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7.9 The use of scales in Psyche 1982

SUMMARY

When Admedia decided a year and a half ago to do a second psychographics survey in the Netherlands, we were given the opportunity to have this carried out as a part of the fieldwork for the NOP 1982 (the Dutch national readership survey). Thus we were able to add psychographics to our national readership survey on a single source basis. The procedure was as follows: respondents were first questioned in a one-hour face-to-face interview for the NOP and afterwards asked to fill in a self-completion questionnaire on behalf of Psyche 1982 (except for respondents 65 years of age or older).

Our major concern then became how to analyse and present the psychographic data in such a way that it would be easy and comprehensible to use. To guarantee effective daily use of the data required the computer tape to be so ordered that secondary analysis on the psychographics should be as easy to do as in the case of socio-demographic or media data. Previous experience on Psyche 1978 had taught us that general typologies often 'just missed the point' for individual clients or specific problems.

We therefore decided to carry out scale analyses of the original Psyche 1982 data (400 items) in order to reduce the data into a workable set of significant psychographic measures or dimensions. The research agency in question (Veldkamp Marktonderzoek BV) had had useful experience in the application of the so called Mokken Scale Analyses (1), an adjusted version of the Guttman scalogram method. This method ensures a clear interpretation of the resulting scales, because it tests the items carefully on one-dimensionality.

We ended up with 79 significant scales which, after internal inspection, were each divided into 3 labelled categories. On the computer tape each respondent was given his or her individual scale value on each of the 79 new constructs (the original item scores were, of course, kept available). In our publication we presented the scales cross tabulated with socio-demographics, readership scores and some relevant data on product use.

In the daily practice of media planning relevant selections of the 79 scales are now being used for the purpose of describing specific or desired target audiences. On the other hand we are able to use one or more scales in order to define the target audiences for particular products or brands.

We have the strong feeling that by taking these steps we have succeeded in delivering a useful set of psychographic measures to the Dutch advertising industry — measures which for media analysts are as easy to handle as the well-known socio-demographic criteria they are accustomed to work with (and which it is acknowledged often have shortcomings) and which the end users of the data can understand clearly.

This paper outlines the contents of Psyche 1982, the resulting scales and some examples of applications.

We must acknowledge the contribution of Dr. Alfred E. Bronner (Veldkamp Marktonderzoek BV) in developing a new way to handle the (15%) non-response we faced on the project. They gave the procedure the charming name of *Venus* (abbreviation of the Dutch: Veldkamp's Non response en Uitval Simultatieprocedure) and analyses show that this simulation procedure is a very acceptable solution for the non-response problem, which survey designs like these involve.

BACKGROUND

The background for Psyche 1982 was of course Psyche 1978 *(2)*, our first psychographics survey, carried out as an ad hoc survey (separately from the NOP) in the spring of 1978. It included a face-to-face interview, as well as a self-completion questionnaire. The survey was really extensive and was designed to be fused *(3)* into the data base of NOP 77 (and afterwards also into NOP 79). Psychographics were in a way new for Holland, so the market as well as the publishers themselves had to get used to working with them.

With Psyche 1978 we decided to publish a series of six general Typologies/Market Segmentations, and our people did a tremendous job by getting it all right on time and on paper for presentation to the market. The market was very enthusiastic, but questions were raised about the reliability of the fusion procedure. It was not easy in all cases to overcome some feelings of doubt in this respect, because fusing of data is of course second best to single source collection. And he who has no belief is hard to convert, although the fusion had cost us quite a lot of money. We therefore decided for Psyche 1982 on a *single source approach,* within the fieldwork for NOP 1982.

Another starting point with Psyche 1982 was the decision *not* to issue a publication (and a computer data base) in which a number of general typologies would feature. In our experience, general market segmentations which have not been devised in collaboration with marketing people, often just miss the appeal to individual clients that is necessary for a satisfactory application.

