LINKAGE IN EXTRA-SENSORY PERCEPTION

VOLUME II

by

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APPENDICES TO

LINKAGE IN EXTRA-SENSORY PERCEPTION.

CONTENTS:

This copy contains the appendices marked [X]

Appendices marked * are prefaced by a detailed list of their contents.

APPENDIX A.

LIST OF THE TITLES OF

SOURCE DATA SHEETS.

Sheet No.:	Title:
1.	Raw hits scored by E. & C.G.S. on E.S.O.
2.	Raw hits scored by E. & C.G.S. on C.S.O.
3.	Hits "Corrected for Bunching" scored by E. & C.G.S. on E.S.O.
4.	Derivation of "Fully Corrected A Hits" from Mrs. Forster's Review. Hit Totals for two equated groups of Originals.
5.	Weekly Raw hit distributions on target originals of each section of the experiment, scored by E.G.S. on E.S.O.
6.	Weekly Raw hit distributions on target originals of each section of the experiment, scored by C.G.S. on E.S.O.
7.	Weekly "Hits Corrected for Bunching" distributions on target originals of each section of the experiment, scored by E.G.S. on E.S.O.
8.	Weekly "Hits Corrected for Bunching" distributions on target originals of each section of the experiment, scored by C.G.S. on E.S.O.
9.	Bernreuter and Washburne personality test score distributions for an unselected group of subjects.
10.	Pressey Test score distributions for an unselected group of subjects.
11.	Study of Values score distributions for an unselected group of subjects. Distribution of subjects' ages. Distribution of E.S.P. hits.
12.	Bernreuter F1C and B3I score distributions for groups scoring various numbers of A hits.
13.	Product-moment correlation data for correlations between "All Hits Combined" and personality test scores.
14.	Mean-difference calculation data for personality test scores and (i) Raw A hits, (ii) "Singles" titles suggested in the Preliminary Frequency Experiment.
15.	Non-parametric Median Test data for Bernreuter scores and Raw A hits.
16.	Total number of drawings returned in each week of the experiment by each subject group.
17.	Raw hits to be expected if each subject group had returned exactly 2,000 drawings for each section of the experiment.
18.	"Corrected for Bunching" hits to be expected if each subject group had returned exactly 2,000 drawings for each section of the experiment.

Serial No. of this Data Sheet: D 1.

Source data sheets not reproduced.

RAW SCORE HITS MADE BY CONTROL AND EXPERIMENTAL GROUP SUBJECTS ON EXPERIMENTAL SERIES ORIGINALS.

Hits scored in Week:	A		B		C		D		E		Totals:
By subjects in Group:	E	C	E	C	E	C	E	C	E	C	
Hit Type:											
A	9	14	10	9	18	15	12	11	21	14	133
B	28	32	27	28	21	36	46	38	48	31	335
C	0	0	0	0	0	1	0	1	0	0	2
D	7	7	5	6	9	13	17	17	20	13	114
E	2	1	1	3	2	3	7	2	4	7	32
Totals:	46	54	43	46	50	68	82	69	93	65	616
F3	10	14	11	11	23	10	22	17	20	13	151
F2	33	41	23	30	46	37	41	52	35	52	390
F1	58	64	42	39	67	69	52	62	71	71	595
G3	0	0	0	0	1	0	0	0	0	0	1
G2	0	1	0	1	0	0	0	1	1	1	5
G1	3	7	1	0	0	2	3	1	2	3	22
H3	4	5	9	9	6	9	9	9	12	8	80
Totals:	108	132	86	90	143	127	127	142	141	148	1,244
H2	16	18	21	24	20	17	26	25	24	29	220
H1	29	33	46	41	29	34	34	38	35	37	356
All F, G and H:	153	183	153	155	192	178	187	205	200	214	1,820
I	61	56	39	76	55	70	116	56	86	74	689
K	4	7	14	7	3	6	5	4	3	4	57
Total I & K:	65	63	53	83	58	76	121	60	89	78	746
J	10	12	37	6	9	15	9	16	14	5	133
All I, J and K:	75	75	90	89	67	91	130	76	103	83	879
All hits combined:	244	254	243	234	262	282	332	286	323	310	2,770

Transcription and addition checked ? Yes.

Serial No. of
this Data Sheet: D 2.

Source data sheets
not reproduced.

RAW SCORE HITS MADE BY CONTROL AND EXPERIMENTAL GROUP SUBJECTS ON THE CONTROL SERIES ORIGINALS.

Hits scored in Week:	A		B		C		D		E		Totals
By subjects in group:	E	C	E	C	E	C	E	C	E	C	
Hit type:											
A	3	5	2	2	3	2	6	6	5	3	737
B	40	52	17	22	45	34	33	35	33	31	342
C	0	0	1	0	0	1	3	0	3	0	8
D	20	16	11	29	19	19	18	17	13	18	180
E	16	11	2	3	16	21	9	22	10	16	126
Totals:	79	84	33	56	83	77	69	80	64	68	693
F3	6	3	1	5	8	5	5	8	6	5	52
F2	21	24	7	15	25	24	29	21	24	22	212
F1	29	37	27	22	31	38	27	38	39	41	329
G3	0	0	0	0	0	0	0	0	0	0	0
G2	0	0	0	0	0	0	0	0	0	0	0
G1	1	0	2	6	0	0	0	1	0	1	11
H3	3	3	3	3	0	3	2	2	6	4	29
Totals:	60	67	40	51	64	70	63	70	75	73	633
H2	34	31	21	22	34	37	26	47	27	51	330
H1	43	29	63	54	40	48	49	40	36	32	434
All F, G and H:	137	127	124	127	138	155	138	157	138	156	1,397
I	53	56	36	60	68	61	60	54	58	64	570
K	7	4	3	3	2	5	4	6	4	1	39
Total I & K:	60	60	39	63	70	66	64	60	62	65	609
J	29	24	5	9	27	38	27	42	28	29	258
All I, J and K:	89	84	44	72	97	104	91	102	90	94	867
All hits combined:	250	237	181	233	250	259	240	271	238	260	1,159 1,260 2,419

Transcription and
addition checked ? Yes.

Serial No. of this Data Sheet: D 3.

Source data sheets not reproduced.

HIT SCORES CORRECTED FOR BUNCHING ERRORS MADE BY EXPERIMENTAL AND CONTROL GROUP SUBJECTS ON EXPERIMENTAL SERIES ORIGINALS.

Hits scored in Week:	A		B		C		D		E		
By subjects in group:	E	C	E	C	E	C	E	C	E	C	Totals
Hit type:											
A	5	10	10	9	18	15	12	11	21	14	125
B	28	32	14	24	21	36	34	31	37	29	286
C	0	0	0	0	0	1	0	1	0	0	2
D	7	7	5	6	9	13	13	10	18	9	97
E	2	1	1	3	2	3	7	2	4	7	32
Totals:	42	50	30	42	50	68	66	55	80	59	542
F3	10	14	11	11	23	10	17	12	19	13	140
F2	33	41	23	30	46	37	37	48	32	51	378
F1	58	64	42	39	67	69	52	62	71	71	595
G3	0	0	0	0	1	0	0	0	0	0	1
G2	0	1	0	1	0	0	0	1	1	1	5
G1	3	7	1	0	0	2	3	1	2	3	22
H3	4	5	9	9	6	9	7	6	11	8	74
Totals	108	132	86	90	143	127	116	130	136	147	1,215
H2	16	18	21	24	20	17	26	25	24	29	220
H1	29	33	24	29	29	34	34	33	35	37	317
All F, G, and H:	153	183	131	143	192	178	176	188	195	213	1,752
I	70	64	39	65	55	70	66	50	67	70	616
K	4	7	3	4	3	6	5	4	3	4	43
Total, I & K	74	71	42	69	58	76	71	54	70	74	659
J	10	12	9	6	9	15	9	16	14	5	105
All I, J and K:	84	83	51	75	67	91	80	70	84	79	764

Transcription and addition checked ? Yes.

Serial number of this data sheet: D 4.

Not all source data sheets reproduced, but see page 128.

Derivation of the "Fully Corrected A Hit Totals" from Classes I to V of Mrs. Forster's review of all A hits.

(A) Subjects scoring hits on titles suggested by them in the Preliminary Frequency Experiment:

Serial No:	Subject's name:	Target No:	Target Title:	Forster Class:	Target Series	
4531	Impey, C.W.	15	Bottle Opener	I	E	
19776	Rogers, C.I.	16	Bus Stop	III	E	
10500	Nehama, R.	82	Spiffy	I	E	
2902	Hobson, L.	62	Petrol Pump	I	E	
10420	Makepeace, R.	74	Saturn	I	E	
17721	Mentz, N.D.	40	Gollywog	I		C
Totals:				5		1

(B) Hits on "Candle Stick" in classes I to V inclusive:

1388	I	E	
1603	II	E	
2783	II	E	
1137	II	E	
12981	II	E	
2584	II	E	
14066	II	E	
Totals:		7	

(C) Hence Fully Corrected A Hits:

Totals in classes I to V:	100	28
Less all (A) totals:	5	1
Less six of the seven hits on candle stick	6	0
Difference = "Fully Corrected A Hits on E.S.O."	89	
= "Fully Corrected Hits on C.S.O."		27

A Hits eliminated from the series to form two series equated in initial difficulty in terms of the P.F.E.

From E.S.O:

12738	Vice	Class I	
3003	A vice of sorts	IV	Total hits eliminated
14582	Dumb-bell	I	from E.S.O. = 13
11836	Dumbbell	II	
14867	Dumbell	III	(No hits were scored on
3194	Beacon	I	"Barbed Wire Barb", which
13681	Penguin	I	was the sixth original
1323	Petrol Pump	I	eliminated).
2902	Petrol Pump	I	
4323	Petrol Pump	I	
8375	Petrol Pump	I	
15338	Petrol Pump	I	
8689	Petrol Pump	I	

From C.S.O.:

6753	Accordian.	II	Total hits eliminated
9823	Aladdin's Lamp	I	from C.S.O. = 4
13647	Alladdin's Lamp	III	(No hits were scored on
14075	Alladdin's Lamp	III	"Antbear", "Arc de Triomphe" "Bag Pipes" or "Organ", the remaining originals).

Hence total A hits scored on an equated group of E.S.O. = 89 - 13 = 76

Hence total A hits scored on an equated group of C.S.O. = 27 - 4 = 23

Transcription checked ? Yes.

This Data Sheet's Serial No.: D 5.

Source data sheets not reproduced.

Showing the hits scored on the Experimental Series Originals for each section of the experiment during each week of the experiment.

(A) Raw Score Hits by Experimental Group Subjects

Target Originals of sect.:	Number of hits scored in section:- A	B	C	D	E	Totals
Type A Hits:						
A	2	3	4	5	9	23
B	6	1	3	1	4	15
C	0	3	4	3	3	13
D	0	1	3	1	3	8
E	1	2	4	2	2	11
Totals:	9	10	18	12	21	70
Type A,B,C,D & E Hits:						
A	12	10	13	33	37	105
B	10	2	9	7	7	35
C	10	8	12	20	23	73
D	4	19	7	13	16	59
E	10	4	9	9	10	42
Totals:	46	43	50	82	93	314
Type 2 & 3 hits of F, G & H:						
A	9	12	15	21	29	86
B	12	8	19	16	15	70
C	23	18	23	23	17	104
D	12	17	27	33	22	111
E	7	9	12	5	9	42
Totals:	63	64	96	98	92	413
Type All F,G & H hits:						
A	15	18	23	26	40	122
B	50	31	50	43	48	222
C	45	34	48	51	41	219
D	30	41	42	52	41	206
E	13	29	29	15	30	116
Totals:	153	153	192	187	200	885
Type I,J and K hits:						
A	13	32	8	18	17	88
B	11	11	21	12	19	74
C	5	5	10	3	9	32
D	11	23	10	23	10	77
E	35	19	18	74	48	194
Totals:	75	90	67	130	103	465

Transcription checked ?
Yes.

This Data Sheet's Serial No.: D 6.

Source data sheets not reproduced.

Showing the hits scored on the Experimental Series Originals for each section of the experiment during each week of the experiment.

