	-.20

The correlation matrix in table 8 allows a "reverse" approach to
multitrait-multimethod validation, by heuristically re-arranging rows and
colums so as to obtain high correlations on the validity diagonal and by
checking the correspondences thus obtained for evidence of validity. En-
gaging in this exercise, however, it quickly becomes clear that the reason
for high correlations between traits from different methods is obscure
and that the arrangement of traits optimal for the comparison of one
method with a second one is conflicting with the optimal arrangement re-
quired for the third method.

The negative evidence on this further validation attempt may be
due to the same causes as pointed out previously. In addition, some danger
of misinterpretation is possible in second-stage analyses, where statisti-

cal data from a previous analysis are subjected to further statistical
manipulation. One may note that even the familiarity with advertisement
or the familiarity with product/brand does not appear clearly as a vali-
dated trait in table 8.

7. THE IMPACT OF CONTEXTUAL ATTITUDES ON THE REACTION PROCESS.

The direct validation of traits and the factor analyses of the
monomethod correlation matrices have repeatedly demonstrated the strong
impact of preexisting attitudes and experiences with the message or its
object on the reactions of the respondent to the message. This finding
is not surprising to the practitioner who views a particular message as
contributing to general campaign goals, embedded in a longer-range marke-
ting program. Advertising researchers have repeatedly pointed out the
effect of respondent's brand knowledge or preferences on test scores and
evaluations [14] . More evidence on this aspect is contained in table 9
which contains the simple and multiple correlations between test scores
on the one hand and advertisement familiarity and/or product usage (brand
usage) on the other.

Table 9 shows a relationship between familiarity on the one hand
and recognition, memorability and identification of the message on the
other, the portfolio method shows a negative correlation between visual
recall and familiarity, stressing the importance of visual impact for
novel messages. Transfer of information may be hypothesized where mes-
sage or product familiarity may be the causal factor, as appears from
the relationship to message content recall or comprehension on the one
hand and to new learning on the other. A number of covert responses or
mediators are related to familiarity (connection, interest, counterarguing,
curious disbelief, support arguing). As expected, the relationships dif-
fer according to the method and wether message or object familiarity is
concerned. In an attempt to eliminate the confounding effects of familiari-
ty is concerned. In an attempt to eliminate the confounding effects of

Table 9 : Simple and multiple correlations between test scores and
advertisement familiarity or brand (product) familiarity
for three pretest methods.

Target Plan method.

| items | simple correlations with | | multiple correlation |
	ad know-ledge	product/brand usage	
1.brand name recall	.45	.49	.38
2.headline recall	.36	.13	.14
3.visual recall	.12	.08	.02
4.message content recall	.36	.35	.21
5.continued attention	.18	.14	.04
6.message related continued attention	.18	.22	.07
7.occurence of spontaneous responses	.25	.08	.06
8.message comprehension	.32	.43	.25
9.new learning	-.32	-.51	.31
10.contribution of ad to purchasing	.12	-.24	.08
11.positive format evaluation	.04	-.12	.02
12.interesting	-.08	-.47	.22
13.motivation	.07	-.13	.03
14.connection	+.18	.55	.31
15.source derogation	.28	.04	.08
16.message derogation	.24	.20	.08
17.counterarguing	.43	-.17	.25
18.curious disbelief	-.42	-.55	.41
19.support arguing	.31	.43	.24
20.positive product evaluation	.03	.72	.54

Consumer jury method.

items	simple correlation with advertisement knowledge
1.eye catching	.22
2.visually pleasing	.04
3.new learning	-.24
4.interesting	.00
5.informative	.00
6.persuasive	.02
7.credibility	.14
8.positive source evaluation	.37
9.connection	.36

10.curious disbelief   -.13
11.memorability .43
12.creates favorable attitude .14
13.comprehensibility .06
14.positive product evaluation .07
15.brand name recognition .50
16.provides good image .00
17.purchasing influence .10