Instead we thought it might be more useful to analyse the material thoroughly in order to find as many as possible meaningful scales as the material would appear to contain, for we always could do segmentations or typologies afterwards for specific clients or agencies on an ad hoc basis.

In so doing we planned to end up with a data base which allowed for quick ad hoc secondary analysis, using meaningful psychographic measures, at the same time making visible the major tools to be delivered by Psyche 1982.

PREPARATIONS

The consequence of the single source approach was plainly that we had less space for questioning, so a very careful selection of items had to be made. We started with screening the Psyche 1978 questionnaires where possible, by dropping those items which obviously could be of only secondary importance to the advertising industry.

Some new features were added, such as: consumer decision styles in shopping, fashion, price consciousness and purchase orientation; activities and interest; self concepts; appreciation of TV programme categories; and preferences for political parties.

PILOT STUDY *(4)*

A pilot study was carried out (n = 330) in order to test the statements for continuity and scalability (through factor and Mokken scale analyses and partly also split samples) and to check whether the list might cause problems in terms of completion by respondents. For the group of youngsters (13-17 years) who particularly would be questioned for Psyche for the first time the latter aspect was relevant.

What emerged was that: no problems occurred amongst youngsters (13-17 years); no problems occurred amongst male respondents (who this time, had to complete the full questionnaire, also typical female-looking items); the average completion time amounted to 50 minutes; 75% completed the questionnaire at one go (approximately a quarter used breaks); 75% rated completion of the list as amusing/interesting; only 3% qualified the job as boring.

Changes in content

Based on the above mentioned analyses 157 attitude statements (out of 214) were accepted unchanged, 16 were slightly adjusted and 39 new items were added.

THE FINAL QUESTIONNAIRE

The final questionnaire eventually consisted of:
212 Attitude statements
  70 Activities
  68 Interest items
  34 Self concept items
  15 TV programme categories
The attitude statements were scored on a five-point Likert scale:

strongly agree	agree	neither agree nor disagree	disagree	strongly disagree

The attitude statements covered the following subjects:

	no. of statements
cooking	20
household	11
fashion	27
domestic decoration	9
purchasing of products	20
shopping	5
advertising	7
saving	13
working/leisure time	16
the role of the female	14
environment	10
moral liberality	6
economical prospects	5
religion/faith	4
contacts	11
social relations	5
views upon life	10
problems	10
interest in romantic stories	7
willingness to move house	2
total no. of statements	212

The activities (70) were scored on a six-point frequency scale:

several times a week	once a week	once a fortnight	once a month	less than once a month	never

The activity items mainly concern sports, hobbies and such other leisure-time activities as for example dining in restaurants or shopping (whether for specific purchases or for pleasure).

The interests items (68) were scored on a four-point intensity scale:

very interested	fairly interested	not so interested	not at all interested

These items cover a variety of subjects, from antiques up to all ordinary types of music.
The self concept items (34), based on contrasted statements were scored on a five-point Osgood scale:

applies much more to me	applies more to me	both apply to me equally	applies more to me	applies much more to me

and cover a fair number of personal character qualities.
The TV programme categories (15) were scored on a four-point appreciation scale:

I really like to watch that	I find that quite interesting	I think that's nothing special	I hate that

A classification of the most recent TV programmes available was used, in which the programmes (for example) were mentioned as follows:
News programmes (like Hier en Nu, Brandpunt)
American Criminal series (like Magnum, Starsky and Hutch)
Talk shows (like Sonja Barend, Aad van den Heuvel) show programmes (like Mounties, Andre van Duin).
Family series (like Dallas, Dynasty)
etc.
Political party preferences were brought into the oral, NOP questionnaire, the first and second preferences for 14 political parties being asked about.

FOUR VERSIONS OF THE QUESTIONNAIRE

In order to limit to a minimum any possible harmful sequential effects, we produced four questionnaire versions. The 400 items were divided into 8 blocks, and the blocks rotated through the four questionnaires.

DATA COLLECTION

As mentioned earlier, the self-completion questionnaires were handed over by the interviewers to respondents who had been co-operating in the NOP survey directly after the one-hour face-to-face NOP interview.

