CONTENTS

SN: 222 PROJECT ON OCCUPATIONAL COGNITION (SOCIOLOGICAL ASPECTS OF SUBJECTIVE OCCUPATIONAL STRUCTURES)

Most of the information essential to understanding how the data was obtained in the first place is contained in the attached Research Memorandum No. 2 "Methods of Data Collection used in the Project on Occupational Cognition: A Handbook for Interviewers". This will be referred back to as R.M.2.

Especially important for understanding the data files are:

(1) Details of the standard project identifier. A full specification of this is to be found in R.M.2, pp. 10.3 - 10.4.

(2) Full listings of the sets of occupational titles and predicates used in the project are given in R.M.2, pp. 10.5 - 10.8.

DATA SETS ON THE TAPE

	LABEL	DATA SET NAME	
222A	1	EKKA02. CPB106AD	Pairwise similarity judgements of occupational titles.
222B	2	EKKA02. RAMAY75	Rankings of occupational titles on to selected criteria.
222C	3	EKKA02. RBMAY75	Ratings of occupational titles on selected criteria.
222D	4	EKKA02. SAMAY75	Sentence frame data.
222E	5	EKKA02. PBSUBCD	Summary data on individual subject's pairwise similarity matrices.
222F	6	EKKA02. DTB110AD	Triadic similarity judgements of occupational titles.
222G	7	EKKA02. DHA106AD	Ultramatric distance matrices derived from the hierarchical clustering task.
222H	8	EKKA02. DFA108AD	Co-occurrence matrices derived from sortings of occupational titles.
222I	9	EKKA02. DFA136AD	Co-occurrence matrices derived from sortings of occupational titles.
222J	10	EKKA02. PBAGMATD	Aggregate similarity matrices derived from file CPB106AD.
222K	11	EKKA02. LIFETASK	Background information on subjects.
222L	12	EKKA02. EPB106AD	Balanced subset of CPB106AD, (file 222A on this tape)

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DESCRIPTION OF DATA SETS

FILE 1. (222A) LABEL 1 Pairwise similarities data DSN = EKKA02. CPB106AD

Method of data collection: see R.M.2, pp. 5.1 to 5.5.
Set of titles used: stimulus set 06, listed in R.M.2, p. 10.5.

Each subject's matrix of judgements occupies 15 cards. No separator between cases.

Format (13A1,F2.0,1X,15F2.0)

Cols. 1-13 The first 13 characters of the 16 character identifier, see R.M.2, p. 10.3.
Cols.14-15 I.D. of the occupational title according to stimulus set 06 - each indexing a row of the similarities matrix.
Cols. 17 onwards. The judged similarities are filed as a lower half 16 x 16 matrix.

FILE 2. (222B) LABEL 2 Rankings of occupational titles DSN = EKKA02. RAMAY75

Method of data collection: see R.M.2, pp. 6.1 - 6.6.
Titles used: stimulus set 06, listed in R.M.2, p. 10.5.

297 cases in all - judging on a varying number of criteria

Format (13A1,F1.0,2X,16F3.0)

Cols. 1-18 The first 13 characters of the 16 character identifier (R.M.2, p. 10.3)
Col. 14 Instruction set identifier i.e. identifies the criterion of ranking.
Cols.17-64 The ranks assigned to the 16 occupational titles in the order the occupations appear in stimulus set 06.

RA3 and RA4 data are ranks assigned by the interviewees.
RA6, RA7, RA8 data are ranks derived from ratings data.

N.B.: On this file, occupations with high rank order are given high rank numbers, i.e. 16 is the highest ranking (a reversal of the interview schedules)

Missing data are coded Ø

FILE 3. (222C) LABEL 3 Ratings of occupational titles DSN = EKKA02.RBMAY75

The format is the same as the previous file but with RB6, RB7, RB8 data presented in the form of ratings rather than as RA6, RA7, RA8 rankings.

RB7 data is presented as guessed average monthly income for each occupation.

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FILE 4. (222D) LABEL 4 Sentence frame data DSN = EKKA02. SAMAY75

Method of data collection: see R.M.2, pp. 9.1 - 9.2.

The sets of sentence frames and occupational titles used are both contained in stimulus set 45, listed in R.M.2, p. 10.7. 52 cases.

Each subject's data occupies 15 cards - one for each sentence frame.

Format (16A1,F2.0,25A1)

Cols. 1-16 Standard project identifier see: R.M.2, p. 10.3.
Cols.17-18 Sentence frame identifier - as listed in R.M.2, p. 10.7.
Cols.19-43 Coded responses to the sentences formed by inserting each of the 25 occupational titles in the sentence frames.

Code A : the sentence formed was judged to be always true.
Code U : the sentence formed was judged to be usually true.
Code S : the sentence formed was judged to be seldom true.
Code N : the sentence formed was judged to be never true.

FILE 5. (222E) LABEL 5 Summary data on individual pairwise similarities matrices DSN = EKKA02. PBSUBCD

This file contains data derived from the analysis of the similarity matrices in file CPB106AD.

Two cards per case.

CARD 1

a) 10I4. Frequency of judgements in categories Ø to 9 - Ø standing for missing data.
b) F7.0 Proportion of triangle inequality infractions (as a proportion of all triads of occupations)
c) F7.0 Proportion of ultrametric inequality infractions
d) I4 No. of triads involved (560 in all cases)
14X
e) A4 4-digit subject identifier (first 4 characters of standard 16 character identifier)
f) I4 Card number

CARD 2

a) 3F8.5 3-dimensional INDSCAL subject space co-ordinates
b) F8.5 Correlation (R) between subject's data and INDSCAL solution
c) F8.5 Z* - Fisher Z-transform of R.
d) F8.5 R^2
e) 2F8.5 2 dimension INDSCAL subject space co-ordinates
f) A4 4-digit subject identifier
g) I4 Card number

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FILE 6. (222F) LABEL 6 Triadic similarities data DSN = EKKA02. DTB110AD

Method of data collection: see R.M.2, pp. 8.1 - 8.5.

Set of occupational titles used: stimulus set 10, see R.M.2, p. 10.6.

47 cases.

Because of the variable number of usable triads from each subject, there is no standard number of cards per case.

Cases are separated by a blank card.

Format (13A1,F2.0,2X,5(2X,3F3.0))

Cols. 1-13 First 13 characters of the standard identifier (R.M.2, p. 10.3)
Cols.14-15 Card number
Cols. 21 onwards

The triadic judgements are represented as ordered triads of the occupational 2 digit identifiers according to stimulus set 10 (R.M.2, p. 10.6) - up to five triads are packed per card.

The first and second occupations in a triad are those judged least similar, while the first and last are those judged most similar.

e.g.: triad 03-10-11 is interpretable as -

Occupations 03 (qualified actuary) and 10 (policeman) were judged least similar in the triad.

Occupations 03 (qualified actuary) and 11 (carpenter) were judged most similar.

Missing data just isn't there.

FILE 7. (222G) LABEL 7 Hierarchical clustering data DSN = EKKA02. DHA106AD

Method of data collection: R.M.2, pp. 7.6 - 7.10.
Occupational titles used: stimulus set 06, R.M.2, p. 10.5.

103 cases

Fifteen cards per case. Cases separated by blank card.

Format (16A1,F3,0,15F3.0)

Cols. 1-16 Standard 16 character identifier (R.M.2, p. 10.3)
Cols.17-19 Occupational title identifier, according to stimulus set 06, each indexing a row of the lower half matrix.
Cols. 21 onwards. Lower half 16 x 16 matrix of ultrametric distances between the 16 occupations. The ultrametric distance is the minimum level of the clustering 'tree'

FILE 7. (222G)

made up by the subject at which the two occupations are linked together. In terms of the performance of the clustering task, it is the number of the step at which the two occupations (or groups containing them) were clustered together.

continued..

FILE 8. (222H)

LABEL 8 Free Sorting of 32 Occupational Titles DSN = EKKA02. DFA108AD

Method of data collection: R.M.2, pp. 7.1 - 7.2.
Occupational titles used: stimulus set 06, R.M.2, p. 10.5.

71 cases

Format (16A1,2F2.0,1X,29F2.0/F1.0,2F2.0)

This rather unwieldy format is a relic of the Edinburgh E.M.A.S. system. The data is stored as a 32 x 32 co-occurrence matrix, i.e. a one if the two occupations were sorted into the same group and zero otherwise. The rows and columns of the matrix refer to the occupations as ordered in stimulus set 08. Each row of the matrix is preceded by the 16 digit identifier, the row number and the number of groups in the sorting.

FILE 9. (222I)

LABEL 9 Free Sorting of 50 Occupational Predicates DSN = EKKA02. DFA136AD

Method of data collection: R.M.2, pp. 7.3 - 7.4.

In most cases only the first part of the task was completed, i.e the sorting of the predicates and only the data resulting from this part is in the file.

Occupational predicates used: stimulus set 36, R.M.2, p. 10.6.

65 cases

Format (16A1,2F2.0,1X,29F2.0/F1.0,2F2.0)

Data is stored as 50 x 50 co-occurrence matrices.

FILE 10. (222J)

LABEL 10 DSN = EKKA02. PBAGMATD

This file contains aggregate information on the pairwise similarities judgements given in file CPB106AD.

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FILE 11. (222K) LABEL 11 DSN = EKKA02. LIFETASK

This file contains background information on the subjects interviewed and also an indication of the tasks completed by each of them.

Cols. 1-32 Are derived from the other data card of the attached background information schedule.

Cols.33-45 Contain one's for each task completed - as follows:

33	-	RA3	)
34	-	RA4	)
35	-	RB6	) ranking and rating
36	-	RB7	)
37	-	RB8	)
38	-	PB	pairwise similarities
39	-	TB	Triadic similarities
40	-	FA107	sorting task, pilot only
41	-	FA139	sorting task, predicates and titles
42	-	HA	hierarchical grouping
43	-	FA136	sorting of occupational predicates
44	-	FA108	sorting of titles
45	-	SA	sentence frame completion

FILE 12. (222L) This file contains a carefully chosen subset of the cases in file EKKA02.CPB106AD (= file 222A above). The layout and format are precisely the same as in file 222A. There are 68 subjects, each of whose data occupies 15 card images. This set of data provided the INDSCAL "group space" which is used in the book The Images of Occupational Prestige by A. P. M. Coxon and Charles L. Jones.

research memorandum NO. 2

METHODS OF DATA COLLECTION USED IN THE PROJECT ON OCCUPATIONAL COGNITION: A HANDBOOK FOR INTERVIEWERS.

by

R. LOCKHART and M. MCPHERSON

MARCH 1973.