Portfolio Method

items	simple correlations		multiple
	ad knowledge	product/brand usage	correlation
1.ad recall	.33	.57	.35
2.brand name recall	-.02	.41	.19
3.visual recall	-.35	-.29	.16
4.message content recall	.35	.01	.13
5.positive evaluation of format	-.28	-.11	.08
6.connection	.42	.24	.19
7.source derogation	.20	.07	.06
8.message derogation	-.18	-.23	.07
9.counteraguing	-.14	-.10	.02
10.curious disbelief	-.08	-.23	.05
11.support arguing	-.07	.22	.07
12.new learning	.26	-.19	.15
13.positive product evaluation	.02	.39	.16
14.interest	-.04	-.33	.11
15.motivation	.11	.01	.01

note : .90 significance level is .27 (directional test) for a simple
correlation and .33 for a multiplecorrelation.

familiarity upon the mcp, the residual scores after regression on message
and product/brand familiarity were subjected to factor analysis per
method. Because this involves a second stage analysis and in view of
the inconclusive results at the first stage, the results have to be used
with much caution. The results are shown in appendix 4.

8. SUMMARY AND CONCLUSIONS.

The purpose of the study was to gain insight into the micro-communication process of advertising by cross-validating measurements obtained by means of three pretest methods. The results of this exploratory analysis are disappointing, since few positive conclusions are reached. The main conclusions therefore are put in the form of suggestions.

a. Conclusions w.r.t. the micro-communication process.

We started from the assumption that the mcp is a multidimensional process of concurrent and sequential responses with respect to the communication on the one hand and its object on the other. The mcp takes place within an existing and ongoing attitudinal and behavioral context. The relationship between these contextual variables and message input, processing and output (effects) is pronounced and makes it difficult to study the communication process as such.
Two positions are possible here. On the one hand one may want to study the mcp for an ad outside of its attitudinal and behavioral context (e.g. by studying isolated components or by deleting references to brand or product). On the other hand one may want to study the mcp within this context, since it is the ultimately relevant situation. In our opinion the applied research efforts should thread the middle ground and study the interaction effects between mcp and familiarity.

A second assumption was that the mcp could be observed by means of the several pretest methods applied in the study. The dimensionality of the reaction process appears from the factor analyses applied to the mono-method correlation matrices. These factors do not usually represent a "pure" construct, but rather a cluster of reactions or processes sometimes typical for the consumer's response to certain types of messages. This leads to the expectation that marked interactions are present which depend

on the type of message and on the general attitudinal context. In this
case an analysis of the correlation matrix of average scores would be
less appropriate and generalizations should be made on the basis of the
covariance pattern of responses within advertisements. Studying the
structure of the mcp by analyzing the covariance pattern of the mean pro-
file across advertisements may lead to spurious results.

b. Conclusions w.r.t. pretesting methodology.

Within the limitations of the study (small sample sizes, overlap-
ping samples, occasional deficiencies in concept definition and operatio-
nalization), the method-to-method cross-validation attempt was far from
successfull. Simple constructs and synthetic factors defined for a par-
ticular method could not in general be validated against such constructs
for other methods. We can see the following reasons for this outcome :
(1) different response dimensions are measured by the three pretest methods,
(2) different methods elicit different response patterns and (3) method
factors have an overwhelming influence. The distinction between the se-
cond and third reason is that the former would lead to a different pat-
tern of the covariance between responses, while the third could merely
result in the accentuation of some or all correlations.
These three effects are likely to occur simultaneously. The consumer jury
method can be used in principle to gauge all kinds of responses by means
of direct questioning, yet it is less appropriate to measure the immediate
impact and memorability, it tends to cast the respondent in the role of
an expert and forces him to consistency in his evaluation. The target-
plan method is suited for the study of impact communication and covert
responding; it has the disadvantage of being quite reactive and leads to
a tendency for consistency across responses.

The portfolio method is better suited for the study of impact and
retention, but less for the measurement of communication and of cognitive
responding. The measurement is less demanding and reactive, but this is
paid for by paucity in the information.