Respondents were requested to send in the schedule after completion, to one of two research agencies, in a post-paid envelope. Respondents aged 65 and older were, however, excluded because this age group would certainly have needed assistance, which could not be provided given the chosen fieldwork design. In order to stimulate response, the gift of a Parker pencil was handed over beforehand. Two recalls, a written recall and a telephone recall (if possible) were made. A net and usable response rate of 84.1% was the result.

The NOP sample
The starting point for the NOP 82 was a household sample based on addresses with a cluster size of four (except for the smaller municipalities). The total number of successful personal interviews amounted to 7,614 (13 years and older) representing a response rate of 75.4%.

Of those 7,614 persons 1,028 were found to be aged 65 years and older. 6,586 persons aged from 13 up to and including 64 were thus suitable to complete and send back the Psyche 1982 schedules.

The Psyche sample results
As **Table 1** shows, out of the 6,586 Psyche 1982 schedules received, 5,537 could be used for further processing and analysis — a response rate of 84.1%

TABLE 1
Response review Psyche 1982

	abs.	%
total number of NOP respondents 13/64	6,586	100
- received back	5,717	86.1
- not processed (x)	180	2.2
- completely usable for processing	5,537	84.1

(x)   mostly filled in incompletely; other reasons:
doubtful response pattern, wrong person in
household, 65 + person, miscoded in the NOP,
filled in together, etc.

On the non-responses (15.9%) a simulation procedure was employed in order to end up with a full NOP/Psyche 1982 data base of all 6,586 NOP 1982 respondents aged 13 to 64 (the simulation procedure used has been referred to earlier).

WEIGHTING

The Psyche 1982 sample did not have to be weighted

separately, because a weighting procedure had already been carried out on the NOP sample, so in constructing the Psyche 1982 data tape the unchanged weighting factors per person were taken over from the data tape of the NOP 1982. **Table 2** gives the results of the weighting upon the original sample sizes.

TABLE 2
Resulting sizes after weighting

	unweighted	after weighting
total number of NOP respondents aged 13 to 64:	6,586	6,697
of which:		
- males	2,997	3,321
- females	3,589	3,376
- family heads	2,909	2,501
- housewives	3,228	2,570
- other persons	1,126	1,860

ANALYSING THE DATA/CONSTRUCTING THE SCALES

In analysing the data of Psyche 1982 the procedures developed in the pilot study played an important role: the analyses could be sharply focussed because the results of the main survey were in general the same of those of the pilot.

The procedure was as follows: *factor analyses* were carried out on items which are more or less in the same areas (eg. cooking and household are in the same area); next, *Mokken scale analyses* were done on items of which the researchers felt that there would be a good chance of one-dimensional scales, based upon the findings in the pilot and upon the items contents.

After these first rounds the results were analysed and new rounds of Mokken analyses were carried out. Sometimes items were added, sometimes items which appeared to function weakly in the first Mokken analyses were dropped. This weak functioning of items in a scale can be deduced from the too low H-value of one item compared to the other items in the scale. This can make the whole scale weaker. It is also possible that one item — although it generates a high H-value — disturbs the response pattern as a whole, because of a lack of unambiguousness.

The scale analyses were carried out upon the unweighted data base. The danger of possible 'fake'

correlations (caused by the weighting procedure) could thus be avoided. Moreover, the weightings had not been finished by that time.

A number of scale analyses were, however, repeated upon the weighted data base to gain more assurance. The results were satisfactory: within the scales no items were rejected and the total H-values per scale hardly differed from the H-values of those scales which resulted from the unweighted data base.

Eventually 87 scales could be constructed, (of which 79 were published in the Psyche 1982 Publication). In the case of Mokken scales the dichotomized items were counted. In the case of other scale-types (like indexes and items which do not allow for dichotomising, like TV programme prefences and activities) the whole value-reach of the selected items was counted.

Reducing the scales

In order to arrive at 'recognizable' categories of respondents, the scales were further examined.

