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DUNCANSON J.P.  
 INTELLIGENCE AND THE ABILITY TO LEARN  
 PRINCETON- ETS RB-64-29 JUNE 1964  
 PEARSON R'S TABLE 7 P.30 ALL 48 VARS  
 M & F STUDENTS GR 6 IN 5 URBAN NJ CLASSROOMS

N=102

\*\*\* HIERARCHICAL FACTOR MATRIX, ORDER 1 \*\*\*

V#	1	2	3	4	5	6	7	8	9	10	H^2
FACTOR 1: O2;F1 GEN'L COGNITIVE ABILITY ..2G; ORDER 2											
FACTOR 2: O1;F3 NUMERICAL FACILITY .....N; ORDER 1											
1 +13 ADDITION (ETS KIT N-1) .....	.77	.44	.02	-.14	-.01	.03	-.03	-.03	.11	.13	.85
2 +15 SUBTRACTN/MULT'N/ETS KIT N-3 ..	.72	.38	-.01	-.00	-.03	.01	.01	-.27	-.01	-.02	.73
3 +14 DIVISION (ETS KIT N-2) .....	.72	.31	.01	.03	.23	.14	-.02	.05	.04	-.21	.74
4 +17 NUMBER COMPARISON/ETS KIT P-2.	.55	.26	-.01	.12	.04	-.06	.13	-.16	.03	.09	.44
5 +18 IDENTICAL PICTURES/ETS KIT P-3	.54	.24	.00	.01	.01	.23	.04	.234	-.335	.04	.56
6 +#7 ARITH.COMPUT'N/STANFD ACHVT B	.58	.23	.18	-.21	.22	-.01	.20	.29	-.03	-.06	.65
7 +31 CONCEPT FORM'N FIG .. CMPNT 2.	.14	.11	-.07	.04	-.04	-.04	-.09	.01	-.03	.11	.06
FACTOR 3: O1;F1 VERBAL ABILITY .....V; ORDER 1											
8 +#3 WORD MEANING (STANF ACHVT BATT	.46	-.02	.66	.01	-.17	-.05	-.07	.22	.00	.06	.73
9 +#5 LANGUAGE/STANFORD ACHVT BATT..	.41	-.10	.66	.16	-.07	-.16	.03	.01	-.16	.04	.70
10 +12 AUDITORY LETTER SPAN/ETS MS-2	.22	-.16	.63	.02	.02	.02	-.064	-.445	.00	-.03	.67
11 +#2 PARAGRAPH MEMORY (STANF ACHVT.	.58	.07	.57	-.02	-.13	.00	.02	.28	-.01	-.01	.77
12 +21 VOCABULARY (ETS KIT V-1) .....	.35	-.01	.52	.044	-.325	-.12	.03	.15	-.02	.08	.54
13 +#4 SPELLING (STANFORD ACHVT BATT.	.59	.03	.484	.355	.00	-.29	-.00	-.01	-.11	.02	.79
14 +22 VOCABULARY (ETS KIT V-2) .....	.37	.01	.47	-.02	-.19	-.04	.04	.02	-.18	-.06	.43
15 +11 AUDITORY MEM SPAN/ETS KIT MS-1	.19	-.07	.44	-.15	.21	.01	.03	-.03	.15	-.01	.33
16 +#1 IQ - KUHLMAN-ANDERSON .....	.65	.15	.37	-.03	.10	-.00	.09	.25	-.17	-.03	.70
17 +32 PAIRED ASSOC VERBAL ..CMPNT 1.	.51	.04	.34	.28	-.01	.01	.18	.10	.20	.03	.54
18 -34 PAIRED ASSOC VERBAL ..CMPNT 3.	.31	.00	.22	.17	.07	.20	-.23	.04	-.18	.02	.30
FACTOR 4: O1;F2 ASSOCIATIVE MEMORY .....MA; ORDER 1											
19 +10 FIRST & LAST NAMES/ETS KT MA-3	.50	-.024	.305	.66	.02	-.23	-.02	-.01	.13	-.01	.85
20 +#8 PICTURE-NUMBER (ETS KIT MA-1).	.37	.01	.09	.55	.02	.06	.02	-.04	-.01	.05	.46
21 +#9 OBJECT-NUMBER/ETS KIT MA-2 ...	.32	-.07	.20	.55	-.04	.18	-.06	.08	.02	-.05	.49
22 +42 ROTE MEMORY/VERBAL CMPNT 2....	.21	.00	.02	.50	-.27	-.02	.02	.01	-.17	-.06	.40
23 +35 PAIRED ASSOC PARALOG/# CMPNT 1	.31	-.01	.01	.48	.29	.01	.15	.224	.375	-.02	.62
24 -36 PAIRED ASSOC PARALOG/# CMPNT 2	.09	-.01	-.07	.35	-.194	.305	.03	-.16	-.04	-.16	.32
FACTOR 5: O1;F4 ASSOCIATIVE MEMORY(ALT)...MA; ORDER 1											
25 +48 ROTE MEMORY/FIGURAL CMPNT 3...	.10	-.02	.01	-.01	.61	-.23	.02	.02	-.02	-.02	.44
26 +46 ROTE MEMORY/FIGURAL CMPNT 1...	.31	.00	.09	.04	.59	-.03	.014	.5554	-.445	.00	.95
27 +44 ROTE MEMORY/2-DIG#'S CMPNT 1..	.38	.03	.024	.345	.46	-.03	.00	-.01	-.02	-.20	.52
28 +45 ROTE MEMORY/2-DIG#'S CMPNT 2..	.17	.00	-.03	.16	.32	.17	-.11	-.14	-.01	-.15	.24