Our study leads to serious questions about the true nature of the responses elicited by the test methods used in practice. Generalizing to pretesting in general, the nature of the conclusions in pretesting (if not their validity) must be questioned. The consumer jury method is often times discarded for its assumed lack of validity· When, instead, preference is given to such more "qualitative" tests as the Target Plan method or the Portfolio method, one should also prove the validity of such approaches.

c. Conclusions w.r.t. general research methodology.

Beyond the correction of basic deficiencies (sample sizes, avoidance of response tendencies, clear definition and operationalization of constructs), the following guidelines for a further research program are suggested

c.1. More focus on interaction between components of the mcp by studying the reaction pattern to individual advertisements; broad categories of interaction effects, rather than main effects, may emerge as "units" for structuring the mcp.

c.2. Use of adequate methodology. The study of multiple reactions to multiple advertisements by different methods is limited by the availability of suitable programs for analyzing such multidimensional data. Nonmetric multidimensional scaling, three-mode factor analysis and particularly confirmatory factor analysis should be preferred modes of analysis.

c.3. Development of "hybrid" pretest methods. The basic approaches to pretesting all offer potentially valuable approaches to the study of the mcp. They are complementary in the sense that they may measure different types of response or be better suited to measure certain responses. The appropriate "mix" of methods may depend on the type of message and on its attitudinal context.

APPENDIX 1.   DESCRIPTION OF PROCEDURE AND ITEMS.

a. The Consumer Jury Procedure.

Respondents were shown a set of 12 advertisements, projected as slides and asked to fill out a set of 18 rating scales while each message was kept in full view. Three-step scales consisting of the steps "agree", "neutral", "disagree". The scales were formulated as follows (numbers in parenthesis refer to the continuous numbering used in the text).

1. this ad is eye catching (23)
2. this ad is pretty (24)
3. this ad teaches me new things (25)
4. this ad is interesting (26)
5. this ad is informative (27)
6. this ad is persuasive (28)
7. I have doubts about what this ad is telling (29)
8. this ad comes from a good company (30)
9. this ad makes me think of my own life (31)
10. I am curious to know whether what this ad tells is true (32)
11. this ad will be easy to remember (33)
12. this ad disposes me favorably to what is advertised (34)
13. this ad is easy to understand (35)
14. this ad is about a good product (36)
15. this ad is already known to me (37)
16. this ad will make me recognize the product (38)
17. this ad provides a good image of the product (39)
18. this ad could influence my purchasing behavior (40)

b. The Portfolio Method Procedure.

Respondents were shown a set of 24 advertisements projected as slides and kept in view for a fixed time. After exposure, respondents are given a questionnaire containing some filler items in order to dull

the short term memory. After the filler questions, the respondent is
asked to write down what he remembers having been exposed to, namely :

- which messages does he remember (brand, product, message elements)
- what does he remember of the visual elements in the stimulus
- what does he remember of the verbal elements in the stimulus
- what were his spontaneous thoughts while seeing the message
- does he know the advertisement; does he use the product/brand
  advertised

The protocols were coded for the following responses

1. proportion of respondents recalling the message (41)
2. proportion of recallers mentioning brand name (42)
3. proportion of recallers mentioning visual elements (43)
4. proportion of recallers mentioning verbal elements (44)
5. proportion of recallers mentioning positive reactions to format (45)
6. proportion of recallers mentioning connection thoughts (46)
7. proportion of recallers mentioning source derogation thoughts (47)
8. proportion of recallers mentioning message derogation thoughts (48)
9. proportion of recallers mentioning counterarguing thoughts (49)
10. proportion of recallers mentioning curious disbelief thoughts (50)
11. proportion of recallers mentioning support arguing thoughts (51)
12. proportion of recallers mentioning learning of new information (52)
13. proportion of recallers mentioning positive product evaluation (53)
14. proportion of recallers mentioning interest in further information or
    experience (54)
15. proportion of recallers mentioning motivation thoughts (55)
16. proportion of recallers stating previous advertisement knowledge (56)
17. proportion of recallers stating previous product/brand usage (57).

c. The Target Plan Procedure.