This can be done by comparing the scale with the items comprising the scale. As an example: suppose we want to measure the attitude towards shopping. The items which could be part of the scale are dichotomized so that the positive alternative is always 'positive towards shopping'. The scale constructed then goes from 'very positive' to 'not positive' towards shopping. Because the items have been scored as positive, we do not know if the lowest scores (not positive) represent a 'negative' attitude or simply a 'not positive' (= 'neutral') attitude towards shopping.

We can come closer to a solution of this 'labelling' problem if we analyse the respondent's scale values by the original answers given to the five separate scale items. From this an opinion can be formed as regards contents, and with this procedure, distributions per scale into 3 categories have been made, each category being given a correct and justifiable 'label'.

Table 3 is an example of a scale construction, reduction and labelling procedure, as described:

An example of a scale construction and reduction

Five statements appear to represent the dimension 'cooking as a hobby'. **(Table 3)**

Dichotomising of the statement scores can be visualized as shown in **Table 4**.

After counting up the scores the scale distribution results (for the whole sample). **(Table 5)**

That females like cooking better than males becomes clear from the distribution by sex. **(Table 6)**

TABLE 3
The five statements measuring 'cooking as a hobby'

	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
1 I often keep recipes from magazines	▓	▓			
2 For me cooking is one of the most enjoyable things of about housekeeping	▓	▓			
3 I don't care to be in the kitchen for hours in order to prepare a good meal	▓	▓			
4 I don't like to spend much time on cooking				▓	▓
5 I think cooking is a necessary evil				▓	▓

TABLE 4
Dichotomising the statement scores

		agree	disagree
1	I often keep recipes from magazines	1	0
2	For me cooking is one of the most enjoyable things about housekeeping	1	0
3	I don't care to be in the kitchen for hours in order to prepare a good meal	1	0
4	I don't like to spend much time on cooking	0	1
5	I think cooking is a necessary evil	0	1

TABLE 6
'Cooking as a hobby' by sex

scale score	distribution females %	males %	reduced females %	males %
5	18.8	5.0		
4	19.6	11.4	38	16
3	15.8	12.6		
2	16.6	18.2	32	31
1	15.9	30.1		
0	13.2	22.8	29	53
(n =)	(3376)	(3321)		

TABLE 5
Scale distribution 'cooking as a hobby'

scale score	as to content		distribution %	chosen reduction
5	+ + +	cooking very enjoyable	12.0 ⎱	cooking very enjoyable (27.5%)
4	+ +		15.5 ⎰	
3	+		14.2 ⎱	cooking fairly enjoyable (31.6%)
2	0		17.4 ⎰	
1	0 (−)		22.9 ⎱	cooking not enjoyable (40.9%)
0	−	cooking not enjoyable	18.0 ⎰	

Thus, as previously mentioned, we ended up with 79 significant scales, which are shown in the appendix.

SOME APPLICATIONS

The advantage of having the data analysed as described are two fold: for potential users it does not take much time to gain an overall view of the study's content; a relevant selection of psychographic measures to be taken into specific media planning procedures can easily be made; the availability of the 79 scales on the computer tape allows for quick and easy secondary analyses (mostly cross-tabulations, in practice).

In principle no complicated and time consuming procedures are necessary to get the desired data from the computer. Although Admedia is equipped to carry out cluster analyses and all the calculations the SPSS-package offers, most of the runs simply use the scales in order to describe readership audiences, and target audiences, otherwise defined, such as: product users,

brand users/owners, customers of specific stores or demographical segments.

On the other hand the scales themselves can be a powerful starting-point for market segmentation or target group selections in the case of new product launches, in whatever market.

A 'count' can, for example, be made of all persons who have an overall high score on a set of dimensions such as: cooking very enjoyable; accessible to new products; wholesome food very important; free-spender.