(B) Raw Score Hits by Control Group Subjects

Target Originals of sect.:	Number of hits scored in section:- A	B	C	D	E	Totals
Type A hits:						
A	4	1	5	1	6	17
B	7	1	4	3	2	17
C	2	3	2	3	2	12
D	0	3	1	1	2	7
E	1	1	3	3	2	10
Totals:	14	9	15	11	14	63
Type A,B,C,D & E hits:						
A	20	11	21	18	22	92
B	9	4	10	9	12	44
C	13	9	19	13	12	66
D	5	16	9	16	11	57
E	7	6	9	13	8	43
Totals:	54	46	68	69	65	302
Type 2 & 3 F,G & H hits:						
A	19	12	16	11	14	72
B	20	10	22	25	27	104
C	19	18	18	23	24	102
D	9	23	11	33	23	99
E	12	12	6	12	15	57
Totals:	79	75	73	104	103	434
Type All F,G & H hits:						
A	25	16	25	25	24	115
B	51	32	58	55	64	260
C	50	34	47	43	46	220
D	33	44	29	56	44	206
E	24	29	19	26	36	134
Totals:	183	155	178	205	214	935
Type I,J & K hits:						
A	10	3	8	9	9	39
B	12	24	23	14	26	99
C	10	5	14	4	8	41
D	14	26	12	16	7	75
E	29	31	34	33	33	160
Totals:	75	89	91	76	83	414

Transcription checked ?
Yes.

This Data Sheet's Serial No.: D 7.

Source data sheets not reproduced.

Showing the hits scored on the Experimental Series Originals for each section of the experiment during each week of the experiment.

(C) Scores Corrected for Bunching: Hits made by the Experimental Group Subjects.

Target Originals of sect.:	Number of hits scored in section:- A	B	C	D	E	Totals:
Type A hits:						
A	2	3	4	5	9	23
B	2	1	3	1	4	11
C	0	3	4	3	3	13
D	0	1	3	1	3	8
E	1	2	4	2	2	11
Totals:	5	10	18	12	21	66
Type A,B,C,D & E hits:						
A	12	10	13	21	29	85
B	6	2	9	7	7	31
C	10	8	12	20	23	73
D	4	6	7	9	11	37
E	10	4	9	9	10	42
Totals:	42	30	50	66	80	268
Type 2 & 3 F,G & H hits:						
A	9	12	15	16	29	81
B	12	8	19	16	15	70
C	23	18	23	23	17	104
D	12	17	27	27	17	100
E	7	9	12	5	9	42
Totals:	63	64	96	87	87	397
Type All F,G & H hits:						
A	15	18	23	21	40	117
B	50	31	50	43	48	222
C	45	34	48	51	41	219
D	30	32	42	46	36	186
E	13	16	29	15	30	103
Totals:	153	131	192	176	195	847
Type I,J & K hits:						
A	13	4	8	18	17	60
B	20	11	21	12	19	83
C	5	5	10	3	9	32
D	11	12	10	17	10	60
E	35	19	18	30	29	131
Totals:	84	51	67	80	84	366

Transcription checked ?
Yes.

This Data Sheet's Serial No.: D 8.

Source data Sheets not reproduced.

Showing the hits scored on the Experimental Series Originals for each section of the experiment during each week of the experiment.

(D) Scores Corrected for Bunching: Hits made by the Control Group Subjects.

Target Originals of sect.:	Number of hits scored in section:- A	B	C	D	E	Totals
Type A hits:						
A	4	1	5	1	6	17
B	3	1	4	3	2	13
C	2	3	2	3	2	12
D	0	3	1	1	2	7
E	1	1	3	3	2	10
Totals:	10	9	15	11	14	59
Type A,B,C,D & E hits:						
A	20	11	21	16	20	88
B	5	4	10	9	12	40
C	13	9	19	13	12	66
D	5	12	9	4	7	37
E	7	6	9	13	8	43
Totals:	50	42	68	55	59	274
Type 2 & 3 F,G & H hits:						
A	19	12	16	7	14	68
B	20	10	22	25	27	104
C	19	18	18	23	24	102
D	9	23	11	25	22	90
E	12	12	6	12	15	57
Totals:	79	75	73	92	102	421
Type All F,G & H hits:						
A	25	16	25	16	24	106
B	51	32	58	55	64	260
C	50	34	47	43	46	220
D	33	32	29	48	43	185
E	24	29	19	26	36	134
Totals:	183	143	178	188	213	905
Type I,J & K hits:						
A	10	3	8	9	9	39
B	20	24	23	14	26	107
C	10	5	14	4	8	41
D	14	12	12	13	7	58
E	29	31	34	30	29	153
Totals:	83	75	91	70	79	398

Transcription checked ?
Yes.

Data sheet No: 9.

PERSONALITY TEST SCORE DISTRIBUTIONS FOR AN UNSELECTED GROUP OF 340 SUBJECTS.

Bernreuter Scales:

Scores:	BIN.	B2S.	B3I.	B4D.	FIC.	F2S.
+220 to +239					2	
+200 +219				1	5	
+180 +199				1	8	
+160 +179	2	3		3	5	1
+140 +159	8	1		7	7	2
+120 +139	10	0		11	11	3
+100 +119	10	12	4	17	19	2
+ 80 + 99	17	22	11	31	23	10
+ 60 + 79	13	28	21	29	24	19
+ 40 + 59	21	32	28	40	27	28
+ 20 + 39	28	67	39	33	26	42
+ 0 + 19	28	43	36	39	25	42
- 1 - 20	25	32	72	35	30	56
- 21 - 40	31	46	52	29	28	44
- 41 - 60	31	24	38	30	27	46
- 61 - 80	23	15	22	18	20	17
- 81 -100	23	8	14	7	22	12
-101 -120	28	5	3	5	12	7
-121 -140	16	1		4	7	5
-141 -160	15	1			4	0
-161 -180	5				6	3
-181 -200	4				2	1
-201 -220	2					
Totals:	340	340	340	340	340	340

Washburne Subtotal Scores:

30 to 44	1
45 59	2
60 74	31
75 89	55
90 104	56
105 119	61
120 134	60
135 149	23
150 164	16
165 179	20
180 194	7
195 209	4
210 224	1
225 239	1
240 254	1
270 285	1
Total:	340

Washburne S.A. Inventory: THASPIC Edition Scores:

Scores:	T.	H.	C.	I-J	Score.	S	Score.	P.	A.
0 to 1	61	146	14	114	0 3	39	0 5		52
2 3	31	23	29	37	4 7	40	6 11		51
4 5	40	43	29	82	8 11	50	12 17		66
6 7	59	31	26	33	12 15	53	18 23	2	64
8 9	22	17	22	30	16 19	50	24 29	19	40
10 11	36	31	29	20	20 23	41	30 35	42	19
12 13	20	12	36	8	24 27	30	36 41	62	24
14 15	16	8	28	10	28 31	18	42 47	59	7
16 17	16	10	18	5	32 35	8	48 53	64	11
18 19	11	9	20	0	36 39	8	54 59	34	2
20 21	10	2	11	0	40 43	2	60 65	31	1
22 23	5	2	17	0	44 47	0	66 71	11	1
24 25	4	3	12	1	48 51	1	72 77	10	0
26 27	2	2	11				78 83	5	1
28 29	1	1	7				84 89	0	1
30 31	2		15				90 95	1	
32 33	0		7						
34 35	1		3						
36 37	1		3						
38 39	1		0						
40 41	0		1						
42 43	0		2						
50 51	1								
Totals:	340	340	340	340		340		340	340

Transcription checked ?
Yes.

Data Sheet No: 10

PRESSEY X-O TEST SCORE DISTRIBUTIONS FOR AN UNSELECTED GROUP OF 362 SUBJECTS.

Scores:	Subtotals for: T1	T2	T3	T4	Time.
100 to 104		1	2		
95 99		0	1		
90 94		1	4	0	
85 89		2	8	1	1
80 84		3	16	5	1
75 79	1	5	21	7	0
70 74	4	8	26	6	0
65 69	4	6	32	17	4
60 64	6	7	56	20	5
55 59	19	16	38	23	5
50 54	33	24	40	30	12
45 49	31	35	32	26	18
40 44	38	40	26	30	34
35 39	43	50	19	31	52
30 34	34	51	16	37	80
25 29	40	43	10	40	78
20 24	39	25	4	34	42
15 19	27	31	5	26	16
10 14	24	10	2	12	3
5 9	12	3	3	15	2
0 4	7	2	1	1	
Totals:	362	362	362	362	362

Total X-O Score: Scores:	
321 to 340	1
301 320	0
281 300	3
261 280	4
241 260	19
221 240	25
201 220	41
181 200	43
161 180	62
141 160	51
121 140	47
101 120	35
81 100	15
61 80	8
41 60	4
21 40	3
1 20	1
Total.:	362

Diagnostic score totals:

Scores:	D	Sex	Joke	Fear	SF	Para.	Neur.	S-C	Mela.	Hypo.
23	1									
22	2				1	1		2		
21	2				1	0	1	0	1	2
20	6				5	0	0	1	3	3
19	5			1	7	0	1	3	6	2
18	16	1		2	10	3	1	7	11	6
17	20	3		3	9	2	1	5	11	9
16	21	2		5	20	4	5	17	12	8
15	21	1		14	16	6	5	17	11	12
14	25	6		11	11	5	7	14	19	10
13	28	7		7	18	12	9	9	15	14
12	20	12		11	27	18	18	15	18	24
11	34	19		21	17	17	15	23	22	21
10	29	28		21	22	16	19	24	35	24
9	17	37		34	22	30	29	21	27	22
8	25	38		23	17	23	30	26	24	28
7	22	30	1	24	26	37	32	23	25	36
6	22	31	0	23	18	29	36	42	26	26
5	12	45	0	35	32	37	35	27	25	29
4	10	25	3	31	21	39	30	27	26	23
3	4	22	4	29	19	25	36	22	15	24
2	9	22	13	30	19	33	23	20	16	15
1	3	19	54	16	13	14	22	8	7	16
0	8	14	287	21	11	11	7	9	7	8
Totals:	362	362	362	362	362	362	362	362	362	362

Transcription checked ?
Yes.

Data Sheet No: 11.

ALLPORT-VERNON STUDY OF VALUES TEST SCORES FOR AN UNSELECTED GROUP OF 337 SUBJECTS.

Raw Scores:	T.	E.	A.	S.	P.	R.
+ 0 to 5						2
+ 6 10		1				6
+ 11 15	5	28	11	1	4	24
+ 16 20	16	75	32	8	23	54
+ 21 25	50	74	46	35	60	62
+ 26 30	91	67	63	80	90	60
+ 31 35	83	54	56	117	79	53
+ 36 40	50	29	49	73	57	31
+ 41 45	34	6	41	18	20	22
+ 46 50	6	3	28	5	3	10
+ 51 55	2	0	8	0	1	12
+ 56 60			3			1
Totals:	337	337	337	337	337	337

DISTRIBUTION SHOWING AGES OF SUBJECTS TAKING PART IN THE EXPERIMENT:::

Age:	No of S's:
63	1
46	1
33	3
32	1
31	1
30	2
29	1
28	0
27	1
26	5
25	9
24	12
23	9
22	17
21	37
20	60
19	77
18	67
17	48
16	7
15	0
Total:	360

DISTRIBUTION OF E.S.P. HIT SCORES, (ALL HITS COMBINED, ALL JUDGES, EXPECTANCY ON BASIS OF 50 DRAWINGS RETURNED).

Hits scored:	No. of subjects:
17	3
16	0
15	2
14	6
13	12
12	13
11	28
10	33
9	45
8	42
7	52
6	45
5	40
4	21
3	6
2	4
1	1
0	4
Total:	357

Transcription checked ?
Yes.

Data Sheet No 12.

SCORE DISTRIBUTIONS FOR BERNREUTER FIC (CONFIDENCE) SCORES FOR VARIOUS GROUPS OF SUBJECTS IN TERMS OF UNCORRECTED A HITS SCORED, AND NUMBER OF DRAWINGS RETURNED.