Respondents were sequentially exposed to four advertisements, projected as slides. The questioning was done personally and in sequence for each message. The message was first presented briefly, followed by a few questions. Further semi-structured questioning was then done with the message in full view. Responses were coded from interview tapes as follows :

After brief exposure

1. proportion of respondents recalling brand name (1)
2. proportion of respondents recalling headline (2)
3. proportion of respondents recalling visual elements (3)
4. proportion of respondents recalling verbal message elements (4)

After long exposure :

5. proportion of respondents stating willingness to give continued attention to message (5)
6. proportion of respondents giving continued attention because of message rather than of product (6)
7. proportion of respondents mentioning that they had spontaneous thoughts when exposed to the message(7)
8. proportion of respondents stating previous message knowledge (8)
9. proportion of respondents stating product/brand usage (9)
10. proportion of respondents giving evidence of message comprehension (10)
11. proportion of respondents stating new learning out of the message (11)
12. proportion of respondents stating that the message may influence their purchasing behavior (12)
13. proportion of respondents giving positive reactions to message format(13)
14. proportion of respondents stating that the message is interesting (14)
15. proportion of respondents mentioning motivation thoughts (15)
16. proportion of respondents mentioning connection thoughts (16)

17. proportion of respondents mentioning source derogation thoughts (17)

18. proportion of respondents mentioning message derogation thoughts (18)

19. proportion of respondents mentioning counterarguing thoughts (19)

20. proportion of respondents mentioning curious disbelief thoughts (20)

21. proportion of respondents mentioning support arguing thoughts (21)

22. proportion of respondents giving positive product evaluation (22).

Table 2.1. Monomethod correlation matrix for 18 traits by the Consumer-
jury method. Communalities on the diagonal.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	(.98)																	
2	.74	(.47)																
3	-.33	-.04	(.59)															
4	-.24	-.09	.53	(.91)														
5	-.05	-.14	.40	.71	(.64)													
6	.40	.32	.00	.41	.43	(.46)												
7	.14	.14	.08	-.32	-.02	-.10	(.57)											
8	.31	.31	-.15	.16	.13	-.41	-.25	(.65)										
9	.32	.08	-.36	.14	.07	.26	-.21	.68	(.58)									
10	-.23	-.24	.22	.21	.15	.02	-.47	-.10	.00	(.90)								
11	.79	.62	-.34	-.18	-.07	.29	.03	.41	.36	-.39	(.78)							
12	.11	.10	.21	.72	.63	.50	-.48	.48	.30	-.24	.26	(.87)						
13	.03	.04	-.41	-.04	-.15	.38	-.14	.51	.41	.14	.16	.02	(.60)					
14	-.18	-.03	.02	.53	.34	.13	-.51	.49	.47	-.09	.01	.59	.30	(.60)				
15	.47	.20	-.49	.02	.06	.16	-.37	.61	.60	-.36	.66	.37	.25	.26	(.69)			
16	.42	.24	-.41	.09	.03	.29	-.25	.68	.68	-.02	.54	.34	.59	.30	.71	(.78)		
17	-.05	.04	.36	.58	.42	.31	-.13	.17	.05	.46	.04	.36	.24	.36	.00	.22	(.48)	
18	.45	.26	.22	.51	.61	.56	-.19	.28	.25	-.26	.42	.67	-.19	.20	.31	.33	.22	(.78)