The selection of persons thus identified can be adopted as a primary target group for the new product in question. A good impression of the group can further be obtained from a cross tabulation of the group by such other passive variables as socio-demographics and/or other psychographic measures. Finally, the most cost-efficient media within this target group can be listed for media planning purposes.

The following tables show some examples of Psyche 1982 results based on specific exercises.

TABLE 7
Describing readership audiences

Psyche 1982	Total females 20-64	Readership audiences of: *			
		Margriet	Viva	Story	Privé
	n = 3149	n = 1516	n = 413	n = 1189	n = 1234
Dimensions	100%	48%	13%	38%	39%
	%	%	%	%	%
- popular sports	22	23	28	22	24
- pop music	13	14	20	17	17
- traditional music	8	8	8	11	10
- impulsive buying	34	35	42	38	38
- active fashion	9	9	14	11	10
- shopping pleasant	34	38	41	40	39
- int. in romantic reading	18	22	23	30	28
- going out	12	13	21	15	15
- positive advertising	17	17	20	21	20
Preference TV-progr. cat.					
- amusement programmes	40	43	38	55	52
- imformative programmes	39	41	41	39	40
- thrilling programmes	30	33	35	41	40

* Basis: Average Issue Readership   *Source: NOP/Psyche 1982*

TABLE 8
Describing product segments by readership scores — video

	Total family heads	Possesses VIDEO	Having buying intention	Having positive interest in info*
Average issue	n = 3096	n = 182	n = 119	n = 585
Readership scores	100%	5.9%	4.8%	18.9%
	%	%	%	%
Panorama	34	36	51	38
Nieuwe Revu	28	34	46	32
TeleVizier	13	22	17	17
Story	30	31	41	32
Privé	30	34	49	36
Beste	15	15	20	17
Volkskrant	8	9	9	10
Parool	4	3	3	4
Regional Newspapers	61	55	65	60

*Positive scoring on: "If a new product comes out, like video or magnetron, I want to know all about it".

Source: NOP/Psyche 1982

TABLE 9
Describing car brand owners

Psyche 1982 Dimensions	Total persons M + F n = 6586	Owners of: Opel n = 392	Citroen n = 164	Renault n = 241	Ford n = 247
	%	%	%	%	%
- brand loyal	39	45	27	36	39
- price sensitive	34	35	26	35	26
- buying orientation	30	26	32	42	30
- impulsive buying	31	23	33	26	29
- easy spending	8	2	12	6	8
- social relations	43	51	34	46	42
- self confidence	26	32	43	35	35
- interest in cars	21	30	19	22	27

Source: NOP/Psyche 1982

TABLE 10
Describing scale categories

	'Cooking very enjoyable' n=879 38% %	Total housewives 20-64 y. n=2343 100% %	'Active Fashion' n=303 10% %	Total Females 20-64 y. n=3149 100% %
Age				
20-34	40	38	63	42
35-49	35	36	24	32
50-64	26	26	12	26
- social capability	39	32	43	33
- classical music	16	13	10	13
- pop music	22	20	34	22
- shopping pleasant	38	33	47	34
- positive advertising	21	17	25	17
- imp. leisure time	14	13	28	15
*Media**				
Libelle	50	48	54	48
Margriet	49	49	51	49
Story	39	38	48	39
Telegraaf	17	16	19	16
Tip	16	12	17	13
Avenue	9	7	12	8

*Average Issue Readership   Source: NOP/Psyche 1982

Last example: target group construction with aid of more than one scale

As mentioned earlier the computer programmes allow us to count up the scores of more scale-categories, in order to select target audiences to meet further expectations. For the launch of a new product the following starting-points could be relevant:

Target Group 1
Housewives who very much like cooking who are open to new products, who spend money easily, and who think wholesome food important.

Target Group 2
Housewives who *dislike* cooking, but otherwise resemble Target Group 1.

The media planner who has no access to these kinds of variables will probably decide on something like:
Target Group 3
Housewives aged 20 to 46 in social classes A + B1.

Table 11 lists the three target group selections and shows that in many cases the socio-demographical approach will indeed have shortcomings.