Scores:	A	B	A+B	C	D	C+D	E	F	E+F	G
+271 to +300	1		1							1
+241 +270	0		0							0
+211 +240	2		2			2				4
+181 +210	3	1	4	3	1	4				8
+151 +180	6	1	7	3	1	4				11
+121 +150	9	2	11	1	3	4				15
+ 91 +120	17	3	20	6	0	6	3		3	29
+ 61 + 90	22	5	27	5	0	5	1	1	2	34
+ 31 + 60	25	6	31	11	1	12	2		2	45
+ 1 + 30	22	9	31	4	3	7	3		3	41
- 29 0	19	11	30	9	2	11	2		2	43
- 59 - 30	21	5	26	7	1	8	6		6	40
- 89 - 60	16	7	23	5	1	6	0	1	1	30
-119 - 90	17	3	20	3	0	3	3		3	26
-149 -120	6	1	7	3	1	4	0		0	11
-179 -150	4	0	4	2	0	2	1	1	2	8
-209 -180	2	0	2	0	1	1				3
Totals:	192	54	246	64	15	79	21	3	24	349

Notes: Group A: Returning full 50 drawings but scoring 0 A hits.
B: Failing to return 50 drawings, and scoring 0 A hits.
C: Returning full 50 drawings and scoring 1 A hit.
D: Not returning full 50 drawings, but scoring 1 A hit.
E: Returning full 50 drawings and scoring 2 or more A hits.
F: Not returning full 50 drawings, but scoring 2 or more A hits.
G: Total subject group.

N.B. Trafford has been allotted to group B.

No subjects have been included who returned no drawings whatsoever in the Main Experiment.

SCORE DISTRIBUTIONS FOR BERNREUTER B3I (INTROVERSION) SCORES FOR VARIOUS GROUPS OF SUBJECTS IN TERMS OF UNCORRECTED A HITS SCORED, AND NUMBER OF DRAWINGS RETURNED.

Scores:	A	B	A+B	C	D	C+D	E	F	E+F	G
+101 to +120	3		3	2		2				5
+ 81 +100	8	1	9	1	1	2				11
+ 61 + 80	13	4	17	4	2	6				23
+ 41 + 60	17	3	20	3	2	5	1		1	26
+ 21 + 40	17	7	24	6	0	6	4		4	34
+ 1 + 20	21	8	29	7	0	7	1		1	37
- 19 0	45	10	55	13	2	15	2		2	72
- 39 - 20	32	9	41	15	4	19	2	1	3	63
- 59 - 40	13	8	21	8	1	9	6		6	36
- 79 - 60	14	3	17	4	0	4	4	1	5	26
- 99 - 80	7	1	8	1	2	3	1	1	2	13
-119 -100	2		2		1	1				3
Totals:	192	54	246	64	15	79	21	3	24	349

Transcription checked ? Yes.

This data sheet's Serial No.: D 13.

Source data sheet not reproduced.

Data for product-moment correlations between "All Hits Combined" hits scored on E.S.O. by E.G.S. and C.G.S. combined, and personality scores.

Study of Values: N = 353 Sum Y = 2,787 Sum Y^2 = 24,871

Calc:	Score:	Sum X	Sum X^2	Sum XY
45	Theoretical	11,056	365,308	87,346
46	Economic	8,919	245,815	70,873
47	Aesthetic	11,416	402,836	90,344
48	Social	11,449	383,553	90,459
49	Political	10,636	336,920	83,696
50	Religious	10,053	325,463	78,947

Pressey Total Words crossed out.

N = 357 Sum Y = 2,795 Sum Y^2 = 24,905

Calc:	Score:	Sum X	Sum X^2	Sum XX
51	Total	59,631	10,872,891	485,825

Washburne Subtotal:

N = 355 Sum Y = 2,792 Sum Y^2 = 24,896

Calc.	Score:	Sum X	Sum X^2	Sum XY
52	Subtotal	40,747	5,124,909	319,175

Bernreuter: N = 349 Sum Y = 2,763 Sum Y^2 = 24,665

Calc:	Score:	Sum X	Sum X^2	Sum XY
53	FIC	74,153	18,515,463	580,041
54	F2S	67,541	14,131,391	530,042

Transcription checked ? Yes.

Serial number of this data sheet: D 14.

Source data sheet not reproduced.

Data for the calculation of the significance of mean differences in personality test scores for various groups in terms of raw A hits, and in terms of the number of "Singles" Original Titles suggested in the P.F.E.

Group Symbol Key:

A: Scoring 1, 2 or more A hits.
B: Scoring 0 A hits.
C: Scoring 2 or more A hits.
D: Scoring 1 A hit.
E: Scoring 0 or 1 A hits.
F: Suggesting 2 or more Original titles in P.F.E.
G: Suggesting 1 or more titles
H: Suggesting 1 title in the P.F.E.

Personality measure:	Group:	N	Sum X	Sum X^2
Washburne Subtotal	A	103	11,990	1,570,932
	B	252	28,757	3,553,977
	C	24	2,614	315,956
Pressey X-O Melancholic	A	102	946	10,918
	B	255	2,283	26,585
	C	24	201	2,043
Pressey X-O Total crossouts	A	103	17,339	3,166,919
	B	258	43,107	7,840,958
	C	24	3,791	650,011
Bernreuter FIC	A	103	21,716	5,465,702
	B	246	52,437	13,049,761
	C	24	4,318	916,888
	D	79	17,398	4,548,814
	E	325	69,835	17,598,575
Bernreuter F2S	A	103	19,623	4,063,667
	B	246	47,918	10,067,724
	C	24	4,426	894,294
Bernreuter B3I	A	103	19,436	3,898,744
	B	246	48,529	10,111,923
	C	24	4,034	714,612
	D	79	15,402	3,184,132
	E			
	F	15	2,885	576,265
	G	84	15,955	3,197,249
	H	69	13,070	2,620,984

Transcription checked ? Yes.

Serial Number of this Data Sheet: D 15.

Source Data Sheet not reproduced.

Data for the non-parametric Median Tests of the Personality Scores.

Bernreuter FIC Confidence scores: (Including all subjects returning at least one drawing).(Calc. 77).	Number of subjects: Above Mdn:	Below Mdn:
Group scoring 0 A hits:	127	119
Group scoring 2 or more A hits:	8	16
Bernreuter FIC Confidence scores: (Excluding subjects not returning the full 50 drawings).(Calc. 78).		
Group scoring 2 or more A hits:	7	14
Group scoring 0 A hits:	98	92
Bernreuter B3I Introversion scores: (Including all subjects returning at least one drawing).(Calc. 79).		
Group scoring 0 A hits:	126	116
Group scoring 2 or more A hits:	7	17
Bernreuter B3I Introversion scores: (Excluding subjects not returning the full 50 drawings).(Calc. 80).		
Group scoring 0 A hits:	98	91
Group scoring 2 or more A hits:	7	14

Transcription checked ? Yes.

Serial No. of
this Data Sheet: D 16.

Source Data Sheets not reproduced.

NUMBER OF DRAWINGS RETURNED BY EACH GROUP OF SUBJECTS FOR EACH SECTION OF THE EXPERIMENT, AND THE WEIGHTING FACTORS NECESSARY TO CONVERT RAW SCORES TO THE EXPECTANCY FOR 2,000 TRIALS PER SUBJECT GROUP PER WEEK OF THE EXPERIMENT.

(A) EXPERIMENTAL GROUP SUBJECTS

Week:	Number of drawings returned:	Correction factor for 2,000 trials:
A	1,741	$\frac{2,000}{1,741}$ = 1.148,765
B	1,760	$\frac{2,000}{1,760}$ = 1.136,364
C	1,702	$\frac{2,000}{1,702}$ = 1.175,088
D	1,702	$\frac{2,000}{1,702}$ = 1.175,088
E	1,678	$\frac{2,000}{1,678}$ = 1.191,895
Total	8,583	

(B) THE CONTROL GROUP SUBJECTS:

A	1,801	$\frac{2,000}{1,801}$ = 1.110,494
B	1,760	$\frac{2,000}{1,760}$ = 1.136,364
C	1,759	$\frac{2,000}{1,759}$ = 1.137,010
D	1,767	$\frac{2,000}{1,767}$ = 1.131,362
E	1,770	$\frac{2,000}{1,770}$ = 1.129,943
Total	8,857	

Total,
E & C 17,440
groups

Transcription and
calculation checked ? Yes.

This Data Sheet's Serial No: D 17.

Source Data Sheets' Serial Numbers: D 1 & 2, and D. 16.

EXPECTED RAW SCORE HIT FREQUENCIES PER 2000 TRIALS PER SUBJECT GROUP PER WEEK ON EXPERIMENTAL SERIES ORIGINALS.

Hit type	S G	Week A Raw	Week A Expd	Week B Raw	Week B Exptd	Week C Raw	Week C Exptd	Week D Raw	Week D Exptd	Week E Raw	Week E Exptd
A	E	9	10.3	10	11.4	18	21.1	12	14.1	21	25.0
	C	14	15.5	9	10.2	15	17.1	11	12.5	14	15.8
All A,B, C,D, E:	E	46	52.8	43	48.9	50	58.7	82	96.3	93	110.8
	C	54	60.0	46	52.3	68	77.3	69	78.1	65	73.4
All F,G, and H3:	E	108	124.1	86	97.7	143	168.0	127	149.2	141	168.1
	C	132	146.6	90	102.3	127	144.4	142	160.7	148	167.2
All F,G and H	E	153	175.8	153	173.9	192	225.6	187	219.7	200	238.4
	C	183	203.2	155	176.1	178	202.4	205	232.0	214	241.8
I & K	E	65	74.7	53	60.2	58	68.1	121	142.2	89	106.1
	C	63	70.0	83	94.3	76	86.4	60	67.9	78	88.1
I,J,K	E	75	86.1	90	102.3	67	78.7	130	152.8	103	122.8
	C	75	83.3	89	101.1	91	103.5	76	86.0	83	93.8
All hits combined	E	244	280.3	243	276.1	262	307.9	332	390.1	323	385.0
	C	254	282.1	234	265.9	282	320.6	286	323.7	310	350.3

ON THE CONTROL SERIES ORIGINALS:

A	E	3	3.4	2	2.3	3	3.5	6	7.1	5	5.9
	C	5	5.5	2	2.3	2	2.3	6	6.8	3	3.4
All A,B, C,D,E:	E	79	90.7	33	37.5	83	97.5	69	81.1	64	76.3
	C	84	93.3	56	63.6	77	87.5	80	90.5	68	76.8
All F,G, and H3	E	60	68.9	40	45.5	64	75.2	63	74.0	75	89.4
	C	67	74.4	51	57.9	70	79.6	70	79.2	73	82.5
All F,G, and H	E	137	157.4	124	140.9	138	162.2	138	162.2	138	164.5
	C	127	141.0	127	144.3	155	176.2	157	177.7	156	176.3
I & K	E	60	68.9	39	44.3	70	82.3	64	75.2	62	73.9
	C	60	66.6	63	71.6	66	75.0	60	67.9	65	73.4
I,J,K:	E	89	102.2	44	50.0	97	114.0	91	106.9	90	107.3
	C	84	93.3	72	81.8	104	118.2	102	115.4	94	106.2
All hits combined	E	250	287.2	181	205.7	250	293.8	240	282.0	238	283.7
	C	237	263.2	233	264.8	259	294.5	271	306.7	260	293.8
Correction factors:	E	1·148,765		1·136,364		1·175,088		1·175,088		1·191,895	
	C	1·110,494		1·136,364		1·137,010		1·131,862		1·129,943	

Transcription and calculation checked ? Yes.

Serial No. of this Data Sheet: D 18.

Serial Nos. of Source Data Sheets: D 3 & D 16.

EXPECTED FREQUENCIES OF HITS (CORRECTED FOR BUNCHING ERRORS) PER 2,000 TRIALS PER SUBJECT GROUP PER WEEK, MADE ON EXPERIMENTAL SERIES ORIGINALS.

Hit type	SG	Week A Raw	Week A Exptd	Week B Raw	Week B Exptd	Week C Raw	Week C Exptd	Week D Raw	Week D Exptd	Week E Raw	Week E Exptd
A	E	5	5.7	10	11.4	18	21.1	12	14.1	21	25.0
	C	10	11.1	9	10.2	15	17.1	11	12.5	14	15.8
All A,B, C,D,E.	E	42	48.2	30	34.1	50	58.7	66	77.5	80	95.3
	C	50	55.5	42	47.7	68	77.3	55	62.3	59	66.7
All F,G, and H3	E	108	124.1	86	97.7	143	168.0	116	136.3	136	162.1
	C	132	146.6	90	102.3	127	144.4	130	147.1	147	166.1
All F,G and H	E	153	175.8	131	148.9	192	225.6	176	206.8	195	232.4
	C	183	203.2	143	162.5	178	202.4	188	212.8	213	240.7
I & K	E	74	85.0	42	47.7	58	68.1	71	83.4	70	83.4
	C	71	78.8	69	78.4	76	86.4	54	61.1	74	83.6
I, J & K:	E	84	96.5	51	57.9	67	78.7	80	94.0	84	100.1
	C	83	92.2	75	85.2	91	103.5	70	79.2	79	89.3
Correction Factors:	E	1.148,765		1.136,364		1.175,088		1.175,088		1.191,895	
	C	1.110,494		1.136,364		1.137,010		1.131,862		1.129,943	

Transcription and calculation checked ? Yes.