Table 2.2. Monomethod correlation matrix for 22 traits by the Target-Plan method. Communalities on the diagonal.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	(.78)																					
2	-.02	(.71)																				
3	.08	-.03	(.68)																			
4	.13	.66	-.09	(.79)																		
5	.23	-.15	.24	-.08	(.79)																	
6	.19	.23	.46	.17	.13	(.76)																
7	-.02	.18	.29	.26	.09	.00	(.19)															
8	.45	.36	.12	.36	.18	.18	.25	(.66)														
9	.49	.14	.08	.35	.14	.22	.08	.18	(.87)													
10	.04	.28	-.15	.47	.07	.12	.14	.32	.44	(.68)												
11	-.24	-.30	.05	-.18	.21	-.28	-.09	-.32	-.51	-.31	(.65)											
12	-.23	-.16	-.10	-.01	.30	.14	-.10	.12	-.24	.10	.20	(.88)										
13	.21	-.21	.26	-.24	.31	-.19	-.01	.04	-.12	-.31	.38	.27	(.80)									
14	-.25	-.04	.23	.07	.09	-.24	-.02	-.08	-.48	-.26	.57	.20	.30	(.49)								
15	.08	.10	.02	.22	.37	-.13	.00	.07	-.13	.10	.33	.47	.29	.27	(.97)							
16	.23	.03	.04	.20	.10	.06	.12	.18	.55	.33	-.46	.22	-.01	-.26	.41	(67)						
17	.17	.39	.40	.39	-.39	.50	.06	.28	.04	-.06	-.23	-.13	-.01	-.04	-.00	.03	(.81)					
18	.21	-.02	.04	.10	-.05	.14	-.02	.24	.20	.23	-.04	-.20	-.27	.04	-.23	.01	.19	(.30)				
19	.39	.19	-.21	.26	-.13	-.11	.03	.43	-.17	.39	-.06	-.01	-.07	.02	.37	.07	.16	.17	(.84)			
20	-.51	.08	-.06	-.20	.05	-.18	-.09	-.42	-.56	.38	+.40	.07	-.01	.48	.31	-.27	-.15	-.26	-.17	(.72)		
21	.13	.01	-.08	.31	-.01	-.06	-.04	.31	.43	.30	-.17	.29	.20	-.21	-.06	.29	-.06	-.13	-.09	-.32	(.79)	
22	.24	-.15	-.16	.19	.06	.10	-.17	.03	.73	.47	-.55	.08	-.18	-.42	-.06	.58	-.07	.00	-.11	-.54	..7	(.

Table 2.3. Monomethod correlation matrix for 17 traits by the Portfolio-Method. Communalities on the diagonal.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	(.63)																
2	.12	(.74)															
3	-.19	-.07	(.81)														
4	.06	.40	-.21	(.69)													
5	.17	.11	-.14	-.27	(.51)												
6	.00	.29	-.14	.11	-.13	(.79)											
7	.06	.17	+.18	.15	.10	.23	(.98)										
8	-.33	.15	.65	.17	-.33	-.03	.19	(.89)									
9	-.14	.02	.54	.24	-.34	.02	.14	.74	(.67)								
10	-.26	-.33	-.09	-.03	.03	.02	-.15	-.26	-.20	(.57)							
11	.15	-.01	-.05	.12	-.26	-.28	-.13	-.24	-.11	.37	(.75)						
12	-.04	-.31	-.06	.30	-.20	-.16	.02	-.04	.12	.13	-.08	(.36)					
13	.17	.17	.18	.11	-.20	.20	-.29	.19	.23	.10	.16	-.14	(.56)				
14	-.36	-.46	.38	-.33	-.28	.14	-.11	.35	.32	.43	.15	-.11	.22	(.87)			
15	-.24	-.20	-.35	.34	-.30	-.09	-.21	.03	.16	.13	.22	.08	-.27	.12	(.55)		
16	.33	-.02	-.35	.01	-.28	.42	.20	-.18	-.14	-.08	-.06	.26	.02	-.05	.11	(.76)	
17	.57	.41	-.29	.35	-.11	.24	-.07	-.23	-.10	-.23	.22	-.19	.39	-.33	.01	.30	(.76)

Table 2.4. Portfolio-Target Plan heterotrait-heteromethod correlation matrix for 17 pairs of traits.