These, then are some examples of NOP/Psyche 1982 applications in the area of secondary analyses, using the scales as psychographical measures in combination with the readership — and other variables — from one single source survey.

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4 (1982) Pilotstudy Psyche II, Veldkamp Marktonderzoek BV, March.

TABLE 11
Target group construction based on more than one scale

	Target group 1 (cooking enjoyable) n = 403 %	Target group 2 (cooking not enjoyable) n = 293 %	Target group 3 Housew. 20-49 soc.cl. A + B1 n = 852 %
Age			
20-34	31	34	53
35-49	38	43	47
50-64	31	23	-
Soc. classes			
A + B1	34	30	100
B2	21	23	-
C	34	35	-
D	11	12	-
Impulsive buying	45	46	33
Shopping pleasant	40	34	28
Active fashion	15	17	10
Socially capable	42	26	39
Popular sports	21	26	27
Exclusive sports	30	32	46
Preference for TV programmes			
- Amusement programmes	45	37	20
- Informative programmes	44	41	40
- Thrilling programmes	33	36	17

Source: NOP/Psyche 1982

5 See also on this subject: P van Westendorp, *Groepering van respondenten naar attitudedimensies op basis van* somschalen, Jaarboek NVM 1980 (pages 105-122) (NVM = Dutch Market Research Society)

REVIEW OF THE SCALES IN PSYCHE 1982
(scored for males and females aged 13 to 64)

Subject:scales/dimension	reduction	F %	M %
COOKING			
1 cooking as a hobby	1) cooking very enjoyable	38	16
	2) fairly enjoyable	32	31
	3) not enjoyable	29	53
2 creative cooking	1) creative	18	6
	2) not so creative	47	33
	3) not creative	35	61
3 importance of wholesome food	1) very important	27	15
	2) fairly important	55	47
	3) not so important	18	37
4 importance of eating meat	1) very important	34	42
	2) not so very important	52	50
	3) not important	14	8
HOUSEKEEPING			
5 importance of a clean house	1) housekeeping imp.	37	34
	2) not so important	23	24
	3) not important	40	42
6 enjoying housekeeping	1) housekeeping enjoyable	26	9
	2) not particularly boring	40	37
	3) boring	34	54
PRODUCTS			
7 open to new products	1) open to new products	24	16
	2) not open	76	84
8 brand loyalty	1) strong	39	38
	2) fair	38	42
	3) not at all	23	20
9 importance of price in shopping	1) price sensitive	44	24
	2) fairly sensitive	27	32
	3) not sensitive	29	43
10 purchase orientation	1) strongly interested in information	31	29
	2) fairly interested	46	48
	3) not interested	23	23
11 impulse buying	1) casual buying	37	25
	2) careful buying	63	75
SHOPPING			
12 enjoying shopping	1) shopping pleasant	37	12
	2) not unpleasant	52	53
	3) shopping unpleasant	11	35
13 dislike large stores	1) dislike large stores	8	15
	2) not so nice	21	26
	3) no dislike	70	59

Subject: scales/dimension	reduction	F %	M %
SAVING/MONEY BEHAVIOUR			
14 easy spender	1) easy spender	7	8
	2) not too careful buyer	42	43
	3) thoughtful buyer	51	49
15 saving behaviour	1) strongly saving-minded	18	17
	2) fairly so	49	48
	3) not saving-minded	33	35
16 housekeeping money behaviour	1) strongly organised	7	7
	2) fairly organised	35	32
	3) not organised	59	61
LABOUR			
17 labour ethos	1) strong sense of duty	25	33
	2) average sense	54	48
	3) not strong sense	21	18
LEISURE TIME			
18 importance of leisure time	1) important	18	24
	2) fairly important	57	52
	3) not so important	25	24
DWELLING			
19 importance of domestic decoration	1) very important	25	18
	2) fairly important	61	54
	3) not so important	14	28
20 preference in domestic decoration	1) modern preference	20	18
	2) no specific preference	46	52
	3) classical preference	34	30
FASHION			
21 interest in fashion	1) interested	34	8
	2) fairly interested	41	22
	3) not interested	24	70
22 following fashion	1) active following	14	6
	2) to a certain extent	53	50
	3) not following	33	43
23 shopping in clothes shops	1) enjoyable	51	11
	2) fairly enjoyable	30	20
	3) not enjoyable	19	70
ADVERTISING			
24 attitude towards advertising	1) positive	18	19
	2) neutral	41	45
	3) negative	41	36
NEIGHBOURHOOD			
25 social relations neighbourhood	1) very good	46	41
	2) fairly good	36	39
	3) not so good	19	20