APPENDIX B.

PERSONALITY TEST MATERIAL.

CONTENTS:

NAME_____

A STUDY OF VALUES

PART I

DIRECTIONS: A number of controversial statements or questions with two alternative answers are given below. Indicate your personal preferences by writing the appropriate figures in the right-hand columns, as indicated:

	(a)	(b)
If you agree with alternative (a) and disagree with (b), write 3 in the first column and 0 in the second column, thus	*3*	*0*
If you agree with (b); disagree with (a), write	*0*	*3*
If you have a slight preference for (a) over (b), write	*2*	*1*
If you have a slight preference for (b) over (a), write	*1*	*2*

Do not write any other combination of figures after any question except one of these four.

There is no time limit, but do not linger long over any one question or statement, and do not leave out any of the questions, unless you find it really impossible to make a decision.

	(a)	(b)
1. The main object of scientific research should be the discovery of pure truth rather than its practical applications. (a) Yes; (b) No.		
2. Do you *think* that it is justifiable for the greatest artists, such as Beethoven, Wagner, Byron, etc., to be selfish and negligent of the feelings of others? (a) Yes; (b) No.		

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	(a)	(b)
3. Because of the aggressive and self-assertive nature of man the abolition of war is an illusory ideal. (a) Yes; (b) No.		
4. If you were a university professor and had the necessary ability, would you prefer to teach: (a) poetry; (b) chemistry and physics?		
5. Under circumstances similar to those of Qu. 4, would you prefer: (a) economics; (b) law?		
6. Which of these character traits do you consider the more desirable: (a) high ideals and reverence; (b) unselfishness and sympathy?		
7. In a paper such as the New York Sunday Times, are you more interested in the section on picture galleries and exhibitions than in the real estate sections and the account of the stock market? (a) Yes; (b) No.		
8. Is a person who analyzes his emotions likely to be less sincere in his feeling than one who is not so reflective? (a) Yes; (b) No.		
9. If you should see the following news items with headlines of equal size in your morning paper, which would you read the more attentively: (a) Great improvements in market conditions; (b) Protestant leaders to consult on reconciliation?		
10. Under circumstances similar to those of Qu. 9: (a) Laws not opposed to liberties, says Senator; (b) Curiosity the basis of knowledge, educator declares.		
11. When you visit a cathedral are you more impressed by a pervading sense of reverence and worship than by the architectural features and stained glass? (a) Yes; (b) No.		
12. Do you believe that contemporary charitable policies should be curtailed because they tend to undermine individual initiative? (a) Yes; (b) No.		

	(a)	(b)
13. All the evidence that has been impartially accumulated goes to show that the universe has evolved to its present state in accordance with mechanistic principles, so that there is no need to assume a first cause, cosmic purpose, or God behind it. (a) Yes; (b) No.		
14. In your opinion, has general progress been advanced more by: (a) the freeing of slaves, with the enhancement of the value placed on individual life; (b) the discovery of the steam engine, with the consequent industrialization and economic rivalry of European and American countries?		
15. If you had the opportunity, and if nothing of the kind existed in the community or college where you lived, would you prefer to found: (a) a debating society; (b) a classical orchestra?		
16. At an exposition, do you chiefly like to go to the buildings where you can see: (a) automobiles; (b) scientific apparatus or chemical products?		
17. Would you prefer to hear a series of popular lectures on: (a) the progress and needs of social service work in the cities of your part of the country; (b) contemporary painters?		
18. Under similar circumstances, would you choose: (a) the comparative development of the great religious faiths, or (b) the comparative merits of the forms of government in Britain and in the United States?		
19. If you had some time to spend in a waiting room, and there were only these two magazines to choose from, would you prefer: (a) *The Scientific American*; (b) *Arts and Decorations*?		
20. Would you encourage your children, while at school, to: (a) try to make several teams; (b) have vocational training (supposing that they interfered with one another)?		

	(a)	(b)
21. The aim of the churches at the present time should be: (a) to bring out altruistic and charitable tendencies, and to urge people to think more of the good of others; (b) to convey spiritual worship, and a sense of communion with the highest.		
22. Are our modern industrial and scientific developments signs of a greater degree of civilization and culture than those attained by any previous race, the Greeks, for example? (a) Yes; (b) No.		
23. You are asked to wait for a few minutes in a strange living-room; are you more likely to judge (a) the owner's knowledge and intellectuality as shown by the books in his book-cases; (b) his friendliness and hospitality as shown by the photographs on the walls, and the general comforts of the room?		
24. The world would be a much better place if we took to heart the teaching, "Lay not up for yourselves treasures upon earth . . . but lay up for yourselves treasures in heaven, where neither moth nor rust doth corrupt, and where thieves do not break through nor steal." (a) Yes; (b) No.		
25. Are you more interested in reading accounts of the lives and works of men such as: (a) Aristotle, Plato, and Socrates; (b) Alexander, Julius Cæsar, and Charlemagne?		
26. Taking the Bible as a whole, one should regard it from the point of view of its beautiful mythology and literary style rather than as a spiritual revelation. (a) Yes; (b) No.		
27. Since the class or social status to which a man belongs depends mainly upon his push and ability, it is just that a small proportion of the population should be very rich. (a) Yes; (b) No.		
28. If you were given certain topics on which to write an essay, would you choose: (a) the rôle of church-going in religion, or (b) the defects of our present educational systems?		

	(a)	(b)
29. Under similar circumstances would you choose to write about: (a) the best way to distribute one's income between, say, the necessities of life, luxuries, and savings, or (b) the personality of some close friend of yours.		
30. When witnessing a gorgeous ceremony (ecclesiastical or academic, induction into office, etc.) are you more impressed: (a) by the unified idea or institution which the group represents, or (b) by the color and pageantry of the occasion itself?		

Continue with Part II.

PART II

DIRECTIONS: Each of the following situations or questions is followed by four possible attitudes or answers. Arrange these answers in the order of your personal preference from first to fourth by writing, in the left hand margin,

. . . *1* . . . beside the answer that appeals to you most,

. . . *2* . . . beside the answer which is next most important to you,

. . . *3* . . . beside the next, and

. . . *4* . . . beside the answer that least represents your interest or preference.

You may think of answers which would be preferable from your point of view to any of those listed. It is necessary, however, that you make your selection from the alternatives presented, and arrange all four in order of their desirability, guessing when your preferences are not distinct. If you find it really impossible to guess your preference, you may omit the question.

1. Do you think that a good government should aim chiefly at —

. . . . . a. more aid for the poor, sick, and old

. . . . . b. the development of manufacturing and trade

. . . . . c. introducing more ethical principles into its policies and diplomacy

. . . . . d. establishing a position of prestige and respect among nations

2. In your opinion, can a man who works in business for his living all the week best spend Sunday in —

. . . . . a. trying to educate himself by reading serious books

. . . . . b. trying to win at golf, or racing

. . . . . c. going to an orchestral concert

. . . . . d. hearing a really good sermon

3. If you could influence the educational policies of the public schools of some city, would you undertake —

. . . . . a. to promote the study and the performance of drama

. . . . . b. to develop coöperativeness and the spirit of service

. . . . . c. to provide additional laboratory facilities

. . . . . d. to promote school savings banks for education in thrift

4. Do you prefer a friend (of your own sex) who —

. . . . . a. is efficient, industrious, and of a practical turn of mind

. . . . . b. is seriously interested in thinking out his attitude toward life as a whole

. . . . . c. possesses qualities of leadership and organizing ability

. . . . . d. shows refinement and emotional sensitivity

5. If you lived in a small town and had more than enough income for your needs, would you prefer to —

. . . . . a. apply it productively to industrial development

. . . . . b. help to endow the church to which you belong

. . . . . c. give it to a university for the development of scientific research

. . . . . d. devote it to hospitals

6. When you go to the theatre do you, as a rule, enjoy most —

. . . . . a. plays that treat the lives of great men

. . . . . b. ballet or similar imaginative performances

. . . . . c. plays with a theme of human suffering and love

. . . . . d. problem plays that argue consistently for some point of view

7. Assuming that you are a man with the necessary ability, and that the salary for each of the following occupations is the same, would you prefer to be a —

. . . . . a. mathematician

. . . . . b. sales manager

. . . . . c. clergyman

. . . . . d. politician

8. If you had unlimited leisure and money, would you prefer to —

. . . . . a. make a collection of fine sculptures or paintings

. . . . . b. establish a mental hygiene clinic for taking care of the maladjusted and mentally deficient

. . . . . c. aim at a senatorship, or a seat in the Cabinet

. . . . . d. enter into banking and high finance

9. At an evening discussion with intimate friends of your own sex, are you most interested when you talk about —

. . . . . a. the "meaning" of life

. . . . . b. philosophy and psychology

. . . . . c. literature

. . . . . d. socialism and social amelioration

10. Which of the following would you prefer to do during part of your next summer vacation (if your ability and other conditions would permit) —

. . . . . a. write and publish an original biological essay or article

. . . . . b. stay in some secluded part of the country where you can appreciate fine scenery

. . . . . c. go in for a local tennis or other athletic tournament

. . . . . d. get experience in some new line of business

11. Do great exploits and adventures of discovery such as Lindbergh's and Byrd's seem to you significant because —

. . . . . a. they represent conquests by man over the difficult forces of nature

. . . . . b. they add to our knowledge of mechanics, geography, meteorology, etc.

. . . . . c. they weld human interests and international feelings throughout the world

. . . . . d. they contribute to the ultimate revelation of the meaning of the universe

12. Should one guide one's conduct according to, or develop one's chief loyalties toward —

. . . . . a. one's religious faith

. . . . . b. ideals of beauty

. . . . . c. one's business organizations and associates

. . . . . d. society as a whole

13. To what extent do the following famous persons interest or attract you —

. . . . . a. Florence Nightingale

. . . . . b. Napoleon

. . . . . c. Henry Ford

. . . . . d. Charles Darwin

14. If you should marry (or are married), do you prefer a wife who — (*Women answer the alternative form below*) —

. . . . . a. can achieve social prestige, commanding admiration from others

. . . . . b. likes to stay at home and keep house

. . . . . c. is fundamentally spiritual in her attitude toward life

. . . . . d. is gifted along artistic lines

(*For women*) Do you prefer a husband who —

. . . . . a. is successful in his profession, commanding admiration from others

. . . . . b. is domestic in his tastes

. . . . . c. is fundamentally spiritual in his attitude toward life

. . . . . d. is gifted along artistic lines

15. Viewing Leonardo da Vinci's picture — "The Last Supper" — would you tend to think of it —

. . . . . a. as expressing the highest spiritual tendencies and emotions

. . . . . b. as one of the most priceless and irreplaceable pictures ever painted

. . . . . c. in relation to Leonardo's versatility and its place in history

. . . . . d. as a masterpiece of design

Name..... Age.....

SCORE SHEET FOR THE STUDY OF VALUES

Directions

1. **First make sure that every question has been answered.**

   Note: If you have found it impossible to answer all the questions, you may give equal scores to the alternative answers under each question that has been omitted; thus,

   Part I. 1½ for each alternative. The sum of the scores for (a) and (b) must always equal 3.

   Part II. 2½ for each alternative. The sum of the scores for the four alternatives under each question must always equal 10.