Portfolio method \ Target Plan method	10	1	3	4	13	16	17	18	19	20	21	11	22	12	15	8	9
41	.29	.28	.14	.08	.04	.46	.03	-.26	-.11	-.35	.35	.02	.60	.04	-.04	.35	.59
42	.37	.39	.07	.47	-.32	.37	.21	.11	.46	-.34	.16	-.20	.12	-.32	.04	.30	.39
43	-.10	-.03	.16	.13	.17	-.35	.16	-.35	.21	.30	-.32	.19	-.38	.17	.51	-.16	-.33
44	.12	.07	.25	.21	-.15	.26	.05	.05	-.19	-.18	.39	-.07	.25	-.15	-.03	-.08	.46
45	.42	-.20	.25	.14	-.13	.11	.10	.11	.04	-.21	-.09	-.16	.04	-.13	-.15	.08	.06
46	.18	.45	-.33	.61	.06	.19	.29	.09	.22	-.43	.23	-.17	.33	.06	.01	.18	.38
47	.07	.16	.43	.43	-.01	.05	.84	.21	.11	-.22	.22	.17	.08	-.01	.03	.31	.11
48	.15	.03	.04	.29	-.23	-.30	.09	.07	.29	.12	-.21	.16	-.23	-.22	.26	-.08	-.18
49	.06	-.12	-.00	.19	-.07	-.01	.09	-.17	.17	.11	-.08	.13	.08	-.07	.32	-.38	-.09
50	-.27	.29	.20	-.28	.41	.07	-.16	.22	-.03	-.16	-.07	-.12	-.08	.41	.21	.03	.01
51	-.44	.28	.26	-.42	.22	.05	-.09	-.15	.02	-.07	.00	-.12	-.13	.22	-.02	.18	-.03
52	.05	-.52	.10	-.02	.06	-.09	-.10	-.22	-.27	.32	.22	.15	.01	.06	.02	-.17	-.09
53	.09	.37	-.14	-.06	.23	.04	-.09	-.22	.33	-.36	-.07	-.17	-.05	.23	.08	.14	.11
54	-.27	.07	-.21	.02	.21	-.30	-.18	-.10	.06	-.03	-.10	.15	-.21	.21	.18	-.02	-.31
55	-.19	-.25	-.14	-.17	-.32	.18	-.18	.12	-.28	.15	-.13	.10	.18	-.32	-.03	-.30	-.06
56	.09	.31	-.15	.30	-.00	.36	.27	.02	.14	-.03	.20	.04	.32	-.00	.13	.43	.26
57	.01	.41	.03	.08	-.08	.34	.13	-.24	-.17	-.37	.17	-.35	.38	-.08	-.29	.13	.63

Table 2.5. Target Plan-Consumer Jury heterotrait-heteromethod
Correlation matrix for 16 pairs of items.

Consumer jury method \ Target Plan method	3	13	11	14	4	19	18	17	16	20	21	10	22	8	1	12
23	-.57	-.54	.24	.11	.14	.05	-.11	-.26	-.27	.26	-.19	-.03	-.06	-.42	-.32	-.22
24	-.40	-.58	-.18	-.09	.22	-.12	-.09	-.12	-.13	.24	-.02	-.06	-.01	-.17	-.22	-.41
25	.23	-.06	-.48	-.34	.32	.05	.13	.34	.40	-.22	-.12	.32	.24	.16	.17	-.11
26	.36	.00	-.10	.00	.13	.26	-.05	.33	.10	.23	-.51	.03	-.35	.26	.21	-.09
27	.09	-.02	-.04	.09	-.05	.37	.18	.22	-.05	.03	-.61	.14	-.22	.01	.20	-.14
28	-.35	-.13	.02	.39	.05	.18	-.14	.02	-.17	.56	-.47	-.28	-.23	-.20	.02	-.11
29	-.50	-.31	-.35	.04	.20	.19	.41	-.04	.38	-.45	.24	.44	.48	.29	.20	-.07
30	.02	-.02	.33	.30	-.13	-.35	-.08	-.24	-.11	.60	-.17	-.28	-.34	-.30	-.46	.11
31	.04	-.09	.57	.45	-.04	.22	-.03	-.24	-.30	.63	-.32	-.16	-.53	-.26	-.45	.08
32	-.11	.03	-.23	.14	.08	.20	-.01	-.02	.46	-.07	.01	.46	.33	.27	.06	-.01
34	.24	-.07	.12	.03	0.11	.15	0.0	.38	-.19	.33	-.48	-.22	-.52	-.07	-.04	-.08
35	-.02	.04	.01	.20	-.41	-.24	-.17	-.23	0.0	.62	-.03	-.27	-.17	-.21	-.33	.05
36	.63	.12	.20	.06	-.04	-.10	.05	.30	-.25	.41	-.24	-.08	-.47	.06	-.15	-.08
37	-.09	.09	.64	.30	-.27	-.12	-.25	-.38	-.32	.44	-.25	-.33	-.59	-.31	-.47	.19
38	-.14	-.10	.34	.06	-.34	-.21	-.33	-.49	-.22	.54	-.17	-.19	-.41	-.37	-.43	.02
40	-.18	-.26	.15	-.06	.15	.27	-.09	.02	-.34	.18	-.42	.06	-.29	-.12	.04	-.01