APPENDIX

REVIEW OF THE SCALES IN PSYCHE 1982
(scored for males and females aged 13 to 64)

Subject: scales/dimension	reduction	F %	M %
REMOVING			
26 removal mindedness	1) willing and away from neighbourhood	5	5
	2) willing, but not away from neighbourhood	7	7
	3) not so willing to move	88	88
FEMALES			
27 importance of women's lib	1) important	17	13
	2) fairly important	56	54
	3) not important	27	33
28 social equality men and women	1) women equal	23	19
	2) not entirely equal	57	55
	3) women not equal	20	26
SHOW/FANTASYWORLD			
29 interest in show-business	1) very interested	21	15
	2) fairly interested	46	48
	3) not interested	33	37
NATIONAL ECONOMY			
30 pessimism national economy	1) very pessimistic	30	29
	2) fairly pessimistic	28	29
	3) not so pessimistic	42	42
ENVIRONMENT			
31 problems of pollution	1) probably not so important	17	21
	2) fairly important	24	26
	3) important	59	53
32 willingness to make sacrifices for the environment	1) strongly willing	15	16
	2) fairly willing	57	55
	3) not so willing	28	28
33 fear of environmental disasters	1) much fear	24	19
	2) some fear	40	37
	3) no fear	36	44
LIBERAL MINDEDNESS			
34 moral conservatism	1) conservative	33	40
	2) fairly conservative	42	37
	3) not conservative	25	23
DENOMINATIONAL SEGREGATION			
35 denominational segregation	1) segregated	22	20
	2) not segregated	78	80
RELIGION			
36 belief in life after death	1) belief	51	44
	2) not so much belief	49	56
MYSELF AND THE WORLD			
37 social capability	1) very capable	33	39
	2) fairly capable	49	48
	3) not capable	18	13

Subject: scales/dimension	reduction	F %	M %
38 many contacts	1) many	22	20
	2) not so many	50	50
	3) few	28	31
39 social helpfulness	1) social helpful	42	33
	2) not so helpful	58	67
40 carefulness	1) very careful	28	17
	2) fairly careful	39	34
	3) not so careful	33	49
41 self confidence	1) much self confidence	16	35
	2) not so much	54	53
	3) slight self confidence	29	12
42 happiness in life	1) happy	22	35
	2) fairly happy	64	60
	3) unhappy	14	5
43 pessimistic expectations of the future	1) pessimistic	13	13
	2) neither pessimistic nor optimistic	28	24
	3) fairly optimistic	59	63
44 vulnerability	1) easily discouraged	31	13
	2) not so easily	44	47
	3) not easily discouraged	25	40
45 success	1) satisfied	41	32
	2) fairly satisfied	30	31
	3) not so satisfied	29	37
46 satisfaction with personal appearance	1) satisfied	45	59
	2) not so satisfied	55	41
47 nerviness	1) nervy	26	14
	2) not so nervy	44	42
	3) not nervy	30	44
48 decisiveness	1) decisive	21	36
	2) neither decisive nor doubtful	59	55
	3) doubtful	19	9
49 systematic	1) systematic	33	40
	2) neither systematic nor doubtful	58	54
	3) chaotic	9	7
50 self-will	1) self-willed	10	15
	2) neither self-willed nor accommodating	61	59
	3) accommodating	30	27