2. **Transfer your scores directly to the proper boxes on the next two pages.**

   E.g., Part I: If for your first question you have a score of 2 in column (a), and 1 in column (b), the scores will appear on the next page as follows:

Part I. Question	Type of value					
	Theoretical	Economic	Æsthetic	Social	Political	Religious
1.	a [2]	b [1]				

E.g., Part II: Suppose you have marked the alternatives in the first question as follows:

3 a
4 b
1 c
2 d

When transcribed, these scores will appear in the corresponding boxes on the third page like this:

Part II Question	Type of Value					
	Theoretical	Economic	Æsthetic	Social	Political	Religious
1.		b [4]		a [3]	d [2]	c [1]

3. Add the vertical columns of scores in Part I and Part II separately.
4. Make certain that the sum of the six totals in each part is equal to the figure printed to their right.
5. In Part II *subtract your scores from the printed correction figures*, as indicated on the third page.
6. Transcribe the total scores for the separate values, i.e., the numbers at the bottom of each page, to the last page.
7. Add the pairs of scores for each value to secure your final totals.
8. Plot these totals on the vertical lines in the graph, and compare them with the norms printed beneath the graph.

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PART I.	Type of Value.					
Question	Theoretical	Economic	Aesthetic	Social	Political	Religious
1	a	b				
2			a	b		
3					a	b
4	b		a			
5		a			b	
6				b		a
7		b	a			
8	b			a		
9		a				b
10	b				a	
11			b			a
12				b	a	
13	a					b
14		b		a		
15			b		a	
16	b	a				
17			b	a		
18					b	a
19	a		b			
20		b			a	
21				a		b
22		a	b			
23	a			b		
24		b				a
25	a				b	
26			a			b
27				b	a	
28	b					a
29		a		b		
30			b		a	
TOTALS						

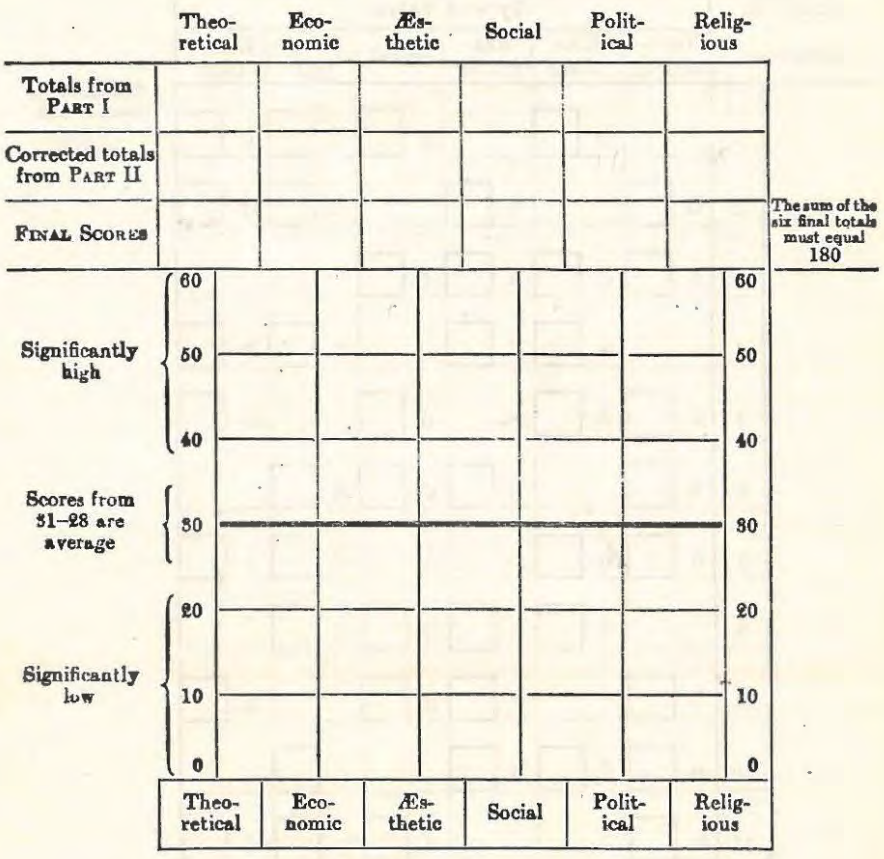
The sum of the scores for each row must equal 3

The sum of these six totals must equal 90

Transcribe this row of figures to the last page.

PART II.	Type of Value.						
Question	Theoretical	Economic	Aesthetic	Social	Political	Religious	
1		b ☐		a ☐	d ☐	c ☐	The sum of the ranks for each row must equal 10
2	a ☐		c ☐		b ☐	d ☐	
3	c ☐	d ☐	a ☐	b ☐			
4		a ☐	d ☐		c ☐	b ☐	
5	c ☐	a ☐		d ☐		b ☐	
6	d ☐		b ☐	c ☐	a ☐		
7	a ☐	b ☐			d ☐	c ☐	
8		d ☐	a ☐	b ☐	c ☐		
9	b ☐		c ☐	d ☐		a ☐	
10	a ☐	d ☐	b ☐		c ☐		
11	b ☐			c ☐	a ☐	d ☐	
12		c ☐	b ☐	d ☐		a ☐	
13	d ☐	c ☐		a ☐	b ☐		
14			d ☐	b ☐	a ☐	c ☐	
15	c ☐	b ☐	d ☐			a ☐	
TOTALS							The sum of these six totals must equal 150
Subtract these totals from:							
Corrections	39	41	41	36	41	42	
Corrected Totals							The sum of the six corrected totals must equal 90

Transcribe this row of corrected totals to the last page.



PROFILE OF VALUES

Percentile	Scores on any value	Percentile	Scores on any value
5 (low)	0–16	60	30–31
10	17–19	70	32–34
20	20–23	80	35–36
30	24–25	90	37–40
40	26–27	95	41–43
50	28–30	100 (high)	44–60

NORMS FOR ADULTS AND UNDERGRADUATES (BOTH SEXES)

000094

THE PERSONALITY INVENTORY

By **ROBERT G. BERNREUTER**

PUBLISHED BY
STANFORD UNIVERSITY PRESS
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Date.....

NAME..... Age..... Sex.....

Address.....

Name of school or business firm..... School grade or occupation .....

	B1-N	B2-S	B3-I	B4-D	F1-C	F2-S
Plus						
Minus						
Difference						
Percentile	%	%	%	%	%	%

H.S—COLL.—ADULT

Based on norms

MALE—FEMALE

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Leland Stanford Junior University

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The questions on this blank are intended to indicate your interests and attitudes. It is not an intelligence test, nor are there any right or wrong answers.

In front of each question you will find: "Yes No ?"

If your answer is "Yes," draw a circle around the "Yes." If your answer is "No," draw a circle around the "No." If you are entirely unable to answer either "Yes" or "No" to the question, then draw a circle around the question mark.

1.	Yes	No	?	Does it make you uncomfortable to be "different" or unconventional?
2.	Yes	No	?	Do you day-dream frequently?
3.	Yes	No	?	Do you usually work things out for yourself rather than get someone to show you?
4.	Yes	No	?	Have you ever crossed the street to avoid meeting some person?
5.	Yes	No	?	Can you stand criticism without feeling hurt?
6.	Yes	No	?	Do you ever give money to beggars?
7.	Yes	No	?	Do you prefer to associate with people who are younger than yourself?
8.	Yes	No	?	Do you often feel just miserable?
9.	Yes	No	?	Do you dislike finding your way about in strange places?
10.	Yes	No	?	Are you easily discouraged when the opinions of others differ from your own?
11.	Yes	No	?	Do you try to get your own way even if you have to fight for it?
12.	Yes	No	?	Do you blush very often?
13.	Yes	No	?	Do athletics interest you more than intellectual affairs?
14.	Yes	No	?	Do you consider yourself a rather nervous person?
15.	Yes	No	?	Do you usually object when a person steps in front of you in a line of people?
16.	Yes	No	?	Have you ever tried to argue or bluff your way past a guard or doorman?
17.	Yes	No	?	Are you much affected by the praise or blame of many people?
18.	Yes	No	?	Are you touchy on various subjects?
19.	Yes	No	?	Do you frequently argue over prices with tradesmen or junkmen?
20.	Yes	No	?	Do you feel self-conscious in the presence of superiors in the academic or business world?
21.	Yes	No	?	Do ideas often run through your head so that you cannot sleep?
22.	Yes	No	?	Are you slow in making decisions?
23.	Yes	No	?	Do you think you could become so absorbed in creative work that you would not notice a lack of intimate friends?
24.	Yes	No	?	Are you troubled with shyness?
25.	Yes	No	?	Are you inclined to study the motives of other people carefully?
26.	Yes	No	?	Do you frequently feel grouchy?
27.	Yes	No	?	Do your interests change rapidly?
28.	Yes	No	?	Are you very talkative at social gatherings?
29.	Yes	No	?	Do you ever heckle or question a public speaker?
30.	Yes	No	?	Do you very much mind taking back articles you have purchased at stores?
31.	Yes	No	?	Do you see more fun or humor in things when you are in a group than when alone?
32.	Yes	No	?	Do you prefer travelling with someone who will make all the necessary arrangements to the adventure of travelling alone?
33.	Yes	No	?	Would you rather work for yourself than carry out the program of a superior whom you respect?
34.	Yes	No	?	Can you usually express yourself better in speech than in writing?
35.	Yes	No	?	Would you dislike any work which might take you into isolation for a few years, such as forest ranging, etc.?
36.	Yes	No	?	Have you ever solicited funds for a cause in which you were interested?
37.	Yes	No	?	Do you usually try to avoid dictatorial or "bossy" people?
38.	Yes	No	?	Do you find conversation more helpful in formulating your ideas than reading?

39. Yes No ? Do you worry too long over humiliating experiences?
40. Yes No ? Have you ever organized any clubs, teams, or other groups on your own initiative?
41. Yes No ? If you see an accident do you quickly take an active part in giving aid?
42. Yes No ? Do you get stage fright?
43. Yes No ? Do you like to bear responsibilities alone?
44. Yes No ? Have books been more entertaining to you than companions?
45. Yes No ? Have you ever had spells of dizziness?
46. Yes No ? Do jeers humiliate you even when you know you are right?
47. Yes No ? Do you want someone to be with you when you receive bad news?
48. Yes No ? Does it bother you to have people watch you at work even when you do it well?
49. Yes No ? Do you often experience periods of loneliness?
50. Yes No ? Do you usually try to avoid arguments?
51. Yes No ? Are your feelings easily hurt?
52. Yes No ? Do you usually prefer to do your own planning alone rather than with others?
53. Yes No ? Do you find that telling others of your own personal good news is the greatest part of the enjoyment of it?
54. Yes No ? Do you often feel lonesome when you are with other people?
55. Yes No ? Are you thrifty and careful about making loans?
56. Yes No ? Are you careful not to say things to hurt other people's feelings?
57. Yes No ? Are you easily moved to tears?
58. Yes No ? Do you ever complain to the waiter when you are served inferior or poorly prepared food?
59. Yes No ? Do you find it difficult to speak in public?
60. Yes No ? Do you ever rewrite your letters before mailing them?
61. Yes No ? Do you usually enjoy spending an evening alone?
62. Yes No ? Do you make new friends easily?
63. Yes No ? If you are dining out do you prefer to have someone else order dinner for you?
64. Yes No ? Do you usually feel a great deal of hesitancy over borrowing an article from an acquaintance?
65. Yes No ? Are you greatly embarrassed if you have greeted a stranger whom you have mistaken for an acquaintance?
66. Yes No ? Do you find it difficult to get rid of a salesman?
67. Yes No ? Do people ever come to you for advice?
68. Yes No ? Do you usually ignore the feelings of others when accomplishing some end which is important to you?
69. Yes No ? Do you often find that you cannot make up your mind until the time for action has passed?
70. Yes No ? Do you especially like to have attention from acquaintances when you are ill?
71. Yes No ? Do you experience many pleasant or unpleasant moods?
72. Yes No ? Are you troubled with feelings of inferiority?
73. Yes No ? Does some particularly useless thought keep coming into your mind to bother you?
74. Yes No ? Do you ever upbraid a workman who fails to have your work done on time?
75. Yes No ? Are you able to play your best in a game or contest against an opponent who is greatly superior to you?
76. Yes No ? Have you frequently appeared as a lecturer or entertainer before groups of people?
77. Yes No ? Are people sometimes successful in taking advantage of you?
78. Yes No ? When you are in low spirits do you try to find someone to cheer you up?
79. Yes No ? Can you usually understand a problem better by studying it out alone than by discussing it with others?
80. Yes No ? Do you lack self-confidence?
81. Yes No ? Does admiration gratify you more than achievement?
82. Yes No ? Are you willing to take a chance alone in a situation of doubtful outcome?
83. Yes No ? Does your ambition need occasional stimulation through contact with successful people?