Consumer jury method	Portfolio Method														
	33	38	23	27	24	31	30	29	28	32	34	25	36	40	37
41	-.49	-.24	-.50	-.22	-.23	-.37	-.40	.17	-.21	.50	-.40	.23	-.10	-.42	-.62
42	-.02	-.09	.02	.18	.25	-.32	-.17	.08	-.03	-.13	.33	.42	.04	.29	-.21
43	.06	.10	.14	.20	-.12	.34	.02	-.55	.19	-.17	.38	-.23	.40	.37	.31
44	-.12	-.09	0.0	-.43	.16	-.14	-.06	.06	-.39	-.15	-.18	.33	-.11	-.05	-.30
45	-.06	-.04	-.19	.30	-.23	.09	-0.14	.05	-.29	.16	.04	.25	.15	-.08	.02
46	.07	-.45	.19	.06	.22	-.39	-.25	.47	.20	.02	-.09	.28	-.39	.14	-.33
47	-.19	-.50	-.29	.05	-.25	-.16	-.25	.02	-.15	-.16	.18	.15	.27	-.04	-.36
48	-.03	-.01	.22	.05	-.03	.16	-.13	-.30	.11	-.22	.26	-.11	.12	.42	.06
49	-.15	-.16	.21	-.19	-.05	-.10	-.26	-.23	.01	-.05	-.04	-.11	-.14	.01	-.08
50	-.11	-.14	-.09	-.01	-.27	.10	0.0	.08	-.26	.02	-.24	-.14	-.12	-.26	.20
51	-.36	-.20	-.30	-.25	-.02	-.22	-.21	-.15	-.28	-.14	-.28	-.14	-.09	-.41	-.10
52	-.05	.28	.12	-.24	.13	.34	.47	.06	-.03	.28	-.15	-.12	.22	-.13	.05
53	-.13	.04	-.03	0.0	-.16	-.23	-.43	.15	-.16	.34	-.14	0.0	-.30	.04	-.09
55	-.03	-.16	.18	-.26	-.24	-.11	.07	.06	-.02	-.15	-.24	.18	-.45	-.11	-.07
56	-.32	-.27	-.17	.05	.02	-.22	-.03	.47	.35	.58	-.10	.28	-.20	-.09	-.51

APPENDIX 3.   VARIMAX FACTOR LOADINGS FOR 6-FACTOR PRINCIPAL COMPONENT
FACTOR ANALYSIS OF MONOMETHOD CORRELATION MATRICES.