APPENDIX

REVIEW OF THE SCALES IN PSYCHE 1982
(scored for males and females aged 13 to 64)

Subject: scales/dimension	reduction	F %	M %
INTERESTS			
51 interest in technology	1) strong	10	46
	2) fair	23	29
	3) not so much	67	25
52 cultural interests	1) strong	12	11
	2) fair	44	49
	3) not so much	44	39
53 political/social interests	1) strong	30	29
	2) fair	40	44
	3) not so much	30	28
54 interests in gastronomy	1) strong	41	22
	2) fair	23	15
	3) not so much	37	63
55 interest in beauty care	1) strong	48	4
	2) fair	16	10
	3) not so much	36	87
56 financial/ economic interests	1) strong	11	30
	2) fair	15	20
	3) not so much	74	50
57 interest in cars	1) strong	8	35
	2) fair	20	33
	3) not so much	72	32
58 medical/ psychological interests	1) strong	26	14
	2) fair	45	42
	3) not so much	29	45
59 interest in foreign countries	1) strong	19	15
	2) fair	19	17
	3) not so much	63	68
60 interest in the natural way of life	1) strong	17	9
	2) fair	46	35
	3) not so much	37	56
INTEREST IN STYLES OF MUSIC			
61 interest in pop music	1) very interested	19	17
	2) fairly interested	51	54
	3) not so interested	30	28
62 interest in light music	1) very interested	22	15
	2) fairly interested	59	62
	3) not so interested	19	23
63 interest in jazz and blues	1) very interested	9	8
	2) fairly interested	49	51
	3) not so interested	42	41

REVIEW OF THE SCALES IN PSYCHE 1982
(scored for males and females aged 13 to 64)

Subject: scales/dimension	reduction	F %	M %
64 interest in classical music	1) very interested	11	6
	2) fairly interested	46	42
	3) not so interested	42	52
65 interest in traditional music	1) very interested	8	7
	2) fairly interested	46	50
	3) not so interested	46	43
PREFERENCE BETWEEN TV PROGRAMME CATEGORIES			
66 preference for amusement programmes	1) fond of....	42	22
	2) like it in a way	42	53
	3) nothing special	17	25
67 preference for informative programme	1) like to watch them	33	27
	2) .... in a way	55	64
	3) not for me	12	8
68 preference for thrillers	1) fond of	36	25
	2) .....in a way	47	56
	3) not for me	17	18
ACTIVITIES			
69 reading popular novels	1) monthly or more often	23	6
	2) less often	33	19
	3) never	44	76
70 cultural activities	1) monthly or more often	11	8
	2) less often	42	35
	3) (almost) never	47	57
71 youthful outdoor activities	1) monthly or more often	19	30
	2) less often	43	44
	3) (almost) never	38	26
72 popular sports (watching and practising)	1) monthly or more often	29	48
	2) less often	30	25
	3) (almost) never	41	27
73 practising the more exclusive sports	1) ever	31	35
	2) never	69	65
74 practising fighting sports	1) ever	3	7
	2) never	97	93
75 eating outdoors	1) monthly or more often	14	23
	2) less often	66	58
	3) (almost) never	21	19

APPENDIX

REVIEW OF THE SCALES IN PSYCHE 1982
(scored for males and females aged 13 to 64)

Subject: scales/dimension	reduction	F %	M %
76 creative occupations	1) monthly or more often	9	9
	2) less often	24	27
	3) never	67	65
77 outdoor recreation	1) weekly or more often	35	33
	2) monthly	55	53
	3) less than a month	10	14

REVIEW OF THE SCALES IN PSYCHE 1982
(scored for males and females aged 13 to 64)

Subject: scales/dimension	reduction	F %	M %
78 playing records/	1) several times a week	28	28
cassette tapes	2) weekly to monthly	53	53
	3) less often than once a month	19	19
79 going out visiting or	1) several times a week	22	12
entertaining	2) weekly	51	47
acquaintances/	3) less often than once		
relatives	a week	27	40