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V#	1	2	3	4	5	6	7	8	9	10	H^2	
FACTOR 6: O1;F9 LEARNING ABILITY .....I0; ORDER 1												
29 +43	ROTE MEMORY/VERBAL CMPNT 3....	.06	.01	.02	-.03	.01	.444	-.345	-.04	-.03	-.05	.32
30 +39	PAIRED ASSOC DIGIT-SYMB CMPNT2	.19	-.01	-.104	.335	.16	.42	.03	.22	.004	-.305	.49
31 +25	CONCEPT FORM'N VERBAL CMPNT 3.	-.03	-.10	.20	.03	-.15	.38	.01	-.01	.02	.17	.25
32 +26	CONCEPT FORM'N VERBAL CMPNT 4.	.06	-.00	.04	.11	-.03	.24	-.15	-.02	.05	.18	.14
33 +41	ROTE MEMORY/VERBAL CMPNT 1....	.45	.054	.3254	.325	-.12	-.41	.27	-.02	.15	-.05	.69
34 -40	PAIRED ASSOC DIGIT-SYMB CMPNT3	.12	-.01	.01	.11	.24	-.474	.435	-.29	.034	-.335	.68
FACTOR 7: O1;F5 INDUCTIVE LEARNING .....I; ORDER 1												
35 +27	CONCEPT FORM'N NUMERL CMPNT 1.	.06	-.01	.01	-.00	-.01	.02	.73	.03	-.19	-.02	.57
36 +30	CONCEPT FORM'N FIG .. CMPNT 1.	.04	.00	-.01	.04	.06	-.04	.554	-.305	.14	.05	.42
37 -28	CONCEPT FORM'N NUMERL CMPNT 2.	.21	.09	.04	-.04	-.05	-.02	.30	-.01	.00	-.12	.16
38 -29	CONCEPT FORM'N NUMERL CMPNT 3.	.08	-.02	.13	-.01	.16	.12	-.33	-.12	.01	.02	.19
FACTOR 8: O1;F6 QUANTITATIVE REASONING ...RQ; ORDER 1												
39 +47	ROTE MEMORY/FIGURAL CMPNT 2...	.26	.07	-.01	.13	.014	.305	-.03	.504	-.305	.18	.55
40 +19	MATH APTITUDE (ETS KIT R-1) ..	.40	.08	.27	-.04	.12	-.02	-.03	.49	.07	.04	.50
41 +#6	ARITH.REASONING/STANF ACHVT B.	.62	.164	.305	.04	.03	.05	.00	.39	-.06	-.03	.66
42 +20	NECESSARY ARITH OP'NS(KIT R-4)	.47	.11	.21	.11	.01	.04	-.02	.36	.05	-.13	.44
FACTOR 9: O1;F7 UNINTERPRETED .....I0; ORDER 1												
43 -33	PAIRED ASSOC VERBAL ..CMPNT 2.	.18	.01	.24	.02	.02	.16	.05	.04	.554	.305	.51
44 +16	FINDING A'S (ETS KIT P-1) ....	.39	.14	-.01	.08	.18	.05	.21	-.03	-.27	.04	.33
45 +37	PAIRED ASSOC PARALOG/# CMPNT 3	.03	.01	.02	-.08	.03	.04	-.08	-.00	-.30	-.02	.11
FACTOR 10: O1;F8 INDUCTIVE LEARNING(VERBAL).I; ORDER 1												
46 +24	CONCEPT FORM'N VERBAL CMPNT 2.	.26	.17	.00	-.00	.00	-.04	.01	.04	-.02	.60	.46
47 +23	CONCEPT FORM'N VERBAL CMPNT 1.	.15	.00	.17	-.04	.13	.064	.385	-.05	.00	.42	.40
48 +38	PAIRED ASSOC DIGIT/SYMB CMPNT1	.37	.02	-.014	.365	.26	-.004	.345	.17	-.01	-.44	.68
SMSQ: 7.25 .82 3.45 2.57 1.87 1.61 1.97 2.11 1.34 1.36 24.36												

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\*\*\* HIERARCHICAL FACTOR MATRIX, ORDER 2 \*\*\*

HF #	1ST-ORD FACTOR	1	H^2
FACTOR 1: O2;F1 GEN'L COGNITIVE ABILITY ..2G; ORDER 2			
HF 2	O1;F3 NUMERICAL FACILITY .....	N	.89 .79
HF 3	O1;F1 VERBAL ABILITY .....	V	.64 .41
HF 4	O1;F2 ASSOCIATIVE MEMORY .....	MA	.44 .20
HF 5	O1;F4 ASSOCIATIVE MEMORY (ALT)...	MA	.25 .06
HF 6	O1;F9 LEARNING ABILITY .....	L0	.12 .01
HF 7	O1;F5 INDUCTIVE LEARNING .....	I	.09 .01
HF 8	O1;F6 QUANTITATIVE REASONING ...	RQ	.05 .00
HF 9	O1;F7 UNINTERPRETED .....	I0	-.08 .01
HF10	O1;F8 INDUCTIVE LEARNING (VERBAL)...	I	-.11 .01

SMSQ: 1.50 1.50