84. Yes No ? Do you usually avoid asking advice?
85. Yes No ? Do you consider the observance of social customs and manners an essential aspect of life?
86. Yes No ? If you are spending an evening in the company of other people do you usually let someone else decide upon the entertainment?
87. Yes No ? Do you take the responsibility for introducing people at a party?
88. Yes No ? If you came late to a meeting would you rather stand than take a front seat?
89. Yes No ? Do you like to get many views from others before making an important decision?
90. Yes No ? Do you try to treat a domineering person the same as he treats you?
91. Yes No ? Does your mind often wander so badly that you lose track of what you are doing?
92. Yes No ? Do you ever argue a point with an older person whom you respect?
93. Yes No ? Do you have difficulty in making up your mind for yourself?
94. Yes No ? Do you ever take the lead to enliven a dull party?
95. Yes No ? Would you "have it out" with a person who spread untrue rumors about you?
96. Yes No ? At a reception or tea do you feel reluctant to meet the most important person present?
97. Yes No ? Do you find that people are more stimulating to you than anything else?
98. Yes No ? Do you prefer a play to a dance?
99. Yes No ? Do you tend to be radical in your political, religious, or social beliefs?
100. Yes No ? Do you prefer to be alone at times of emotional stress?
101. Yes No ? Do you usually prefer to work with others?
102. Yes No ? Do you usually work better when you are praised?
103. Yes No ? Do you have difficulty in starting a conversation with a stranger?
104. Yes No ? Do your feelings alternate between happiness and sadness without apparent reason?
105. Yes No ? Are you systematic in caring for your personal property?
106. Yes No ? Do you worry over possible misfortunes?
107. Yes No ? Do you usually prefer to keep your feelings to yourself?
108. Yes No ? Can you stick to a tiresome task for a long time without someone prodding or encouraging you?
109. Yes No ? Do you get as many ideas at the time of reading a book as you do from a discussion of it afterward?
110. Yes No ? Do you usually face your troubles alone without seeking help?
111. Yes No ? Have you been the recognized leader (president, captain, chairman) of a group within the last five years?
112. Yes No ? Do you prefer making hurried decisions alone?
113. Yes No ? If you were hiking with a group of people, where none of you knew the way, would you probably let someone else take the full responsibility for guiding the party?
114. Yes No ? Are you troubled with the idea that people on the street are watching you?
115. Yes No ? Are you often in a state of excitement?
116. Yes No ? Are you considered to be critical of other people?
117. Yes No ? Do you usually try to take added responsibilities on yourself?
118. Yes No ? Do you keep in the background at social functions?
119. Yes No ? Do you greatly dislike being told how you should do things?
120. Yes No ? Do you feel that marriage is essential to your present or future happiness?
121. Yes No ? Do you like to be with people a great deal?
122. Yes No ? Can you be optimistic when others about you are greatly depressed?
123. Yes No ? Does discipline make you discontented?
124. Yes No ? Are you usually considered to be indifferent to the opposite sex?
125. Yes No ? Would you feel very self-conscious if you had to volunteer an idea to start a discussion among a group of people?

PRESSEY X-O TESTS

DIRECTIONS: On each page of this folder there is a test. Work these tests in order, finishing each test before you go on to the next. Do not hurry; but work as rapidly as you can; your score will depend partly upon the quickness with which you work. Begin with Test I below.

TEST I t.....d.....

Read over the twenty-five lists of words on the page below and cross out every word whose meaning is unpleasant to you—every word which you do not like. You may cross out as many or as few words as you wish; but be sure to cross out everything that is unpleasant.

1. disgust fear sex suspicion aunt.
2. roar divorce dislike sidewalk wiggle.
3. naked snicker wonder spit fight.
4. failure home rotting snake hug.
5. prize gutter thunder breast insult.
6. worm tremble street-walker rival city.
7. cruel shirt favorite laughter crawl.
8. undress slight journey dirty insanity.
9. nervous gift sewer dizzy pervert.
10. white drunk choke flirt unfair.
11. stink influence skin worry house.
12. execute stockings loss kind filthy.
13. suck meanness eat ugly black.
14. loneliness road sneeze fever illegitimate.
15. river vomit electricity immoral whisper.
16. smell blood skirt cheat horse.
17. slash tough giggle bargain flesh.
18. pregnant voices quiet leg kill.
19. sin smile swamp spider tickle.
20. distance slippery cannibal assault persecute.
21. butcher poison abortion contempt visit.
22. detective engagement queer door pus.
23. pox homely fried sticky falling.
24. disgrace fence bladder dream baby.
25. boat yellow crazy indecent shame.

FURTHER DIRECTIONS: Read through the lists again. Do not change any of the marks you have already made. In addition to these, draw a line around the ONE word in each list that is most unpleasant to you. If you are not sure, guess. If there is no unpleasant word in a list, find the least pleasant. Work rapidly; but be sure that you have a line around one, AND ONLY ONE, word in EVERY list.

When you have finished this test, turn over the page to Test II.

TEST II t.....d.....

DIRECTIONS: In this test there are twenty-five words in large letters, each followed by a list of five words in small letters. Go through these lists, and cross out, in each list, all the words that are connected in your mind with the word in large letters at the beginning of the list. You may cross out as many or as few words as you wish. But be sure to cross out every word, in each list, that is connected or associated in any way, in your mind, with the word in large letters at the beginning of that list.

1.	BLOSSOM	flame flower paralyzed red sew.
2.	LAMP	poor headache match dogs light.
3.	BATH	naked choke tree alone danger.
4.	KING	father baseball queen rights razor.
5.	SLEEP	grade ache fright tongue worry.
6.	RIVER	dark fear hypnotize dead necktie.
7.	HAND	slimy followed strong sky kill.
8.	WINDOW	high fall wheat queer judge.
9.	BOY	marriage cloud brave disgust sweet.
10.	RELIGION	wood truth crime longing sickness.
11.	DREAM	floating heart beautiful manhood bicycle.
12.	DOCTOR	scream baby head sale immoral.
13.	FOOT	girl contempt cider undress escape.
14.	SPIDER	chills cook female drunk clammy.
15.	CHEESE	floor buried whip hang worms.
16.	GIRL	health figure wrong soft climb.
17.	JUSTICE	terror enemy unfair ice plot.
18.	WHISKEY	crawl jealousy snow wife horrors.
19.	BITTER	family key suspect old hope.
20.	WISH	broom tired never disappointment die.
21.	ANGER	lover home trick laugh cloth.
22.	HUNGER	funeral poison work stump shoot.
23.	SICKNESS	children memory save sin worry.
24.	LIVING	agony country bed drug bare.
25.	DEATH	five water self welcome hopeless.

FURTHER DIRECTIONS: Go through the lists again. Do not change any of the marks you have already made. In addition to these, draw a line around the ONE word in each list that is most closely connected in your mind with the word in large letters at the beginning of the list. If no word in the list has any connection in your mind with the first word, or if you are not sure which is most closely connected, guess. Work rapidly; but be sure you have a line around ONE, AND ONLY ONE, word in EVERY list.

When you have finished this test, go on to Test III on the opposite page.

TEST III t.....d.....

DIRECTIONS: Read through the twenty-five lists below and cross out everything that you think is wrong—that a person is to be blamed for. Cross out as many or as few words as you wish; but be sure to cross out everything that you think is wrong.

1. begging swearing smoking flirting spitting.
2. fear hate anger jealousy suspicion.
3. dullness weakness ignorance innocence meekness.
4. careless fussy reckless silly childish.
5. poor extravagant sporty shrewd bad-mannered.
6. clumsy slang blues dancing snob.
7. thief prostitute grafter thug gambler.
8. war lynching revolution king socialism.
9. dirty idle conceited tough smutty.
10. worry thoughtless day-dreaming tired slow.
11. divorce bankruptcy gang overwork politics.
12. dishonest illegitimate failure drunkard coward.
13. sad bashful stupid easy queer.
14. lazy mean disgrace immodest fighting.
15. prize-fight drugs indecent loafing cheating.
16. debt theatre shabby proud chewing.
17. cheap smelly stingy meddling pick-up.
18. betting squealer street-walker cruel graft.
19. mistress scab dope-fiend swindler bully.
20. strike lock-out union trust detective.
21. broker lawyer millionaire judge priest.
22. church-going fasting cards quitter over-eating.
23. stubborn speculating gossip pity greedy.
24. boasting nagging persecute money overdressed.
25. teasing sneering tricky brutal insane.

FURTHER DIRECTIONS: Go through the lists again. Do not change any of the marks you have already made. In addition to these, draw a line around the ONE thing in each list that you think is worst. If you are not sure, guess. If there is nothing in the list which you think is wrong, draw a line around the thing which you consider least good. Work rapidly; but be sure you have a line around one, AND ONLY ONE, word in EVERY list.

When you have finished this test, turn over the page to Test IV.

TEST IV t.....d.....

DIRECTIONS: Read through the twenty-five lists below and cross out everything about which you have ever worried or felt nervous, or which you have ever dreaded. Cross out as many or as few words as you like. But be sure you cross out everything about which you have ever worried.

1. injustice noise self-consciousness discouragement germs.
2. clothes conscience heart-failure poison sleep.
3. sickness enemies money blushing failure.
4. falling queerness religion dizziness boss.
5. sin operation conspiracy lightning marriage.
6. neighbors accidents impulses suicide disfigurement.
7. women forgiveness cancer insult tiredness.
8. fainting influences nightmares emotions God.
9. tunnels ugliness blues pain sneer.
10. ruin deafness unfairness work stammering.
11. persecution drugs parties depression headache.
12. day-dreaming loneliness arteries visions dogs.
13. food suspicions temper manners guilt.
14. business bashfulness soul weakness machines.
15. childhood syphilis rivals windstorms men.
16. voices exhaustion sex helplessness disease.
17. longings forgetfulness smoking teasing darkness.
18. paralysis employer hysterics moodiness worry.
19. gun immodesty crying stomach fault-finding.
20. children medicine hypnotism crowds dances.
21. whisperings fire inferior unbelief tuberculosis.
22. giggling grave nervousness spirits twitching.
23. suffocating slight habits jokes nervous-breakdown.
24. cats engagement confusion epilepsy teacher.
25. death insanity inventions wreck awkwardness.

FURTHER DIRECTIONS: Go through the lists again. Do not change any of the marks you have already made. In addition to these, draw a line around the ONE thing in each list about which you have worried the most. If there are lists in which there is nothing about which you have worried, draw a line around the thing you would be most likely to worry about. If you are not sure, guess. Work rapidly; but be sure you have a line around one, AND ONLY ONE, word in EVERY list.

As soon as you have finished the last test write your name on the line below

NAME.....

Then hold up your hand so that the examiner will know that you have finished.

time.....total aff.....id.....

No. 24500—Pressey
(Copyright, 1920, by C. H. Stoelting Co., Chicago, Ill., U. S. A.)

WASHBURNE S-A INVENTORY

(*Thaspic Edition*)

By JOHN N. WASHBURNE, PH.D., Syracuse University, Syracuse, New York

STUDENT'S RECORD

DIRECTIONS. Fill in the following blanks and answer the questions fully and frankly. Leave no blank spaces. All answers to this Inventory will be kept strictly confidential, to be used only by your advisers for your benefit.

Your name..... Boy or girl..... Present date.....
(First name, Middle name, Last name)

City..... Name of your school..... Grade you are in.....
(Where your school is located)

Place of birth..... Date of birth..... Age last birthday..... years
(City, state, and nation where you were born) (Month, Day, Year)

(*a*) When you are not away at school, do you live at home with *both* your parents?.....

(*b*) If not, with whom do you live? (Father, mother, aunt, uncle, guardian, etc.).....

(*c*) What is your father's occupation when employed? Explain fully.....

.....

(*d*) Is your father employed now?..... If not, how long has he been unemployed?.....

(*e*) Does your mother *seek* or *have* wage-earning work?..... If so, what?.....

(*f*) Is your mother employed now?..... If not, how long has she been unemployed?.....

(*g*) How many brothers and sisters do you have?..... How many of them live at home?.....

(*h*) How many brothers and sisters living in your home help support themselves by their earnings?.....