PROJECT ON OCCUPATIONAL COGNITION

RESEARCH MEMORANDUM No.2

Methods of Data-Collection used in the Project on Occupational Cognition: a Handbook for Interviewers.

by

R. Lockhart and H. McPherson.

This research memorandum forms an interviewers' handbook for the Project on Occupational Cognition. Since the procedures used in the project are regularly modified, it is organized as a series of modules referring to distinct data-types. As procedures change, this handbook will be updated.

This memorandum was supported by a research grant (no.HR1883/1) from the Social Science Research Council. The Project on Occupational Cognition is under the direction of A.P.M. Coxon and C.L. Jones

I N D E X

(This should be updated when you receive further modules)

1. GENERAL POINTS ON INTERVIEWING

There is a large amount of research material available on how interviewers can bias the results of sociological research projects. We want to minimise interviewer bias in POOC, and so interviewers should read this memorandum with great care. POOC is especially vulnerable to the effects of interviewer bias, because we are asking our respondents to engage in quite complex, though highly structured cognitive tasks. Consider the following points especially carefully.

(i) Previous research has shown that there can be considerable variability from interviewer to interviewer in how they perform the "same" data collection task. POOC interviewers should read their instructions with great care, and should always follow the standard procedure.

(ii) In some research projects, interviewers do not always check that all required data are obtained. POOC interviewers must make such checks.

(iii) Interviewers do not always write up reports on interviews, nor do they always edit the data in accordance with standard procedure, nor do they always make sure that every separate schedule is identified with the respondent's identification number. Editing, identifying and report-writing must always be carried out by POOC interviewers.

(iv) Subjects' data often give evidence of their not understanding the task or the nature of the criterion for judgement. POOC interviewers must make quite sure that they establish an "equivalence of meaning" with their interviewees, and must provide written comments on the matter, if they suspect that this may not have been achieved in any particular case. There is more to "rapport" than smiling at the respondent.

(v) POOC is very much concerned with the "sociolinguistic" aspects of occupations, so we want interviewers to take especial care over collecting the precise phraseology used by subjects when making judgements of similarity between occupations. Interviewers should write down on to the schedules the phrases, predicates and constructs which they elicit from their subjects. We also want the interviewer's written report on how the respondent interprets such global concepts as "overall similarity", and "general standing in the community". The report should be written up after the entire interview.

The following specific regulations will apply to people who interview for POOC.

(1) Occupational predicates and imagery in general crop up in many POOC tasks. They must be recorded, being ESSENTIAL to the objectives of the project.

(2) A written report is required for each interview. In the case of occasional interviewers the production of a satisfactory report will be an explicit precondition for payment.

(3) The documentation on interviewing procedure must be regularly re-read, and the instructions for a task must be adhered to. Comments and criticisms of procedure, instructions and layout are welcomed, and should be entered on a report, or as a separate note.

(4) New occasional interviewers will now be required to undertake two training interviews. In the first, the trainee would simply 'sit in' on an interview conducted by A.P.M.C. or C.L.J., or by a staff member of POOC. In the second, the trainee would conduct an interview, with a different staff member present. Present occasional interviewers will be considered to have performed the first, but not the second, training interview. (These interviews will be paid at the usual rate). All interviewers will periodically be accompanied by A.P.M.C. or C.L.J. The purpose of this is to pinpoint common problems of implementation, and to maintain standard practices among all interviewers.

(5) The definition of a "completed" written up report includes the writing of the POOC 13-character identifier on to the top of each schedule. See section 9 of this memorandum for details.

2. INTRODUCING YOURSELF (AND POOC) TO THE RESPONDENT

POOC interviewers are not expected to go around knocking on unfriendly doors like encyclopaedia salesmen. All interviews are set up in advance by letter or telephone. Sometimes we arrange a group expedition to say, a school, a hospital or a college of further education, get you to the appropriate place, and set some interviewees in front of you. The interviewees have usually been sent one or more of three short publicity documents (called "simple POOC", "Bulletin article", and "Information for Interviewees").

When face-to-face:

(a) Smile and introduce yourself as being from POOC, by which he has agreed to be interviewed.

(b) Ask if he has received and read the publicity documents. If he hasn't, produce one and give it to him.

(c) Assure him that we are only interested in his views about occupations. If he demurs, tell him that he knows much more about his own occupation and its relationships to other ones than a vocationally uncertain school-leaver does. We want to represent his knowledge, views and guesses about the relations between occupations in a kind of "cognitive map" which can be compared with the "cognitive map" which someone else has of occupations.

(d) Reassure the Subject throughout the interview that there are no right or wrong answers. Some Subjects are extremely nervous about "doing the wrong thing" or "mucking up your project"

Here is an extract from "Information for Interviewees"

"WHAT WILL BEING INTERVIEWED ENTAIL?

First, we have no intention of asking anyone any personal or embarrassing questions. We are simply interested in your views on occupations. Second, we do not intend to take up a great deal of your time. A single interview session is all that we shall require, and we would not ask for another interview unless

we were quite sure that it would be particularly helpful, and that you were agreeable.

Some of the techniques that we might use in interviewing you are:

(1) Asking you to give a list of the names of occupations that you are acquainted with.

(2) When you had done this, we might ask you to give short descriptions of certain of the occupations you had mentioned.

(3) We might form up the occupations you had given us into pairs or into threes, and ask you about the similarities and differences between them.

(4) We might ask you to take a large number of names of jobs, and to group them into what seem reasonable clusters to you.

(5) Another possibility is that we might ask you to make judgments about how likely it would be for a man or a woman to change from one occupation to another. "

Does he mind if the interview is tape-recorded? Ask him.

If and when a tape-recorder is used in an interview: (a) try to encourage the S to verbalise even more than one usually tries; (b) make notes of the tape position revolution counter at strategic points, so that you know where to wind the tape for playing back particular episodes; (c) record the time taken for each task, as there are considerable individual differences. We need this information for planning future research.

3. THE LIFE-HISTORY AND THE FACE-SHEET

These are completed by the interviewer on specially pre-printed A4-size record cards. The life-history schedule is adapted from the one used by Blum et al (1969) and is printed on the back of the face-sheet. (The face-sheet is pre-coded for punching, and assumes that the interviewer will collect name, address, date of birth, present job held, last job of father, etc.). If the type of secondary school last attended is not known, write down the full name of the school and the town it was in. There are useful questions one can ask about schools, like "did many people stay on after 15?" "did people do certificate courses?" "did you have to pay fees?".

One tactic is to start the interview with the life-history (though one or two respondents object on grounds of privacy), - as this is more interesting than the face-sheet. It is fairly natural to move from the life history over to the face-sheet.

Points on getting the life-history

The interviewer may start at the top of the life-history card with the year in which the respondent left full-time education (secondary school or full-time courses in higher education). Note the occupation first entered, and the respondent's age and the calendar year. Also ask whether he was articled or apprenticed. Also ask if he took any part-time education or training with his job.

Each row of the recording schedule refers to a transition or change in the individual's occupational career. The following should be recorded (see schedule, an example of which forms the back cover of this Memorandum).

(a) The year of the transition e.g. 1932

(b) Respondent's age e.g. 27 years

(c) The month of the transition e.g. May

(d) Description of the "from" job, i.e. the occupational title, grade, industry, institution, salary etc.

(e) Ditto for the "to" job

(f) Reasons for leaving the "from" job, e.g. own decision or not

(g) Whether had new jobs in hand at time of quitting old job

(h) Got new job through what channels e.g. friends, family, advertisements, labour exchange, man in a pub, etc.

(i) Ages at which significant "marker" events like marriage, childbirth, emigration, war service etc. occurred. It is important to note a Subject's experience of National Service. For example, an Actuary may have been a fitter for 2 years.

Abbreviations to be used in the life-history are:

Left job	At termination	Got job through
Own decision	Had new job	FRiends:FAmily
Not	Knew of job	PUblic/PRivate agency
	Neither	Ads:Other

****

Reference BLUM, Z.D. et al (1969) A method for the collection and analysis of retrospective life histories. CSSOS Report No.48 (July) Baltimore Md. The John Hopkins University. See also NORC Survey 4068

4.1: THE FREE LISTING OF OCCUPATIONAL TITLES.

The instructions we use for this task have never been formalised - we simply ask subjects to give the names of any occupations they can. Since certain subjects believe that to be able to name an occupation, they must have considered it as a possible occupation for themselves it often helps if the Interviewer explains a free-listing to them by giving a list of, for example food: "Buns, cake, biscuits, soda-pop, hot-dogs.....", making clear that he may not have eaten all the things he mentions.

Such free-listing has many things in common with word-association data (Deese 1965), and subject's lists often have a surprising amount of structure (see Bousfield 1958). Pay especial attention to where pauses come, to what principles of clustering seem to be used, and to the occurrence of linking terms such as ".. and then there's...". Where possible, the Subject's list is tape-recorded, because it is very likely that interviewers miss this significant information, and also because it is difficult to keep up with a subject when he is going fast.

Since the task usually follows the life-history collection, the first occupational names are often jobs that they and their immediate friends and relatives have. Beyond this, the number of names elicited, the speed of delivery, the amount of gaps, and the duration till a long silence occurs are all largely unpredictable. When combined with other tasks, we usually put a limit of 4 minutes, or the occurrence of a long gap (of say 30 seconds).

Brief Description: The S is asked simply to list (or say) the names of occupations, as they occur to him (Free Listing).

Methodological

(i) It is important that subjects perform such tasks in as unconstrained way as possible. The point here is to get at the subject's own (probably implicit) principles of organising his "subjective lexicon" of occupational terms.

(ii) In practice, it is often necessary to impose a few constraints - e.g. of limiting the time period for free-listing to 4 minutes.

(iii) Since the emphasis is upon the content and form of the subject's own classification it is especially important that the free-listing task come first, after the occupational life-history.

(iv) Remember that there must be NO PROMPTING BY THE INTERVIEWER, even if the subject asks a question such as "Now what d'you call that man who operates a T.V. camera?" Say "I'm sorry, I can't help you smile; and make a note of the question.

EXAMPLES (extracts from our interview reports):

(a) Free-Listing. S. found this task easy, and a flowing list ensued. Later he was able to rationalize his choice of occupational titles, and the 'clusters' of occupations and hierarchies thereof, telling us that these clusters of titles were so prominent in his listing because of his family's connections with those occupations.

(b) Free-Listing. Found it "rather difficult" to give a fluent list. Most titles were in connection with S's present job.

4.2: FREE DESCRIPTION OF OCCUPATIONAL TITLES.

Following procedures described by Scott (1966) we sometimes ask respondents simply to describe each of the first 10 titles in their free-listing. "Could you give me an adjective to describe this job?" The interviewer should then note down what the respondent says. This should be carried out as accurately as possible, because we want to have on record the kind of words that people use to describe occupations.