Target Plan Method.

items	F I	F II	F III	F IV	F V	F VI
1				.75		
2		.77				
3					.85	
4		.82				
5			.52			
6					.58	
7						
8		.41		.55		
9	.81					
10	.49	.41				
11	-.66					
12			.55			
13			.41			.52
14	-.60					
15			.94			
16	.62		.41			
17		.44			.50	
18						
19				.70		
20	-.55			-.49		
21						.73
22	.90					

Consumer Jury Method.

items	F I	F II	F III	F IV	F V	F VI
1			.82			
2			.92			
3	-.55	.45				
4		.80			.47	
5		.84				
6		.54				.73
7				.59		
8	.66					
9	.77					
10				.95		
11	.48		.71			
12		.75				
13	.51					.68
14					.60	
15	.82					
16	.83					
17		.41			.47	
18		.79				

Portfolio Method.

items	F I	F II	F III	F IV	F V	F VI
1					.73	
2		.42				.59
3	.74					
4		.79				
5	-.42					
6				.90		
7			-.42			
8	.89					
9	.79					
10			.60			
11			.59			
12						-.57
13					.44	
14	.48		.54			
15		.53				
16				.60		-.51
17					.78	

APPENDIX 4 :   VARIMAX FACTOR LOADINGS FOR RESIDUAL SCORES AFTER ELIMINA-
TION OF MESSAGE AND/OR PRODUCT FAMILIARITY

Target Plan Method.

items	FI	FII	FIII	FIV	FV	FVI	FVII	FVIII
1. brand name recall						.95		
2. headline recall	.45		-.44					
3. visual recall								.85
4. message recall							.66	
5. continued attention message related					.55			
6. continued attention		.67						
7. occurrence of spontaneous responses							-.57	
8. message comprehension		.64						
9. new learning				.55				
10. contribution of ad to purchasing					.82			
11. positive format evaluation	.40	-.45						
12. interesting			-.42					
13. motivation	.58					-.47		-.46
14. connection	.95							
15. source derogation				.91				
16. message derogation		.52		.50				
17. counterarguing				.48				
18. curious disbelief			.57					
19. support arguing					.50			
20. positive product evaluation			.82					

Consumer Jury Method

items	FI	FII	FIII	FIV	FV
1. eye catching				.84	
2. visually pleasing			.48	.44	
3. new learning	-.43	-.44	.41		
4. interesting		.65			
5. informative					.77
6. persuasive	.60		.42		-.42
7. credibility			.78		
8. positive source evaluation					
9. connection	.54				.45
10. curious disbelief	.96				
11. advertisement recall		-.46		.42	
12. creates favorable attitude			.76		
13. comprehensible		.70			
14. positive product evaluation				.71	
15. brand name recognition					.49
16. provides good image	.51	.62			
17. purchasing influence		.74			

Portfolio Method.

items	FI	FII	FIII	FIV	FV	FVI	FVII
1.ad recall			-.79				
2.brand name recall							.85
3.visual recall				.51			
4.message recall	.56					.45	
5.positive format evaluation	.68						
6.connection	.98						
7.source derogation		.64					
8.message derogation		.56		.42			
9.countherarguing		.70					
10.curious disbelief				.73			
11.support arguing					-.59		
12.new learning				.57	.66		
13.positive product evaluation					.74		
14.interest					.46	.52	
15.motivation						.75	

For all analyses, factors were extracted with eigenvalue in excess of 1. A tentative interpretation for the Target-Plan Method factors is

F I   : Personally motivating

F II   : Communication

F III   : Curious disbelief

F IV   : Negative covert responding

F V   : Usefulness, contribution to purchasing behavior

F VI   : Brand name registration (familiarity)

F VII   : Message registration (familiarity)

F VIII : Visual impact.

The factors for the Consumer jury method are tentatively labelled as :

F I   : Curious disbelief

F II   : Useful, contributing to purchasing behavior

F III   : Persuasive (but not credible)

F IV   : Impact (familiarity)

F V   : Informative.

Finally, we label the Portfolio Method factors as :

F I   : Connection

F II   : Negative covert responding

F III : Curious disbelief, novel stimulus

F IV   : Intrusive stimulus with negative responding

F V   : Product evaluation

F VI   : Motivation

F VII : Brand name recall (familiarity).

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