(*i*) What grade in school did your father finish?..... your mother?.....

(*j*) How many rooms has your home, not counting closets and bathrooms?.....

(*k*) Do your parents take in roomers?..... If so, how many?.....

(*l*) Do your folks have a telephone?..... a passenger automobile (not a truck)?.....

(*m*) Have you decided what occupation you would like to follow when through school?.....

(*n*) If so, what?.....

.....

Are you studying for this work?.....

(*o*) Are you practicing for this work now?..... If so, about how many hours a week?.....

(*p*) Do you do steady work for pay?.....

If so, what?.....

.....

For whom?.....

Now turn this page and look at page 1 of the Question Booklet. Read the Explanation and Directions on that page very carefully. Be sure that you understand them before you try to answer the questions.

Do not write in this boxed-off space.

PROFILE CHART

Percentile Rank			100 – 98	97–91	90–75	74 – 51	50	49–26	25–10	9 – 3	2 – 0	Retest	
Levels			Exc.	Sup.	W–A	NORM.			L.N.	Bor.	Mal.		
IQ		J.H.	160–135	134–125	124–115	114–106	105	104–100	99 – 86	85–76	75 – 55		
		H.S.	160–140	139–130	129–120	119–111	110	109–101	100 – 91	90–81	80 – 60		
		Col.	160–145	144–135	134–125	124–116	115	114–106	105–100	99–95	94 – 90		
Soc.-Ec. Status													
Sch. Standing													
t	Score	J.H.		0	1 – 6	7 – 11	12	13 – 23	24 – 30	Discard			
		H.S.		0	1 – 6	7 – 10	11	12 – 19	20 – 26	27 – 30	Discard		
		Col.		0	1 – 6	7 – 9	10	11 – 15	16 – 20	21 – 30	Discard		
h		J.H.			0	1 – 2	3	4 – 5	6 – 11	12 – 19	20 – 30		
		H.S.											
		Col.											
a		J.H.		0 – 2	3 – 7	8 – 17	18	19 – 29	30 – 34	35 – 37	38 –100		
		H.S.		0 – 2	3 – 6	7 – 13	14	15 – 22	23 – 27	28 – 35	36 –100		
		Col.		0 – 2	3 – 5	6 – 9	10	11 – 15	16 – 22	24 – 33	34 –100		
s		J.H.	Girls 0		1 – 3	4 – 8	9	10 – 13	14 – 18	19 – 26	27 – 70		
		H.S.	Boys 0	0 – 3	4 – 8	9 – 12	13	14 – 18	9 – 30	31 – 37	38 – 70		
		Col.											
p		J.H.	20 – 31	32–38	39 – 42	43 – 57	58	59 – 69	70 – 79	80 – 93	94 –116		
		H.S.	20 – 27	28–32	33 – 39	40 – 48	49	50 – 59	60 – 67	68 – 81	82 –116		
		Col.	20 – 23	24–26	27 – 33	34 – 39	40	41 – 49	50 – 55	56 – 69	70 –116		
i		J.H.			0 – 1	2 – 3	4	5 – 6	7 – 9	10 – 12	13 – 30		
		H.S.											
		Col.											
c		J.H.		0	1 – 5	6 – 13	14	15 – 19	20 – 24	25 – 29	30 – 50		
		H.S.		0	1 – 5	6 – 11	12	13 – 17	18 – 22	23 – 27	28 – 50		
		Col.		0	1 – 5	6 – 9	10	11 – 15	16 – 20	21 – 25	26 – 50		
SUBTOTAL		J.H.	20 – 49	50–63	64 – 96	97 –111	112	113–124	125–157	158–207	208–466		
		H.S.	20 – 46	47–60	61 – 91	92 –106	107	108–119	120–149	150–199	200–466		
		Col.	20 – 43	44–57	58 – 86	87 –101	102	103–114	115–141	142–191	192–466		
W (Subtract)		J.H.	50 – 30	29–14	13 – 9	8 – 5	4	3–1	0				
		H.S.	50 – 30	29–16	15 – 11	10 – 8	7	6–3	2 – 0				
		Col.	50 – 30	29–18	17 – 13	12 – 11	10	9–5	4 – 2	1 – 0			
TOTAL		J.H.	0 – 50	51–70	71 – 90	91 –109	110	111–129	130–154	155–204	205–466		
		H.S.	0 – 40	41–60	61 – 80	81 – 99	100	101–119	120–149	150–199	200–466		
		Col	0 – 30	31–50	51 – 70	71 – 89	90	91–109	110–144	145–194	195–466		

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Page 6

YES NO

119 ⋮⋮ ⋮⋮

1 2

120 ⋮⋮ ⋮⋮

YES NO

121 ⋮⋮ ⋮⋮

122

a ⋮⋮

b ⋮⋮

c ⋮⋮

d ⋮⋮

e ⋮⋮

f ⋮⋮

g ⋮⋮

h ⋮⋮

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r ⋮⋮

s ⋮⋮

t ⋮⋮

u ⋮⋮

v ⋮⋮

w ⋮⋮

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Page 5

YES NO

93 ⋮⋮ ⋮⋮

YES NO

94 ⋮⋮ ⋮⋮

YES NO

95 ⋮⋮ ⋮⋮

YES NO

96 ⋮⋮ ⋮⋮

YES NO

97 ⋮⋮ ⋮⋮

YES NO

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YES NO

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YES NO

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YES NO

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YES NO

117 ⋮⋮ ⋮⋮

YES NO

118 ⋮⋮ ⋮⋮

Page 4

1 2

70 ⋮⋮ ⋮⋮

1 2

71 ⋮⋮ ⋮⋮

1 2

72 ⋮⋮ ⋮⋮

YES NO

73 ⋮⋮ ⋮⋮

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74 ⋮⋮ ⋮⋮

YES NO

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YES NO

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YES NO

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YES NO

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← 4

YES NO

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YES NO

84 ⋮⋮ ⋮⋮

YES NO

85 ⋮⋮ ⋮⋮

a *b*

86 ⋮⋮ ⋮⋮

YES NO

87 ⋮⋮ ⋮⋮

YES NO

88 ⋮⋮ ⋮⋮

Write your answers to Nos. 89, 90, 91, and 92 in the column under ANSWER SHEET on the right side of this page.

Page 3

YES NO

42 ⋮⋮ ⋮⋮

YES NO

43 ⋮⋮ ⋮⋮

YES NO

44 ⋮⋮ ⋮⋮

YES NO

45 ⋮⋮ ⋮⋮

YES NO

46 ⋮⋮ ⋮⋮

YES NO

47 ⋮⋮ ⋮⋮

YES NO

48 ⋮⋮ ⋮⋮

YES NO

49 ⋮⋮ ⋮⋮

a *b* *c* *d* *e*

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a *b* *c* *d* *e*

51 ⋮⋮ ⋮⋮ ⋮⋮ ⋮⋮ ⋮⋮

1 2 3 4 5

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a *b* *c* *d* *e*

53 ⋮⋮ ⋮⋮ ⋮⋮ ⋮⋮ ⋮⋮

YES NO

54 ⋮⋮ ⋮⋮

← 3

a *b* *c*

55 ⋮⋮ ⋮⋮ ⋮⋮

a *b* *c* *d*

56 ⋮⋮ ⋮⋮ ⋮⋮ ⋮⋮

YES NO

57 ⋮⋮ ⋮⋮

YES NO

58 ⋮⋮ ⋮⋮

YES NO

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YES NO

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YES NO

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YES NO

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YES NO

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YES NO

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67 ⋮⋮ ⋮⋮

a *b*

68 ⋮⋮ ⋮⋮

YES NO

69 ⋮⋮ ⋮⋮

Page 2

YES NO

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YES NO

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YES NO

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YES NO

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YES NO

40 ⋮⋮ ⋮⋮

YES NO

41 ⋮⋮ ⋮⋮

Page 1

See below

YES NO

S ▮

YES NO

1 ⋮⋮ ⋮⋮

YES NO

2 ⋮⋮ ⋮⋮

YES NO

3 ⋮⋮ ⋮⋮

YES NO

4 ⋮⋮ ⋮⋮

YES NO

5 ⋮⋮ ⋮⋮

YES NO

6 ⋮⋮ ⋮⋮

YES NO

7 ⋮⋮ ⋮⋮

YES NO

8 ⋮⋮ ⋮⋮

YES NO

9 ⋮⋮ ⋮⋮

YES NO

10 ⋮⋮ ⋮⋮

YES NO

11 ⋮⋮ ⋮⋮

YES NO

12 ⋮⋮ ⋮⋮

ANSWER SHEET

Tear off this sheet very carefully along this perforated line ——→

(Use ruler if convenient.)

Do not write in this column until you come to page 4.

89. (Three principal wishes)

1 _____

_____

_____

2 _____

_____

_____

3 _____

_____

_____

90. (Other wishes — those you can think of in 3 minutes)

_____

_____

_____

_____

_____

_____

_____

91. (Number of suppressed desires)_____

92. (Suppressed desires)_____

_____

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_____

_____

Now go on to page 5.

RECORD	
Do not write in these spaces.	t
	h
	a
	s
	p
	i
	c
	SUB-TOTAL
	W (SUBT.)
TOTAL	

WASHBURNE S-A INVENTORY
QUESTION BOOKLET

Place this page number beside the "Page 1" on your Answer Sheet. → Page

Before answering any questions read carefully all the following EXPLANATION and DIRECTIONS.

EXPLANATION. In order that your advisers may help you in the best possible way, it is necessary for them to know something of your likes and dislikes, personality and habits. It has been found that some of the brightest persons have social and personality difficulties which can often be overcome if the difficulties are known to those who can offer suitable counsel and opportunities. It will therefore be to your own advantage to answer the questions as truthfully as possible.

This is not an examination. It is not a test in any sense, because there are no right and wrong answers. Some of the questions may seem trivial or childish, but answer them as best you can anyway, because it is necessary to have the same interpretation scheme for persons of all ages.

DIRECTIONS. To answer the questions in the Questionnaire beginning below, tear off very carefully the Answer Sheet (the page just before this one) and place it under this booklet so that the column marked 1 projects at the right. The large figure 1 at the top of the Answer Sheet should be near the large figure 1 in the corner of this page. Then answer the questions as shown in the samples. If you are given a separate Answer Sheet, use that in the same way.

Look at the sample question: "Do you enjoy eating?" Assuming your answer is Yes, you would make a heavy mark under "Yes" on the Answer Sheet, as shown.

If your answer were No, you would put a heavy mark in the space under "No" on the Answer Sheet. That is the way you are to answer the questions. It is not necessary to write anything. Just make a *heavy* and *solid* mark in the space under "Yes" or "No."

CAUTION! Answer ALL the questions carefully. If a question should read: "Did you ever smoke?" the answer No would mean "No, never." If you had smoked even once it would be necessary to make a mark under "Yes." There is no way to answer such a question by indicating "seldom" or "only once." You may find it difficult to follow this rule, but it is important to do so. When a question says "never" or "ever," it means exactly that.

When such words as "often" and "sometimes" are used in a question, without further explanation, make as sensible a guess as you can as to what they mean.

It should not take more than thirty or forty minutes to answer all the questions. BE SURE THAT YOU DON'T SKIP ANY. All the questions must be answered exactly as directed so that this paper may be scored and classified by machinery. Although some of the questions are more suitable for adults and some are more suitable for young children, they must *all* be answered carefully by *everyone*. Mark your answer *strongly*.

QUESTIONNAIRE

Sample. Do you enjoy eating? ..... s

1. Do you like dogs? 1
2. Do you like horses? 2
3. Do you like babies? 3
4. Did you ever cry because someone hurt you? 4
5. Did you ever cry because you saw someone else hurt? 5
6. Do you always report other people whom you see cheating? 6
7. Did you ever tell a lie? 7
8. Do you always report the number of a car you see speeding? 8
9. Do you like to hunt or kill animals for sport? 9
10. Did you ever act greedily by taking more than your share of anything? 10
11. Do you always smile when things go wrong? 11
12. Did you ever cry at a movie? 12

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Go right on to page 2.