This can be varied. Instead of asking S for a brief description of job X, (say Actuary), the interviewer might ask S e.g.

"Make up a sentence with the word 'Actuary' in it"

This can also be done with pairs of occupational titles.

e.g. "Make up a sentence with the words 'Actuary' and 'Coal Hewer' in it".

Other examples, (the "sentence-completion" technique):

being an "X involves ( )"

"X's are unlikely to ( )"

"X's are normally expected to ( )"

Interviewers are encouraged to try out exploratory techniques like this so long as they write up their findings.

4.3: THE JOBS OF RELATIVES AND FRIENDS.

- a listing of the occupations of close friends and relatives:

Father

Mother

Paternal Grandparents

Maternal Grandparents

Aunts and Uncles - (both sides)

(First) Cousins

Siblings

Offspring

Relations by marriage.

- followed by those of 5 fairly close friends, ("People that you know quite a lot about").

This gives several useful things; first of all, it provides a check on the possibility that the free listing given just previously was organized around the occupations of relatives and friends. Secondly, it gives an index of the respondent's "occupational environment", and, taken together with his life history of occupations, it helps us to interpret his patterns of response to later tasks.

EXAMPLE (extract from an interview report):/

Relatives and Friends.

Father - police (Security)

(Paternal)Grandmother - farming and housewife

(Paternal)Grandfather - farming

(Maternal) Grandmother - housewife

(Maternal) Grandfather - Shopowner (general stores, hardware)

(Mother's side) Uncles (2) - shopowners (general stores)

Uncle (1) - garage manager

Uncle (1) - office manager (insurance)

Aunt (1) - W.R.A.F.

Aunts (4) - housewives

Cousins Male (1) - Edinburgh University Graduate

Female (1) - graduate teacher

(1) - was a civil servant

(lost touch with many).

Brothers (1) - Police

(1) - Market Research

NO Sisters

Offspring - aged 7 years and 4 years.

Friends

M - (2) teachers (1 is a Headmaster)

F - (1) was Infant Headmistress. Now Play Group Organizer for Bathgate area.

M - (1) Forester (Head Forester of an Estate)

M - (1) Bakery Manager

References:

Deese, J. (1965) The structure of associations in language and thought. Baltimore: John Hopkins Press.

Bousfield, W.A. (1958) Associative clustering in the recall of words of different taxonomic frequencies of occurrence. Psych. Reports, 4, 39-44

Scott, W.A. (1966) Measures of cognitive structure. Multivariate Research 1 391-5

5.1 PB DATA-RATING-SCALE DATA OR PAIRWISE SIMILARITIES

Pairs of occupational titles are presented to the subject, and he is asked to assess (rate) how similar the pair are. Generally we use a 9-point rating scale, with the extremes marked as 'totally similar' and 'totally dissimilar'. Both the order of the pairs, and the order of stimuli within a pair are randomised to avoid positional effects.

The questionnaire schedules are generated by a computer program and arrive on a piece of printout. The order of pairs of stimuli is randomised (differently for each schedule), as is left-right position. Generally speaking, all un-ordered pairs of a set of stimuli (e.g. occupational titles) are produced, though sundry options are available. A standard POOC set is 16 stimuli, giving 120 pairs to judge.

General instructions come at the top of the printout schedule. In POOC at March '73, these are:

PROJECT ON OCCUPATIONAL COGNITION
UNIVERSITY OF EDINBURGH

DATA TYPE PB DATE

BELOW YOU WILL FIND PAIRS OF NAMES OF OCCUPATIONS, SEPARATED BY NINE NUMBERS. WE WOULD LIKE YOU TO JUDGE HOW SIMILAR IN YOUR OPINION, EACH OF THESE PAIRS OF OCCUPATIONS IS. WILL YOU PLEASE DO THIS BY CIRCLING THE NUMBER WHICH BEST EXPRESSES THE AMOUNT OF SIMILARITY YOU THINK THERE IS - A 9 MEANS TOTALLY SIMILAR, AND A 1 MEANS TOTALLY DISSIMILAR.
I REALIZE THAT THIS SOMETIMES A DIFFICULT TASK, AND YOU MAY FIND IT HARD TO DECIDE IN SOME CASES. PLEASE MAKE A JUDGEMENT NONETHELESS, BUT MARK THAT PAIR WITH AN 'X'.

MANY THANKS FOR YOUR COOPERATION.

CHURCH OF SCOTLAND MINISTER TOTALLY SIMILAR	AND 9.8.7.6.5.4.3.2.1.	CHARTERED ACCOUNTANT TOTALLY DISSIMILAR
CHARTERED ACCOUNTANT TOTALLY SIMILAR	AND 9.8.7.6.5.4.3.2.1.	CARPENTER TOTALLY DISSIMILAR

The interviewer should read through the instructions (aloud) so that the respondent both sees and hears the whole of them. (Beware of

people who have forgotten their reading spectacles). Explain to the subject that as you reach the foot of each page you will ask him to say something about the preceding judgment. Over several months' experience in POOC, we have found that it is best if the similarities task is not treated as a self-completion questionnaire. The interviewer should hold the pen or pencil, read off the names of the appropriate pair of occupations (held where S can see them), and should circle the appropriate number expressing "degree of similarity", on behalf of the interviewee. Watch that you do not "lead" by allowing the pen or pencil to hover over one part of the response scale. (Again beware of people who have difficulty in seeing or reading). In administering this test, you will probably notice that subjects take a longish time over the first few judgments and then speed up (especially after turning the first sheet).

Notice that it is the subject's own opinion of the similarity that is being requested, but that the basis for the similarity is not specified. For this reason it is sometimes termed a "dimensionless" task. It then becomes our purpose to infer the bases of general similarity from the judgments. Be ready to stress the generality of the similarity required, and be on the watch for spontaneous verbalised bases of judgment, or constructs, used (e.g. "Now he could never do his job", or - a genuine one in the comparison of railway porter and ambulance driver "he carries cases ... and, yes, he carries cases"!) Note down any such comments, and, if possible, the pair to which they refer.

Be alert to the "strategy of similarity" used - for instance one basis for similarity is "whether an x could do the job of a y"; another might be "Whether you'd see them in the same social circle!" Try to work out any problem-solving sequence subjects use, and note it down on the schedule or your notes. Ask the subject about this after the task, not during it.

Eliciting reasons and constructs

At the printout perforations, ask the Subject for his similarity judgment as usual. Then say "We are at the foot of a page. Please would you say something about that judgment." Note down on the schedule all that he says. It is now possible to feed back to the subject the implications of what he is doing: e.g.

> "You ringed a 4 for building site labourer with machine tool operator, and a 6 for chartered accountant with actuary. So you think a chartered accountant is more like an actuary than a building site labourer is like a machine tool operator."

We are particularly interested in textual material so don't think it is unimportant. Incorporate it in your own written report. Try to use the same words as the interviewee.

EXAMPLES (from one of our interview reports):

I Chartered Accountant and Qualified Actuary - 7. "Long period of training - similar in the sense that they are training at the job in an office, spare time study. They are both dealing with figures, statistical figures to a large extent. They are often both senior executives, they can both be self-employed, but beyond dealing with figures, the type of figures used and what you use them for are somewhat different".

II Chartered Accountant and Carpenter - 1

"One is dealing with wood, one is manipulating figures (not in any derogatory sense). The accountant is a mental occupation, the Carpenter is working physically. A Carpenter is lower than a joiner, hammering nails to join 2 pieces of wood. A Joiner makes joints".

III Railway Porter and Lorry Driver - 4

"Both manual work. A Lorry Driver is rather more skilled".

Response sets. One not uncommon response set is for an interviewee (especially when not properly interviewed) to go down the schedule indicating one (1) - totally dissimilar - as the appropriate response to all pairs of occupations. Of course it may be that the interviewee actually holds to this - in which case we do not wish to distort his views.

However one can to some extent prevent this happening; when reading through the instructions the interviewer should stress that a 1 denotes TOTALLY DISSIMILAR - "that means, that there is no attribute or characteristic at all that you can think of, which is common to both occupations". The decision is, of course, the subject's in the end, but care should be taken to ask him about his interpretation of similarity after the task is finished.

If the subject asks "what's an x?" or "what does x do?" turn the question back into the form "what do you think he does?", agree with his description, and note the response for your report. If necessary, at the end of the interview correct him, and explain that since we need the subject's own ideas we could not enlighten him before. If he has no conception of any one occupation, then offer him a brief description, e.g.:-

"What is a qualified actuary?".

"An actuary is a person who works in an office with figures about insurance risks. For example if you owned a car and had a bad crash in it, your insurance premium would probably go up. Well, an actuary is a person whose job it is to look at all the statistics, and to work out mathematically how likely you would be to have another crash and so claim more money from the insurance company. Actuaries work in other fields as well. For example, they use mathematical techniques to work out how much each person in a company should pay to the pension fund. They are often in charge of the investment of very large sums of money, on behalf of, for example, pension funds."

Write-ups and check-over. These are very important. You ought to have made sure that the interviewee has made some response to each of the pairs in the schedule, and has missed none out. Having done so, please write up your description and impressions of how he went about the task, noting especially his comprehension of the instructions, response bias, dominant themes or constructs etc. Your write-up is an essential part of the interview report.

Record the length of time taken in the task.

References: CRONBACH, L.J. (1946) Response sets and test validity. Educ Psychol. Meas., 10, 43-56
DAVID, H.A. (1963). The method of pair comparisons. London: Griffin.
GUILDFORD, J.P.(1954). Psychometric methods. New York: McGraw Hill.
MILLER, G.A. (1956) The magical number seven, plus or minus five Psychol. Rev., 63, 81-87

5.2 PA DATA : PAIRWISE DOMINANCE JUDGMENTS

Dominance judgments (so named by Bechtel (1967)) refer to responses where a pair comparison is made, and the judgment is basically that stimulus A "dominates" (is chosen above, is preferred to, is judged more prestigious than) stimulus B, or B dominates A, or indifference. (Bechtel contrasts dominance with composition judgment, where the subject assesses the "composite subjective effect" of A and B together on a particular continuum).

The most typical use in this area involves the judgment as to whether A has greater prestige than B, or whether A is preferred to B (say, in terms of a life-career).

Note that degree of dominance is a bipolar scale, marked by two opposite extremes which has a zero point of indifference at the middle of the scale, where neither A nor B is preferred. This contrasts with scales such as degree of similarity which are unipolar scales with no zero-point of indifference in the middle of the scale. Many of the interviewing points made about taking a respondent through pairwise similarities also apply to pairwise dominances and compositions.

Reference: BECHTEL, G.C. (1967). The analysis of variance and pair-wise scaling. Psychometrika, 32, 47-65

5.3 PC. DATA : PAIRWISE MOBILITY TASK

This task comes as a computer-printed schedule, in rather similar fashion to pairwise similarities and pairwise dominances. Instructions are as follows:

PROJECT ON OCCUPATIONAL COGNITION
UNIVERSITY OF EDINBURGH

BELOW YOU WILL FIND PAIRS OF NAMES OF OCCUPATIONS, SEPARATED BY NINE NUMBERS. WE WOULD LIKE YOU TO JUDGE HOW LIKELY IT WOULD BE FOR SOMEONE TO MOVE FROM ONE TO THE OTHER. WILL YOU PLEASE DO THIS BY CIRCLING THE NUMBER WHICH BEST EXPRESSES THE DEGREE OF PROBABILITY YOU THINK THERE IS - A 9 MEANS DISTINCTLY PROBABLE , AND A 1 MEANS EXTREMELY IMPROBABLE (TO MOVE SO)

I REALIZE THAT THIS IS SOMETIMES A DIFFICULT TASK, AND YOU MAY FIND IT HARD TO DECIDE IN SOME CASES. PLEASE MAKE A JUDGEMENT NONETHELESS, BUT MARK THAT PAIR WITH AN 'X'.

MANY THANKS FOR YOUR COOPERATION.

FROM	COMMERCIAL TRAVELLER	TO	MALE PSYCHIATRIC NURSE
	DISTINCTLY PROBABLE 9 8 7 6 ?? 4 3 2 1		EXTREMELY IMPROBABLE
FROM	BUILDING SITE LABOURER	TO	CHARTERED ACCOUNTANT
	DISTINCTLY PROBABLE 9 8 7 6 ?? 4 3 2 1		EXTREMELY IMPROBABLE

In contrast to many other tasks involving pairwise judgments, the pairwise mobility task demands that <u>all ordered</u> pairs (N(N - 1)) be judged; e.g. if "From C. of S. Minister to Ambulance Driver" is judged, then "From Ambulance Driver to C. of S. Minister" is also judged.

Pilot investigations of the pairwise mobility task (using 8 occupational titles and hence 56 judgments) - have indicated the importance of the interviewer's specifying the meaning of the "hypothetical mobility" very precisely.

1. It is <u>intragenerational</u>:- the <u>same</u> man moves from the first occupation to the second.

2. The mobility is conceived to take place over a period from the age 30 (first job) to the age 40 (second job).

Gentle probing about the reasons for particular judgments often yields intersecting imagery about the barriers to movement between particular locations in the occupational structure, and it is <u>essential</u> that this imagery be recorded as accurately as possible, and <u>included in the interview report</u>.

Record the length of time taken in the task.

5.4 PD DATA: SORTING OF PAIRWISE SIMILARITIES.

This is a pairwise similarities task, comparable to PB (q.v.), but instead of pairs of occupational titles, randomly ordered, being printed on computer paper, there are pairs of titles each printed on a punch card. With the standard set of 16 titles, 120 pairs are generated. Sorting cards into piles is a task which Subjects appear to enjoy, and data processing is very much easier for PD than for PB.

The instructions for this task are as follows:

PROJECT ON OCCUPATIONAL COGNITION
UNIVERSITY OF EDINBURGH

HERE ARE 120 CARDS, EACH OF WHICH HAS ON IT A PAIR OF NAMES OF OCCUPATIONS. WE WOULD LIKE YOU TO JUDGE HOW SIMILAR THEY SEEM TO YOU. WILL YOU PLEASE DO THIS BY SORTING EACH CARD INTO ONE OF 9 PILES. IT MAY HELP YOU TO USE THE NAMES OF THE CATEGORIES WHICH YOU WILL BE GIVEN. PLEASE DECIDE ON THE BASIS OF THE DEGREE OF OVERALL SIMILARITY OF EACH PAIR OF OCCUPATIONS, RATHER THAN ON ANY PARTICULAR CHARACTERISTIC. AFTER YOU HAVE DONE THE FIRST SORTING, BY ALL MEANS REMOVE CARDS FROM ONE PILE TO ANOTHER, UNTIL YOU ARE SATISFIED THAT ALL THE PAIRS IN EACH PILE HAVE ABOUT THE SAME DEGREE OF SIMILARITY.

As well as the 120 cards interviewers will be provided with nine cards bearing the following numbers and labels:-

9	Identical	(Totally similar)
8	Almost identical	(Extremely similar)
7	Very similar	
6	Moderately similar	(Pretty similar)
5	Similar	
4	Slightly similar	
3	Very slightly similar	
2	Hardly similar at all	
1	No similarity whatever	(Totally dissimilar)

Interviewers will also be provided with a card having -1 in the first two columns, and several blank cards. Do not fold, bend, spindle or mutilate!

(i) Give the Subject the nine label-cards before handing him the 120. Ask him whether they are clear and be prepared to clarify any confusion.

(ii) The Subject should spread out the 9 cards so that he can see the labels throughout the task.

(iii) Tell the Subject that from time to time during the execution of the task, you will ask him to talk about the similarity judgment he has just made and that this is quite routine procedure. Say that in any case you would like him to talk about the pairs of occupational titles as he sorts them.

(iv) Hand the Subject the 120 cards one at a time, reading out the occupational titles on each as you do so.

(v) Some cards (randomly chosen) will have an asterisk printed on their far right hand side. When such a card turns up, the interviewer should wait until the subject sorts it and then ask him to talk about the judgment he has just made.

(vi) When the task is completed, encourage him to talk about it. Try to find out what <u>he</u> means by similarity.

(vii) Pile the completed groups (1 at the bottom, 9 at the top) with the "label" card on top of each group, write the Identifier on the top card and put a terminator card (which has "-1" in the first two columns) at the end. Put blank "protector" cards at the top and bottom of the overall pile and secure with several rubber bands.

Read the section on PB data (5.1) which is relevant to this task also.

6. RA and RB DATA : RANKING AND RATING TASKS

General

Rating and ranking have been the routine and standard methods of investigating the perception of occupations in general, and occupational prestige in particular for a long time.

(i) Direct rating is one of the easiest ways of quantifying: for instance, the subject is told to consider the stimulus and "mark it out of 100" or some specified attribute. The implication is that the judgment is to be made in relation to other stimuli in a presented set, but in accordance with some absolute standards. This task is also known as "magnitude estimation" or "direct estimation". (Stevens 1966).

(ii) Sorting into ordered categories. The investigator defines and labels some categories and the subject has to assign each stimulus to one of the categories, e.g. the North-Hatt study where each subject was handed a card with the rubric:

"FOR EACH JOB MENTIONED, PLEASE PICK OUT THE STATEMENT THAT BEST GIVES YOUR OWN PERSONAL OPINION OF THE GENERAL STANDING THAT SUCH A JOB HAS.

1. EXCELLENT STANDING
2. GOOD STANDING
3. AVERAGE STANDING
4. SOMEWHAT BELOW AVERAGE STANDING
5. POOR STANDING

x I DON'T KNOW WHERE TO PLACE THAT ONE. "

(Reiss, p.19).

The investigator can put more or less arbitrary numbers upon the categories (e.g. 1 - 5 as above), or he can try to scale the boundaries of the intervals in some statistical way.

Ranking and Rating Data (POOC RA and RB type)

RA data are rank numbers assigned to a set of stimuli (occupational titles). In some cases, Subjects have been allowed to use tied ranks.

RB data are ratings (e.g. out of 100) or estimated quantities (e.g. income) In this case, ties are freely permitted.

In general then, ties are permitted, unless the task instructions specifically forbid them.

Data are gathered on questionnaire schedules printed by computer. Each ranking or rating task is given one page of computer printout, with instructions at the top and then the set of occupational titles (in individually randomised order) listed down the page. Each occupational title has a two-digit identification number.

Standard POOC instructions sets (at March, 1973) are as follows:

1. PROJECT ON OCCUPATIONAL COGNITION

PLEASE RANK ORDER THE FOLLOWING 16 OCCUPATIONS IN TERMS OF YOUR OWN PERSONAL OPINION OF THEIR GENERAL STANDING IN THE COMMUNITY.
ASSIGN A RANK OF ONE (1) TO THE OCCUPATION WHICH HAS THE MOST EXCELLENT GENERAL STANDING, AND A RANK ORDER OF SIXTEEN (16) TO THE OCCUPATION WHICH HAS THE POOREST GENERAL STANDING. YOU MAY 'TIE' TWO OCCUPATIONS WITH THE SAME RANK IF YOU LIKE.
BY THE WAY, PLEASE TRY NOT TO JUDGE ANY OCCUPATION ACCORDING TO YOUR OPINION OF SOME ON PERSON YOU KNOW WHO HAS SUCH AN OCCUPATION.
(NORC) POOC CODE RA 3

This is a POOC rendering of the criterion used in the NORC North-Hatt study.

The most general use is simply to allow the subject to interpret it without further specification (e.g. rank in order of general social standing). The interviewer should read the instructions aloud to the subject. N.B. Make sure that S knows what he's doing. Stress the "Society at large" criterion. Also make it clear to S that this is a task in which he gives his "own personal opinion" about the state of affairs that is:- what pertains, not what ought to be so. After this (having made sure that S knows the exact nature of the attributes and of the task), the interviewer can play the actual obtaining of the rank orderings by ear. Remember that ties are permitted. If S is a bit slow he may be prodded by

probes such as, "Which occupation has the most excellent general standing?" "Which has the next best general standing?"; or "Which occupation has the poorest general standing?"; "Are there any which are just above that one?" and so on.

N.B. Watch the subject for his verbalizations and general mumbles. Try to note these down. It's no good being a "sensitive interviewer" if there's no written record of your sensitivity:- though it should certainly make your quantitative data of better quality than those of interviewers who are too lazy or incompetent to do the job properly.

2. PROJECT ON OCCUPATIONAL COGNITION

PLEASE RANK ORDER THE FOLLOWING 16 OCCUPATIONS IN TERMS OF YOUR OWN PERSONAL OPINION OF THE PRESTIGE AND REWARDS THEY OUGHT TO RECEIVE. ASSIGN A RANK OF ONE (1) TO THE OCCUPATION WHICH YOU THINK OUGHT TO HAVE THE HIGHEST PRESTIGE AND REWARDS, AND A RANK OF SIXTEEN (16) TO THE OCCUPATION WHICH YOU WOULD GIVE THE LOWEST PRESTIGE AND THE POOREST REWARDS TO. YOU MAY 'TIE' TWO OCCUPATIONS WITH THE SAME RANK IF YOU LIKE.
POOC CODE RA 4

Here, we actually use the word "prestige", and we want the interviewee to give his own possibly idiosyncratic view of what ought to be the case, (i.e. normative)

Some subjects insist on ranking (a) prestige and (b) rewards separately; try to discourage this, but if the subject insists allow him to do it his own way.

3. PROJECT ON OCCUPATIONAL COGNITION

PLEASE RATE EACH OF THE FOLLOWING 16 OCCUPATIONS IN TERMS OF THEIR USEFULNESS TO SOCIETY.
GIVE EACH OF THEM A 'PERCENTAGE' MARK OUT OF 100, JUST AS IF YOU WERE MARKING AN EXAMINATION PAPER.
GIVE HIGH MARKS TO ANY OCCUPATION WHICH YOU THINK OF AS BEING EXTREMELY USEFUL TO SOCIETY, AND LOW MARKS TO ANY OCCUPATION WHICH YOU THINK OF AS BEING NOT AT ALL USEFUL TO SOCIETY.

POOC CODE RB 6

Goldthorpe and Hope (1972) selected the term 'value to society' as a 'purely' evaluative criterion, on the grounds that judgments based on it came as close to being unrefutably normative as possible ("by recourse simply to logic and evidence" they say). We try to clarify the normative aspect by including the social usefulness criterion.

EXAMPLES (from our interview reports):

(a) 'Social Usefulness' (Rate per cent). S. very anxious to be 'fair' to 'lower ranks' - e.g. Barman. "Has a most useful position in society - if he's a good barman, and a good man". Had to put C. of S. Minister first ("That's what I'm here for".), and rated the titles from 90% in descending order to 40%. But he ticked them off at first (with a lot of verbalization), and was asked, later, to assign actual percentages.

(b) "Usefulness to society" he interpreted as the extent to which we could do without them - a construct that appeared before on his judgments, and has come up with other subjects.

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4. PROJECT ON OCCUPATIONAL COGNITION

PLEASE MAKE AS ACCURATE A GUESS AS YOU CAN ABOUT THE AVERAGE INCOME THAT PEOPLE WORKING IN THE 16 OCCUPATIONS BELOW WOULD BE LIKELY TO RECEIVE. WE WANT TO KNOW WHAT YOU THINK SUCH PEOPLE ACTUALLY RECEIVE. (WE DO NOT WANT TO KNOW WHAT YOU THINK THEY OUGHT TO GET),
TO MAKE THE TASK MORE SPECIFIED, PLEASE ANSWER FOR EACH OCCUPATION IN TERMS OF THE TOTAL INCOME LIKELY TO BE RECEIVED IN AN AVERAGE WEEK, BY A MAN AGED ABOUT 30, WHO HAD BEEN WORKING IN THE SAME OCCUPATION FOR ABOUT FIVE YEARS. GUESS AT HIS AVERAGE EXPECTED WEEKLY INCOME BEFORE TAX DEDUCTIONS, AND INCLUDING ANY OTHER SOURCES OF INCOME. (E.G. OVERTIME, DIVIDENDS, ETC.).
POOC CODE RB 7

Tell the subject to give income in weekly, monthly or yearly amounts, whichever is most convenient. During the write-up, figures should be systematically edited to a monthly salary, rounded to the

nearest £1. N.B. To convert a weekly salary to a monthly one, multiply by 52 and then divide by 12.

EXAMPLES (from our interview reports):

(a) The interviewee was concerned about average pay for lorry driver. Pay goes in tonnage:

Up to 3 tons - about £22 basic

3 - 5 tons

5 - 10 tons

10 + over £40 basic, more for long distances.

Also he brought up the fact that one must remember that policemen get rent allowance, free travel on public transport when in uniform, etc.

(b) Didn't like it. Said he'd have to guess. I pointed out that this was just what we wanted. C. of S. Minister and Commercial Traveller seen interestingly high, Barman lower than Railway Porter.

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5. PROJECT ON OCCUPATIONAL COGNITION

PLEASE RATE EACH OF THE FOLLOWING 16 OCCUPATIONS IN TERMS OF HOW MUCH YOU KNOW ABOUT WHAT IS INVOLVED IN THE JOB. GIVE EACH OF THEM A 'PERCENTAGE' MARK OUT OF 100, JUST AS IF YOU WERE MARKING AN EXAMINATION PAPER. GIVE HIGH MARKS TO ANY OCCUPATION WHICH YOU KNOW A VERY GREAT DEAL ABOUT:- FOR EXAMPLE ONE WHICH YOU HAVE WORKED IN FOR A FAIR PERIOD OF TIME, - AND LOW MARKS TO ANY OCCUPATION WHICH YOU KNOW VERY LITTLE ABOUT.

POOC CODE RB 8

Most interviewees find this very easy. Respondents are allowed to give a mark of "nought out of 100", but this should be edited to "1 out of 100", as we are using zero to signify missing data. Such editing is part of the interview write-up.

References: DAVIES, R.M. (1972) Fundamentals of attitude measurement. New York, John Wiley.

GOLDTHORPE, J.H. (1972) Occupational grading and occupational prestige in K. Hope (Ed.) The analysis of social mobility, Oxford, University Press.

STEVENS, S.S. (1966) A metric for social consensus. Science, 151, 530-541.

7. FA DATA : FREE GROUPING OF OCCUPATIONAL TITLES

I HAVE HERE 32 CARDS, EACH WITH THE NAME OF AN OCCUPATION ON IT. WE SHOULD LIKE YOU TO GROUP THEM IN ANY WAY THAT SEEMS NATURAL TO YOU. THERE CAN BE AS MANY OR AS FEW PILES AS YOU WANT, AND IF YOU MAKE SURE THAT YOU CAN SEE THE TITLES AS YOU ARE DOING THE TASK YOU CAN EASILY CHANGE THEM ARCUND IF YOU WANT TO. PLEASE DO TALK ABOUT THE TASK AS YOU ARE DOING IT, BECAUSE ANY COMMENT YOU MAKE IS VERY RELEVANT TO US. THE NUMBERS ON THE CARDS ARE FOR OFFICE USE ONLY AND YOU MAY DISREGARD THEM.

Since this is found to be a fairly untaxing task, the number of titles used is greater than usual, but it is still on the small side ($\frac{32}{34}$).

There are six important aspects of this task:

(1) Wherever possible, the subject should be encouraged to verbalise what he is doing, and this should be tape-recorded. We look at free-grouping as a type of problem-solving, and it is important that we gain fairly naturalistic accounts of what meaning the groups have for them.

(2) Subjects should be actively encouraged to make, break and re-arrange groups, until they are satisfied with the arrangement. A group may, of course, consist of one card only.

(3) At the finish of the task, you should place one <u>blank card</u> on top of each group of cards. The subject should be asked to give a name or description to each group, and this should be recorded in writing on the top blank card.

(4) If there is any significance in the order of the groups (there may not be), ask the subject to hand them to you in this order, and <u>write this information on your record on this interview</u>.

(5) Put several rubber bands round the complete deck, and be sure to mark the top card with the subject's number (see section 9).

(6) Record in your report the time taken to perform the task.

WRITING UP FREE GROUPINGS

Make a list of the constructs used on the test, together with the code number of the cards in each group. e.g. "All Tradesmen" (04, 03, 34, 13, 15, 12, 01, 26). These code numbers refer to the occupational titles.

This means that we have the constructs readily available for comparison with the subject's other tasks and also that, should the worst

happen and the deck be dropped, rubber bank break or whatever, we can still feed the results in to the computer. It takes very little time to do this while writing one's report.

EXAMPLE (from an interview report):

The FA groups:

I: General everyday jobs (01, 21, 25, 16, 23, 01, 33, 02, 33, 11, 24, 19)

II: Skilled personnel (05, 12, 34, 04, 03, 30, 08, 32, 31, 20, 14, 13)

III: Just above average working man - intelligent, need more brains (28, 17, 26, 28, 15)

IV: Professional - (09, 29, 10, 27, 06)

REFERENCES

JONES, R.A. and R.S. ASHMORE (1972). The structure of intergroup perception: categories and dimensions in views of ethnic groups and adjectives used in stereotype research. Journ. Pers. and Soc. Psychol. (in press)

MILLER, G.A. (1969) A psychological method to investigate verbal concepts. Journ. Math. Psychol; 6, 169-191

RAPOPORT, A. and S. FILLENBAUM (1971) Studies in the Subjective Lexicon; New York: Academic Press

7B. FB DATA: FREE GROUPING OF DESCRIPTIONS, FOLLOWED BY GROUPING OF OCCUPATIONAL TITLES

The purpose of the Free-Grouping task is to find out some elementary properties of the ways in which people divide up the occupational world (differentiation), and categorise their experience of it (classification).

In this two-part task, we begin by giving the subject a standard set of randomly ordered punched cards, and asking him to sort them into as many or as few groups as he wishes. A group can consequently consist of as many as 50 cards or as few as 1. Each card refers to a job characteristic; here are a few examples:

12 THEY OFTEN SWITCH THEIR JOBS
41 THEY WORK IN A VERY SPECIALIZED FIELD
32 THEY EARN A GREAT DEAL OF MONEY

The subject is encouraged to rearrange, break and remake the groups if he so wishes until he has reached an arrangement which is satisfactory to him. The purpose of allowing him to do this is to gain some insight into the rules according to which he is working (- if he is), since if he does "break and remake" this presumably indicates that a more systematic or rule-consistent arrangement is being produced. Moreover a final re-arranged sorting tends to be more reliable, in the sense that a replication (re-test) produces very highly similar or identical sortings on both occasions.

The interviewer instructs the subject in the following way:

I HAVE HERE 50 CARDS, EACH OF WHICH BEARS A DESCRIPTION OF A GROUP OF PEOPLE. I WOULD LIKE YOU TO GROUP THEM IN ANY WAY THAT SEEMS NATURAL TO YOU. YOU CAN HAVE ANY NUMBER OF GROUPS, AND ANY NUMBER OF CARDS IN A GROUP. WOULD YOU LIKE TO READ THEM THROUGH? PLEASE TALK ABOUT THE TASK AS YOU ARE DOING IT, BECAUSE ANY COMMENT YOU MAKE IS RELEVANT TO US.

There are 6 important aspects of this part of the task:

(i) Wherever possible, the subject should be encouraged to verbalise what he is doing, and this should be tape-recorded. Since we look at free-grouping as a type of problem-solving, it is important that we gain fairly naturalistic accounts of what meaning the groups have for him. If for any reason tape-recording is not feasible, make copious notes, using the subject's own words. Any comments he makes about the cards should also be recorded.

(ii) The subject should be actively encouraged to make, break and rearrange groups until he is satisfied with the arrangement. A group may, of course, consist of one card only.

(iii) When the subject is satisfied, you should place one blank card on top of each group of cards. The subject should then be asked to give a name or description to the group, and this should be recorded in writing on the blank card.

(iv) Ask the subject whether there is any significance in the way the groups are laid out on the table (there may or may not be). Write this information on your report.

(v) Leave the cards where the subject can see them.

(vi) Record the time taken so far.

The second part of the task now follows. The subject is given a further set of 32 punched cards, each with an occupational title on it. He is now asked to assign them to the previously grouped descriptions, and give some reason for his allocation. The instructions for this are

NOW HERE ARE 32 CARDS, EACH WITH THE NAME OF AN OCCUPATION ON IT. I'D LIKE YOU TO SORT THEM INTO THE GROUPS YOU HAVE MADE. AT THE END I'M GOING TO ASK YOU WHY YOU ALLOCATED THE CARDS TO THAT GROUP. MEANWHILE ANY COMMENT YOU MAKE IS VERY RELEVANT TO US.

There are 7 important aspects of this part of the task:

(i) Once again, encourage the subject to verbalize

(ii) Do not allow the subject to change any of the groups of descriptions at this stage.

(iii) Permit (but do not encourage) the subject to put aside those cards which do not fit into any of the previous groups. At the end he should look them through, perhaps split them into more than one group ("if that seems natural to you") and give a name to the new group or groups. Encourage him to explain why none of the earlier groups would encompass these occupations.

(iv) If the subject has a number of cards which don't seem to fit anywhere, or with one another, ensure that each of these is separated off by a blank card.

(v) Ask the subject whether adding the occupations to the groups has made any difference to the groups. Are there any groups of descriptions that he would now change if he had the chance (though you will not permit him to change any). He may well say that he is satisfied with a group "But for one card". Note all this, and the card in question, on your report.

(vi) For each group, the "occupation" cards should now be put under the "description" cards as they lie on the table, with the written card on top. The groups are then piled up. Put two rubber bands round the deck, and be sure to mark the top with the subject's number (see section 9).

(vii) Record for your report the time taken for the whole task, and the tape number (where applicable).

WRITING UP THE TASK

After your usual report, make a list of the group names or descriptions. These may vary from short and snappy to several sentences. For each group, list the code numbers of the cards within it, putting a slash "/" after the last occupational description and beginning the code numbers for the occupations on a fresh line.

Thus we have the constructs readily available and also, should the card deck be dropped, the rubber band break or whatever, we can still retrieve the results for the computer.

EXAMPLE (from an interview report):

Higher Executive Bracket - And managerial staff. "Desk jobs, top hat and briefcase, the man about town".

37, 5, 11, 3, 14, 26, 32, 42, 49, 31, 33, 48/

51

Professionals

40, 2, 22, 7, 10, 45, 16, 43, 27, 41, 28, 1, 29/

79, 64, 56, 60, 62, 52, 81, 71, 66

Semi-skilled - Other than trades.

No descriptions/

78, 58, 73

References

COXON, A.P.M. and JONES, C.L. (1974) Occupational Categorisation and Images of Society (Project Working Paper)

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SILVERMAN, S.F. (1966) An ethnographic approach to social stratification. Am. Anthrop., 68, 899-921

7.C HI DATA: HIERARCHICAL CLUSTERING TASK

This method stems from Rapoport and Fillenbaum. A 'tree' is an undirected, connected graph without cycles; the subject is asked to construct trees of naturally belonging occupational titles, finally joining them up into one tree.

(i) For each administration you will need a kit consisting of:

(a) 15 sets of matching numbered bracket cards. These have

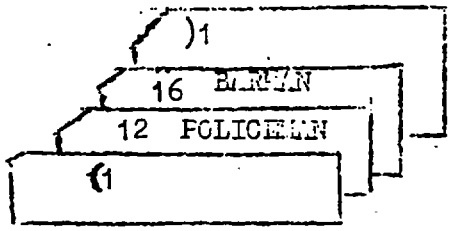
(1 on the first card
)1 on the second card
(2 on the third card
)2 on the fourth card ...
...)14 on the 28th card
(15 on the 29th card
)15 on the 30th card.

(b) A set of randomised stimulus cards; sixteen computer-generated, randomly ordered cards each bearing an occupational title.

(ii) Give the subject the occupation cards and ask him to read them through and lay them out on the table where he can see them. Note anything he says about any of the titles.

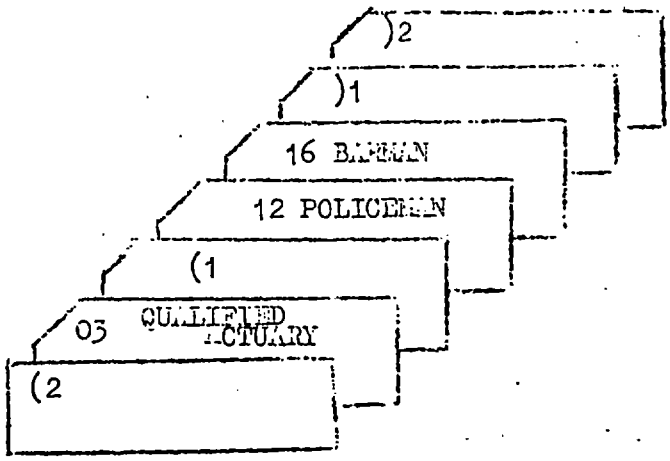
(iii) Ask him to "pick the two occupations which you think most naturally go together" - do not say "most similar". If asked "on what basis?" say "whatever seems right to you", or "we leave that up to you".

(iv) Lay them together on the table, so that they are clearly visible to the subject, with the "(1" card on top of them and the ")1" card below them.
The brackets should always enclose a pair or cluster fully.
Suppose the subject chooses "12 POLICEMAN" and "16 BARMAN" as most similar. They should be laid out on the table like this:



(v) Say "Could you give me your reasons for choosing these two, or give me a name for the branch?", and record the answer for your report.

(vi) At step 2, the "(2" and ")2" cards will be used. Tell the subject that he now has two choices: to append one other stimulus to the existing group or branch or start a new branch or cluster of two. If he chooses the former, they should be laid out as in (iv). If he chooses to add another occupation to the first pair, be careful how you add it in. Put the new card outside the first bracket (either above or below) and then put the "(2" and ")2" above and below the whole group. If he chose to add "QUALIFIED ACTUARY" to the earlier pair they should be laid out like this:



This sequence would be presented linearly as (03(12,16)), but could equally be presented as ((12,16)03); it does not matter whether the added card comes before or after the earlier cluster, but it must not be put within it.

(vii) At step 3, and subsequent steps, the subject can do ont - and one only - of three things

(a) Start a new branch
(b) Add one stimulus to an existing branch
(c) Merge two existing branches

If merging, be sure to put the new bracket cards outside (round) the whole new cluster.

(viii) This "nesting", with 3 possibilities at each step, proceeds until the 15th step. The subject may remark as time goes on that he is putting together things that fit increasingly less well; reassure him that this is usual, that you will end up with one big group again at the end.

(ix) Remember always to note that the subject's reasons at each step. You may find it helps to note down the action taken, in the following way:

(1) Barman and Policeman
(2) Qualified Actuary to (1)

(x) At the end, after step 15, carefully close up the ordered cards into a deck preceded by his P00CID card (see P.9-2) and followed by a card with -1 in cols. 1 and 2. Put two rubber bands around it.

(xi) The subject can decide to change his mind about the tree at any step, and can reorganize the clustering from any breaking point. This may simply mean changing the most recent action, but if he decides to change something several steps back this may mean re-organizing all the succeeding brackets.

Note that it is often difficult to avoid making judgments of relative similarity, and this should not be avoided if the subject finds it a useful general criterion.

The task restricts the size of the initial cluster or branch to only two stimuli, the additions to each cluster to one stimulus at each step, and the merging to two clusters at each step. There is good reason for these

restrictions, both in terms of comparability between subjects' trees and to keep comparability with the FA or FB task. As defined there are exactly 15 steps (or levels of the tree) and the tree can be "sliced" at each level from 1 to 15. This means that the number of clusters can be fixed, and all clusters compared by the Arabie-Boorman partition distance measures. This makes it important to try to elicit the name of, or reason for, each cluster as they grow.

HA and FB (or FA) are often used together in an interview, separated by the Life History. The main difference between the two methods lies in the clustering strategy asked of the subject. In FA or FB data, the strategy is <u>divisive</u>, starting from an undifferentiated group and becoming more and more specific; presumably this strategy tells us about the most general organizing characteristics used by the subject. In HA, the strategy is <u>agglomerative</u>, starting from clusters and merging upwards.

<u>Write-up of HA data</u>

List the subject's action at various steps of the task, followed by his name or reason for each step. See the example below for the layout of this. This would enable us to reproduce the subject's data at any time if disaster struck the cards.

<u>EXAMPLE (from an interview report)</u>:

1.	Ambulance Driver and Lorry Driver.	Both drive. They have different spheres.
2.	Railway Porter and Building Site Labourer	They don't take any specific training
3.	Carpenter and Machine Tool Operator	People who work with their hands but more skilled than the other people like Ambulance Driver and Lorry Driver. They have a technical, manufacturing sort of connection.
4.	Policeman and Commercial Traveller	These are jobs that people go into when they have tried an apprenticeship and are cheesed off with it.
5.	Barman to 2	No training
6.	Male Psychiatric Nurse and Minister	They are specialized - they have a specialized category.
7.	Solicitor and Chartered Accountant	I'm not sure why ... They seem to have sort of legal implications.
8.	Comprehensive School Teacher to 6.	Specialized
9.	Qualified Actuary to 7	I don't know the definition of a Q.A., this is just an enlightened guess.

10.	Civil Servant to 9	They come in the same sort of social category, i.e. they all have fairly extended University training.
11.	5 and 1	I started with people who, to my mind, do not need specific training. We must assume that everybody can read and write in the first place. For me: anyone can learn to be a Barman in a day or so.
12.	4 and 11	"Next" After 11 Subject put Policeman and Commercial Traveller (4) above it. They (Policeman and Commercial Traveller) need specific training but it's almost as if they take a course while Chartered Accountant and Carpenter have a bit of training which they've got to have to be able to do the work. They must have a leaning that way.
13.	3 and 12	After 12, S then put Carpenter and Machine Tool Operator above it, justifying that "Although Solicitor is considered more important than Commercial Traveller, it is an emotional thing with me because I'm a person who works with my hands and I have a bent towards people who make or create things"
14.	10 to 13	At first S put 8 and 13 but changed his mind for "I have a greater respect for them (to group 8) for they are the people with vocation". Instead he put group 10 next " because they are the people who spend years and years studying and they have higher pay".
15.	8 and 14	(8 are highest of all - "People who do their job out of love".)

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8. TA and TB DATA : TRIADIC JUDGEMENTS OF SIMILARITY

In the method of triads, the subject is presented with subsets of three stimuli (here, occupational titles) and asked to make a specified judgment about them.

Methodological notes

If all triads are presented, then for N stimuli there will be N(N-1)(N-2)/6 triads. Each triad (A,B,C) may be decomposed into the implied three pair-comparisons (A,B), (A,C), (B,C). The number of triads increases very rapidly (almost as the cube of N)

We use the method in two distinct ways - (1) Pick one of the three pairs and (2) order two of the three pairs, which define types TA and TB respectively. In the first case, the subject is asked to pick out the most similar pair in a triad. In the second case, the subject is ranking the three stimuli intervals and this provides what Coombs terms - "similarities data". He is usually asked to name the construct or basis that he is using to make the decision. Type TA is now obsolete, as it is less useful than TB (see Roskam 1970)

Because of the rapid increase in number of triads, incomplete designs are used to reduce the tedium, and satiation effects (not least on the interviewer!). Following the lead of Levelt (1966), we have exploited balanced incomplete block designs, where each pair of stimuli appears a given number of times. For reasons cited in Burton and Nerlove (1971) and a POOC memorandum, those designs where all pairs appear twice are a good deal more reliable than those where each pair occur only once. For our 16 occupational title set, such a design needs 80 triads, which is too many for routine usage. We have therefore dropped three occupational titles, and are using 13 stimuli in an incomplete design involving 52 triads.

The order of appearance of the triads, and the order in which the three titles appear is randomised separately for each subject. Here is an example of a triad together with the instructions used in the (now standard) triads type TB task.

PLEASE SUGGEST SOME IMPORTANT WAY IN WHICH TWO OF THE THREE OCCUPATIONS BELOW ARE ALIKE - AND AT THE SAME TIME DIFFERENT IN THE SAME WAY FROM THE THIRD. USE A SENTENCE OR TWO TO DO THIS.

13 BARMAN
10 POLICEMAN
01 CHURCH OF SCOTLAND MINISTER

- WHICH PAIR OF THE THREE OCCUPATIONS IS THE MOST SIMILAR ONE, I.E. WHICH TWO ARE THE MOST ALIKE?
- WHICH PAIR OF THE THREE OCCUPATIONS IS THE LEAST SIMILAR ONE, I.E. WHICH TWO ARE LEAST ALIKE?

The basis (or bases) for the judgments should be obtained from the subject, and should be written down verbatim on the schedule. When administered, the interviewer should note the most similar pair first, and the least similar pair second, followed by the verbal judgment - e.g.

01 10/ they're both professional, aren't they?

13 01/ a barman's not likely to go to church.

Some subjects take an unconscionable time deciding but usually subjects take between 35 and 60 minutes to get through the 52 triads, when the schedule is administered by the interviewer.

Sometimes constructs are used very repetitively by a subject - e.g. "a cushy job" as a differentiating construct for 10 triads in succession. This is quite acceptable, and intrinsically interesting, if boring.

For some reason, our interviewees seem to enjoy the triads task (TB) more than the pairwise similarities task (PB). The problem-solving aspects of the task may be something to do with it. But see from this

extract from a report for an exception.

"The triads task was most difficult - (a) in putting over what was required and (b) in getting him to make some comparisons at all. More than anything else, it was the "least similar" pair that presented the greatest difficulty, after the "most similar" one had been done. "There's no comparison at all" was a frequent reply. However, he conceded in some cases after I wrote "no comparison possible" against the triad!"

Write-up of triadic judgments

1. Be extremely careful to write down the constructs or predicates which are generated exactly as the S speaks them. We want what he said, not the interviewer's shorthand for it.

Examples of Mobility Imagery in the Triadic Judgments of Similarity Task (TB)

-"easier to change from a machine tool operator to a male psychiatric nurse than to go from a machine tool operator to a chartered accountant" (as a reason for the "most dissimilar" judgment).

-"if a commercial traveller was changing professions, he might be a C. of S. minister, but he'd never be an actuary (PROD), because he wouldn't have the qualifications". (also on a dissimilarity).

re - a building site labourer and a lorry driver, - "either of them could change over (substitute for each other) tomorrow" (on a similarity).

---

2. Interviewers' abbreviations of constructs can come in as part of the overall write-up. It is a good idea to go through the schedule and make notes of the frequently occurring constructs

and what triads they occur in.

EXAMPLE (from one of our interview reports):

(a) Public duty, service to the public: (1,2,3,7,8,15,19,20,34,38,45, 48) - item numbers for triads.
(b) Attention to job, skill required: (4,21)
(c) Training required, Qualification, Educ., Intelligence (9,10,16, 17,18,22,23,24,25,26,27,28, 30,31,32,39,41,42,44,47,50, 51)
(d) Working with brains vs. hands (13,29,33,35)
(e) Working with figures (11,14)
(f) Substitution: (could/couldn't do each others jobs): (7,24,25,30, 36,37,39,40,42,47,49)

Extract from another interview report

I had to explain *Actuary*.

(1) T.B. Some difficulty with this task, principally because, although he started out well enough, after a time he confused "least alike" with "next most likely pair". This became obvious, was cleared up once, then again, and the third time I changed "least alike" to "not alike". Constructs mainly "Education", "Dealing with the public", occasionally "Manual workers". Qualifications were very important to him. Occasional other reason, obviously. At one time I thought we'd never finish; I felt the need to nurse him along the whole time. He needed water after 37.

---

3. Record length of time taken to do the task.

Uses in this project.

Triadic data collection bears some resemblance to Kelly's (1955) method of triads, used in his "Repertory Grid Test". (There, a subject is simply asked to provide an antonymous construct which differentiates two of the triad's stimuli from the remaining one). We use this method to elicit constructs, but we do not assume that it is necessarily antonymous.

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POOC MEMORANDUM (APMC/9.12.72)

10. EDITING OF COMPLETED SCHEDULE AND WRITE-UP

The following should be included in your write-up of each task:-

The Subject's mutters, asides and comments about occupations.
Any descriptive imagery used by the Subject
Any questions asked by the Subject
How the Subject tackled the task
Tape recorder revolution counter position at the beginning and the end of the task
Time taken to do the task
Anything else that seems to you to be relevant.

The following are relevant to certain of the tasks:-

Free-Grouping

Names of groups, each followed by the code numbers of the occupations within that group.
Any significant order to the groups.

Free Listing

Names of occupations
Mutters, comments, pauses, linking phrases.
Principles behind the listing

Free Description

First ten occupational titles each followed by the adjective or sentence frame.

Jobs of Relatives and Friends

Listing of the relations and their jobs
Any links with FB

PB - Pairwise Similarities

Basis of comparison
Reasons and constructs
Problem-solving sequence?

TB Frequently occurring constructs and what triads they occur in.

Hierarchical Clustering:

Composition of new group at each decision
Reasons and constructs for each group
Expressed strategies or comments on single occupations

Sentence Completion

Awareness of links between sentence frames
Unusual interpretations if expressed
Degree of reluctance to forced choices

Please remember to put the 16-column identifier on each task schedule.

The 16-character POOC Identification Number. e.g. M2152101731PB106

The first (leftmost) character refers to the group from which the interviewee was sampled.

A C. of S. Ministers
B Teachers
C Episcopalian Ministers
D Doctors
F Actuaries
G Chartered Accountants
J Journalists
K Male Psychiatric Nurses
L Female Nurses
M Ambulance Drivers
N Policemen
S Subjects derived from the combing of E.D. 161.
W Policewomen
X Printers
Y Subjects from the Combing of E.D. 160
Z M.Ed. Teachers

1. Engineers (Heriot-Watt University)
2. Engineers (Edinburgh University)
3. Nursing studies students
4. Telford and Esk Valley F.E. College Students
5. Business Studies Students
6. Moray House Students
7. Social Administration Students
8. Student Lawyers
9. Theological Students

***** So the subject in our example is an Ambulance Driver *****

2 – 4 The next three characters are a 3 digit numerical "case identifier" which will have been allocated to the interviewee by the time you make contact with him.

5, 6 Day of the month that S was interviewed, e.g. 05 (n.b. not 5) or 24

7, 8 Month in which S was interviewed, e.g. 05 for May

9,10 Year in which S was interviewed, e.g. 73

11 The order of the particular schedule under consideration, i.e. was it the first, second, third etc. task in the interview? All completed RA and RB tasks count as one task for this purpose.

***** This was the first task the subject in our example completed *****

12,13 A two-letter code as an identifier for the type of data collected on the schedule under consideration.
At present, these identifiers are as follows:

PA Dominance pair-comparisons (dichotomous judgment required)
PB Similarity pair-comparisons (rating on a 9-point scale)
PC Pairwise mobilities (ordered pairs, and rating on a 9-point scale)
PD Sorting pairwise similarities
TA Triads: pick the odd one out
TB Triads: give the most similar pair and also give the least similar pair
FA Free Grouping on the basis of overall similarities
FB Free Grouping of descriptions followed by grouping of occupational titles

FC Free grouping on the basis of likely "chains" of jobs held by the same person (Not discussed in this memorandum)
RA I-scale; rank ordering of stimuli on some specified dimension
RB Rating of stimuli on some specified criterion
HA Hierarchical clustering tasks
SA Sentence frame task.

14 A single digit referring to the instruction set used in administering the task.
This is mainly relevant to RA and RB tasks e.g. RA4 refers to instruction set (4) for ranking and rating tasks
(see p.6-3)

15-16 These two digits refer to the stimulus set used in a particular task administration. The most commonly used sets - 06, 08, 10, 39 and 45 - are listed following p. 10-5.

Example The ID M2152101731PB106 is derived as follows:

M - ambulance driver
215 - numeric identifier
210173 - interviewed on 21st January, 1973.
1 - the first task he did (excluding life-history)
PB - paired similarities task (PB type data)
1 - instruction set 1 for PB data was used.
06 - stimulus set C6 was used.

THE MOST COMMONLY USED STIMULUS SETS

STIMULUS SET 06: 16 occupational titles being a combination of 8 from the Hall-Jones set and 8 titles referring to occupations represented among P.O.O.C. respondents (01 to 08). This is the often used P.O.O.C. 16, used in administering RA/RB, PB and HA tasks.

01 CHURCH OF SCOTLAND MINISTER
02 COMPREHENSIVE SCHOOL TEACHER
03 QUALIFIED ACTUARY
04 CHARTERED ACCOUNTANT
05 MALE PSYCHIATRIC NURSE
06 AMBULANCE DRIVER
07 BUILDING SITE LABOURER
08 MACHINE TOOL OPERATOR
09 COUNTRY SOLICITOR
10 CIVIL SERVANT (EXECUTIVE)
11 COMMERCIAL TRAVELLER
12 POLICEMAN
13 CARPENTER
14 LORRY DRIVER
15 RAILWAY PORTER
16 BARMAN

STIMULUS SET 08: 32 occupational titles. Standard set for FA task. Also used together with stimulus set 39 in FB task.

01 CHARTERED ACCOUNTANT
02 SECONDARY SCHOOL TEACHER
03 GARAGE MECHANIC
04 BARMAN
05 STATISTICIAN
06 SOCIAL WORKER
07 CARPENTER
08 AMBULANCE DRIVER
09 COMPUTER PROGRAMMER
10 MINISTER OF RELIGION
11 PLUMBER
12 MALE PSYCHIATRIC NURSE
13 BANK CLERK
14 PRIMARY SCHOOL TEACHER
15 UNSKILLED MACHINE OPERATOR IN A FACTORY ASSEMBLY LINE
16 POLICEMAN
17 CIVIL ENGINEER
18 PHOTOGRAPHER
19 BUILDING SITE LABOURER
20 RESTAURANT COOK
21 AIRLINE PILOT
22 ACTOR
23 RAILWAY ENGINE DRIVER
24 POSTMAN
25 GEOLOGIST
26 SALES MANAGER
27 TRAWLER DECKHAND
28 TAXI DRIVER
29 EYE SURGEON
30 JOURNALIST
31 LABORATORY TECHNICIAN
32 BUS CONDUCTOR

STIMULUS SET 10: 13 occupational titles. A subset of stimulus set 06 for use in the TB task.

01 CHURCH OF SCOTLAND MINISTER
02 COMPREHENSIVE SCHOOL TEACHER
03 QUALIFIED ACTUARY
04 CHARTERED ACCOUNTANT
05 MALE PSYCHIATRIC NURSE
06 AMBULANCE DRIVER
07 BUILDING SITE LABOURER
08 MACHINE TOOL OPERATOR
09 COMMERCIAL TRAVELLER
10 POLICEMAN
11 CARPENTER
12 LORRY DRIVER
13 BARMAN

STIMULUS SET 39: This is a composite set comprising the 32 occupational titles of set 06 and the following 50 statements about occupations (set 36)

01 THEY WOULD RECEIVE VERY LITTLE PUBLIC SUPPORT IF THEY WENT ON STRIKE
02 THEY WORK VERY LONG HOURS
03 THEY ARE INVOLVED IN MANAGING PEOPLE AS PART OF THEIR WORK
04 THEY SPEND A LOT OF TIME AT WORK CLOCK-WATCHING
05 THEY ARE OFTEN SELF-EMPLOYED
06 THEY HAVE MAINLY PHYSICAL SKILLS
07 THEY PROVIDE A SERVICE TO THE COMMUNITY
08 THEY HAVE THEIR JOB ORGANIZED AS A CLOSED SHOP
09 THEY HAVE SERVED THEIR APPRENTICESHIPS TO BECOME TRADESMEN
10 THEY HAVE IRREGULAR HOURS
11 THEY HAVE TO HAVE A HIGH STANDARD OF ACADEMIC EDUCATION
12 THEY OFTEN SWITCH THEIR JOBS
13 THEY EARN A LOT OF THEIR SALARY BY WORKING OVERTIME
14 THEY OFTEN ENCOURAGE THEIR SONS TO GO INTO THE SAME WORK AS THEMSELVES
15 THEY HAVE A LOT OF FRINGE BENEFITS AND "PERKS" IN THEIR JOB
16 MOST PEOPLE HAVE THOUGHT OF BEING ONE AT SOME TIME IN THEIR LIVES
17 THEY GET PAID OVERTIME FOR WORK THEY DO OUT OF NORMAL HOURS
18 THEY USUALLY DO THEIR WORK DRESSED IN ORDINARY CASUAL CLOTHES
19 THEY HAVE A STRONG TRADE UNION
20 THEY OFTEN TAKE THE DAY OFF FROM WORK
21 ANYONE WITH AVERAGE INTELLIGENCE COULD DO THE JOB FOR WHICH THEY ARE PAID
22 THEY OFTEN WORK AT WEEKENDS
23 THEY ARE ALMOST ALWAYS MEN
24 THEY ARE PAID BY THE WEEK
25 THEY HAVE TO CLOCK IN AND OUT OF WORK WITH A TIME-CARD
26 YOU EXPECT THEM TO BE OVER 30 YEARS OLD
27 THEY REGARD THEMSELVES AS PROFESSIONALS
28 THEY HAVE TO UNDERTAKE A LONG ARDUOUS TRAINING FOR THEIR JOB
29 THEY ARE INVOLVED IN HELPING OTHER PEOPLE
30 THEY HAVE A BORING REPETITIVE JOB
31 THEY ARE PAID BY THE MONTH
32 THEY EARN A GREAT DEAL OF MONEY

33 THEY HAVE A HIGH SOCIAL STANDING IN THE COMMUNITY
34 THEY ARE NOT PAID REGULARLY, BUT EARN FEES FOR WHAT THEY DO
35 THEY OFTEN MOVE INTO SOME OTHER LINE OF WORK AFTER A FEW YEARS
36 THEY HAVE OFTEN HAD EXPERIENCE OF WORKING IN VARIOUS LINES OF WORK
37 THEY TEND TO BE ACTIVE IN THE AFFAIRS OF THEIR LOCAL COMMUNITY
38 THEY EARN A LOT WHEN YOUNG, BUT THEIR INCOMES DON'T RISE MUCH AFTER THAT
39 THEY ARE PAID BY THE HOUR
40 THEY BUILD UP RELATIONSHIPS WITH OTHER PEOPLE AS PART OF THEIR JOB
41 THEY WORK IN A VERY SPECIALIZED FIELD
42 THEY ARE REQUIRED TO HAVE HIGH EDUCATIONAL QUALIFICATIONS
43 SOCIETY COULD NOT CONTINUE TO EXIST WITHOUT THEM
44 NO SPECIAL TRAINING IS REQUIRED TO BE ONE
45 THEY DO NOT EARN MUCH AT FIRST, BUT DO HAVE HIGH INCOMES LATER ON
46 THEY ARE MOSTLY YOUNGER THAN 30
47 THEY HAVE TO BE PHYSICALLY FIT TO DO THEIR JOB
48 THEY HAVE A SECURE JOB
49 THEY HAVE TO PASS DIFFICULT EXAMINATIONS
50 THEY HAVE A TRADITION OF SOLIDARITY WITH EACH OTHER

STIMULUS SET 45: 15 sentence frames plus 25 occupational titles. For use in SA task.

01 A ..... WOULD HAVE SERVED A TRADE APPRENTICESHIP TO GET INTO THE JOB
02 A ..... WOULD HAVE HIGH EDUCATIONAL QUALIFICATIONS
03 A ..... WOULD HAVE THE OPPORTUNITY OF WORKING AT OVERTIME RATES
04 A ..... WOULD BE A MEMBER OF A STRONG TRADE UNION
05 A ..... WOULD HAVE HIGH SOCIAL STANDING IN THE COMMUNITY
06 A ..... WOULD BE PAID BY THE WEEK
07 A ..... WOULD HAVE TO CLOCK IN AND OUT OF WORK WITH A TIME CARD
08 A ..... WOULD REGARD HIMSELF AS A MEMBER OF A PROFESSION
09 A ..... WOULD BE INVOLVED IN MEETING THE PUBLIC IN HIS JOB
10 A ..... WOULD HAVE A BORING REPETITIVE JOB
11 A ..... WOULD VOTE LABOUR
12 A ..... WOULD OWN THE HOUSE OR FLAT HE LIVED IN
13 A ..... WOULD HAVE FINANCIAL SECURITY IN HIS JOB
14 A ..... WOULD SEND HIS CHILDREN TO A FEE-PAYING SCHOOL
15 A ..... WOULD REGARD HIMSELF AS WORKING CLASS
19 ARCHITECT
20 MINI AMBULANCE DRIVER
21 CIVIL SERVANT, ASSISTANT SECRETARY
22 WAGES CLERK FOR ENGINEERING FIRM
23 INDUSTRIAL COMPOSITOR (TYPESETTER)
24 DIRECTOR OF BRASS FOUNDRY (SELF-EMPLOYED)
25 ENGINE DRIVER (SECOND MAN ON DIESEL LOCOMOTIVE)
26 REFRIGERATION ENGINEER (SELF-EMPLOYED)
27 ENGINEERING INSPECTOR (STEEL PLANT)
28 HEAD GROUNDSMAN
29 INSPECTOR OF TAXES
30 MASTER JEWELLER

31 CARPENTER/JOINER (SELF-EMPLOYED)
32 LONG DISTANCE LORRY DRIVER
33 TRAINEE MANAGER IN BURTON'S TAILORS
34 MOTOR MECHANIC IN GARAGE
35 NURSERY MAN (SELF-EMPLOYED WITH TWO EMPLOYEES)
36 POLICE SERGEANT
37 TEACHER IN BOYS BOARDING SCHOOL
38 LABORATORY TECHNICIAN TRAINEE (BREWERY)
39 TYRE REPAIRER
40 WAREHOUSEMAN (GROCERIES)
41 SHOP FLOOR SUPERINTENDENT (ENGINEERING FACTORY)
42 TURNER AND FITTER
43 ASSISTANT OFFICE MANAGER (STOCKBROKER'S OFFICE)

PROJECT ON OCCUPATIONAL COGNITION

(Form based on NORC Survey 4068 and C.S.S.O.S., JHU, with acknowledgements)

APMC.

YEAR (first full-time occ)	AGE	Full-Time Employment or Unemployment: Month	Occupation / Grade	Firm, Industry, Location	Left Job: [illegible]	At [illegible]	[illegible]	COMMENT

NAME CARD

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	1																																						

Title Mr Miss Mrs | Initials | Surname

ADDRESS CARD

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
2	1																																						
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

OTHER DATA CARD

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
3	!									1	9										

Day | Month | Year of Birth.

lephone no. (not punch)

R-G 1970
Present job of interviewee. Describe very fully with employer's business or industry and any special rank or grade held, and qualifications too.

R-G 1970
Present job or last full-time job held by father of interviewee
Describe fully as before.

Type 2ndary school

11 junior secondary school
12 secondary modern school
13 technical high school
14 non-fee-paying senior 2ndary
15 fee-paying Corporation senior 2ndary
16 fee-paying grant aided senior 2ndary
17 grant-aided (English direct grant) grammar school of English 11-plus sort
18 wholly independent school ("Public school")
19 comprehensive school
21 other (specify)
22 no information, not know, etc.
91

	23	24	25	26	27	28	29	30	31	32

self | father | mother

age at end of full-time education

code in years don't know is 91

how many years since entered present specific job code in years

how many years since entered present general type of job code in years

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