93. Do you think many people make quite a lot of fun of you? 93

94. Do people find fault with you more than you deserve? 94

95. Do you feel lonely most of the time even when you are with people? 95

96. Do you often (several times a year) suddenly dislike something you have liked very much? 96

97. Do you feel suspicious of most of the people you know? 97

98. Do you often feel that most of the people you know are against you? 98

99. Do you tire quickly of a good many of your friends? 99

100. Do you feel that you are very different from other people? 100

101. Do you feel that most of the people whom you know fairly well like to have you near them? 101

102. When you meet people for the first time, do you usually feel that they will not like you? 102

103. Do you feel that your parents or guardians expect too much of you? 103

104. Do you often (at least nine or ten times a year) feel that life is not worth living? 104

105. On the whole, do you think you are treated right? 105

106. Do you usually feel that you don't "belong" anywhere? 106

5➡

107. When you have work to do, do you usually let it go as long as you can, and then work with all your might? .. 107

108. After you have decided to do something, do you often (nearly one fourth of the time) change your mind? .. 108

109. After you have decided to do something, do you often (nearly one fourth of the time) find that you cannot make yourself do it? 109

110. If you could have your choice between these two gifts, which would you take, (1) a very fine automobile (with expenses paid, a driver's license, and knowledge of how to drive) right now, or (2) a million dollars next year? [Mark under 1 or 2 on the Answer Sheet.] 110

111. Suppose you had to go to prison, and the judge said to you, "If you go to prison right away you will have to stay only five years and when you get out you can finish your education without its costing you any more than it does now. But if you want to you can wait before you go to prison; you can have ten years of freedom right now. But after that you will have to go to prison for ten years instead of five." If you knew you had to go at one time or the other and that you could not possibly escape, which would you choose, (1) five years of prison now, or (2) ten years of prison later? 111

112. Do you often (several times a week) become so excited or angry that you can't keep still even though you want to? 112

113. Are you often (almost every day) bothered by not being able to get rid of some useless thoughts that keep coming into your mind? 113

114. Do you get tired of work quickly? 114

115. Do you usually plan your work ahead? 115

116. Are you lazy most of the time? 116

117. Do you often (several times a year) get into trouble because of doing something on impulse (but not in anger)? 117

118. Do you usually carry out your plans? 118

Go right on to page 6.

42. Do you like to fight? (Not just a play fight, but *a real fight with fists or words.*) 42

43. Are you happy most of the time? 43

44. Do you feel that nobody loves you? 44

45. Do you feel that nobody quite understands you? 45

46. Do your feelings keep changing from sad to happy and from happy to sad without your knowing why? 46

47. Do you feel unhappy most of the time? 47

48. Do people hurt your feelings very often — that is, almost every day? 48

49. Do you almost always feel painfully self-conscious when you are among people you don't know very well? ... 49

50. About how many teachers have you disliked (or hated) very much? [Answer by marking under *a*, *b*, *c*, *d*, or *e* on the Answer Sheet. (*a*) none, (*b*) 1 to 3, (*c*) 4 to 6, (*d*) 7 to 10, (*e*) over 10.] 50

51. About how many other people have you disliked (or hated) very much? [Show your answer as follows: (*a*) none, (*b*) 1 to 3, (*c*) 4 to 10, (*d*) 11 to 50, (*e*) over 50.] 51

52. Which one of the following statements is true of you: (1) On an average, I am very happy. (2) On an average, I am fairly happy. (3) On an average, I am neither happy nor unhappy. (4) On an average, I am somewhat unhappy. (5) On an average, I am very unhappy. [Mark under either 1, 2, 3, 4, or 5.] 52

53. How many times in the last year have you wanted to run away from home or from your present circumstances? [Show your answer as follows: (*a*) none, (*b*) 1 to 5, (*c*) 6 to 15, (*d*) 16 to 100, (*e*) over 100.] 53

54. Has your family almost always treated you right? 54

3➔

55. About how many good friends have you now whom you can really trust? [Show your answer as follows: (*a*) none, (*b*) 1 or 2, (*c*) over 2.] 55

56. About how many good friends have you ever had whom you could really trust? [Show your answer as follows: (*a*) none, (*b*) one, (*c*) 2 to 5, (*d*) over 5.] 56

57. Do you usually let yourself go when angry? 57

58. Are you often (several times a week) late for work, school, or meals? 58

59. Do you often become interested in the people you meet? 59

60. Do you often feel self-conscious because of your personal appearance? 60

61. Do you think most people regard you as queer? 61

62. Would you like to see the people who have been extremely mean to you lose an arm or a leg? 62

63. Do you like to see dogfights? 63

64. Which would you prefer, (1) to be very popular but not to have any very close friends, or (2) to have only a few close friends? [Mark under 1 or 2 on the Answer Sheet.] 64

65. Do you often feel almost as bad about other people's troubles as about your own? 65

66. Do you often (almost every day) put off doing things that you should do, and then afterward feel sorry that you did put them off? 66

67. When you get some money, what do you usually do, (1) spend it all at once, or (2) make it last a long time? .. 67

68. About how many times a year do you make resolutions? [Answer by marking under *a* or *b* as follows: (*a*) less than 10 times, (*b*) 10 or more times.] 68

69. Do you keep most of your resolutions? 69

Go right on to page 4. Turn over the page and turn the booklet around.

70. Which would you prefer, (1) a good automobile (and its upkeep) right now, or (2) $20,000 ten years from now? [Mark under 1 or 2 on the Answer Sheet.] 70

71. Which would you prefer, (1) a job with fairly good wages (enough for a family to live on) and very little work, but practically no chance for advancement, or (2) a job with less pay, harder work, and longer hours, but very good chances for advancement after the second or the third year? 71

72. If for running the same errands you were offered these two choices (by someone you trusted), which would you take, (1) 50¢ a week for ten weeks, or (2) $10 at the end of ten weeks? 72

73. If there were no rules against copying other people's work even in examinations, and it was considered a proper thing to do, would you prefer going through school by that means instead of doing the work yourself? 73

74. If the salary, security, and advancement were the same, which would you prefer, (1) an easy job that was not very interesting, or (2) a hard job that was very interesting? 74

75. Do you often plan what you will do five or ten years from now? 75

76. Do you usually feel friendly toward most people? 76

77. Does it usually take some time before you can grow to like people? 77

78. Do you very often feel sorry for people who suffer punishment even if you know they have done wrong? 78

79. Do you usually feel sorry for anybody who is getting the worst of a struggle? 79

80. Do you feel healthy and well most of the time? 80

81. Do you have enough excitement? 81

82. Do you feel restless and discontented most of the time? 82

4➡

83. Does your mind often (nearly every day) wander so badly that you lose track of what you are doing? 83

84. Do you often (almost every day) eat, drink, or smoke too much? 84

85. Do you sometimes feel that some mysterious force compels you to do something against your will? 85

86. How many habits have you that you wish you could break? [Mark under *a* or *b* as follows: (*a*) less than 10, (*b*) 10 or more.] 86

87. Do you usually find it hard to concentrate on what you are doing, even for half an hour? 87

88. Are you aware of any main purpose in your life? 88

89. What are your three chief wishes? In other words, if you could have any three wishes, but only three, come true, what would they be? The only thing you cannot wish for is more wishes. [Write your answers in the space after 89 on the Answer Sheet. See the column at the right side of the page.]

90. What other things would you wish for, if you were told (and believed) that you would be granted everything that you could write down clearly in three minutes? You are also told (and believe) that after the three minutes are up you cannot change your mind, but must accept whatever you have wished for. When you have finished reading these directions start timing yourself immediately, without thinking about the wishes first. If you have no watch or clock, guess the time as nearly as you can. [Write your other wishes after 90 in the right-hand column of the Answer Sheet.]

91. Many persons have some SUPPRESSED DESIRES — things they would like to see come true, but which they do not let themselves wish for or try to make happen, because of their own conscience or because of what other people might think. About how many such suppressed desires do you recognize in yourself? [Write the number after 91 on the Answer Sheet.]

92. Write down as many of these suppressed desires as you are willing to make known to your advisers. (It may help them very much in understanding your needs.) [Write after 92 on the Answer Sheet.]

Go right on to page 5.

PSYCHIC QUESTIONNAIRE.

It would be greatly appreciated if you would answer the following questions.

The information that you give will be treated as confidential.

In those questions where a number of possible answers are given, underline the one which best applies in your case.

Please try to answer all the questions, and do not leave any blank.

The backs of the pages have been left blank for you to use if you should wish to elaborate any replies for which insufficient space has been allowed in the body of the questionnaire. If you would like more blank paper for your answers, please ask for it.

Fill in the information asked for on this page.

Subject's name:	Initials:

Today's date:	Age in years:	Sex:

Now turn over and begin.
There is no time limit.

GENERAL INFORMATION REQUIRED ABOUT THE EXPERIMENT YOU HAVE JUST COMPLETED.

(1) Describe briefly your general procedure when trying to get impressions of your agent's drawings throughout the experiment:

(2) Have you come in contact with any linkage objects supplied to subjects not in your group ? YES NO

(3) Do you know anything about the agent serving subjects not in your group ? YES NO

(4) If your answer to question 3 is "yes", underline the sections of the experiment in which you obtained your information, and indicate briefly what you know below: A B C D E

(5) If you think that there is a possibility that telepathy took place between you and any other subjects taking part, give their names:

(6) Did you discuss your drawings with these particular subjects at any time ? YES NO

(7) If your answer to question 6 is "yes", underline the sections in which you did this: A B C D E

(8) If you did compare drawings, indicate when you did this by underlining a, b or c opposite:
(a) While the section was in progress
(b) After completing your drawings at the end of the section.
(c) Only at the end of section "E".

(9) Have you discussed your drawings with any other subjects ? YES NO

(10) If you have discussed your drawings with other subjects, give the same information asked for in questions 7 and 8: A B C D E

(11) If you became bored with the experiment at any stage, indicate when by underlining the appropiate sections: A B C D E

(12) Indicate what your attitude to telepathy was at the beginning of the experiment by underlining a, b, c or d. opposite:
(a) Sceptical.
(b) No convictions either way.
(c) Convinced that it occurres.
(d) Convinced that you are personally telepathic.

(13) If your opinions have undergone any change during the course of the experiment, state in what way:

IMAGERY.

(1) How frequently do you dream ? (a) Very seldom.

(b) Once a month

(c) Once a week.

(d) Every few nights.

(e) Nightly.

(2) Do you generally remember these dreams ? YES NO

(3) If yes, how much of them do you remember ? ALL PARTS

(4) Are your dreams generally (a) Logical.

(b) Confused.

(c) A mixture.

(5) Underline <u>all</u> the types of imagery given below that usually occur in your dreams:

(a) VISUAL IMAGES: (Do you see events unfolding in your dreams like a silent bioscope picture ?)

(b) AUDITORY IMAGES: (Do you hear people speaking, singing, etc. ?)

(c) SENSATIONS OF MOVEMENT: (Do you feel yourself running, etc ?)

(d) SENSATIONS OF SMELL: (Are you aware of scents and odours in your dreams ?)

(e) SENSATIONS OF TASTE

(f) SENSATIONS OF PAIN, HEAT, and/or COLD.

(g) EMOTION: (Are you aware of any emotional feelings during your dreams ?)

(6) Do your dreams usually take place without any of the above imagery occurring: that is, do you seem to know intuitively what is happening without having any of the imagery outlined above: YES NO

(7) Indicate shortly below any other peculiarities about your dreams, such as having them recur; etc:

(8) When lying half asleep, or half awake, do you usually find a series of images passing before your "mind's eye" ? YES NO

(9) If yes, which type predominate ?

(10) Can you control the content of this imagery, and influence the nature and trend of the images ? (for example, if in your mind's eye you were visualizing a man riding down a road, and he came to a fork, could you make him choose whichever branch of the road you wished ?)

YES NO

(11) Some people habitually find that sensations from one sense department call up vivid imagery from other sense departments. Days of the week for them may have definite colours, Monday being "Red", Tuesday perhaps "Green" and so on. A musician may feel that some notes are "Cold", others "Stiff", others again rough or angular. A person will "hear" the sickle moon in the sky as a high clear ringing note. The Walt Disney picture "Fantasia" was an attempt to show this effect.

If you have experienced anything similar, please give some examples below:

(12) Normally if we look at an object, and then look away, the image of what we saw persists for a brief period of time. If we look at a bright object, (like the sun) and then look away, the "after-image" persists longer. If the after-image is in the same colours as the original, it is called "positive", if in the complementary colours it is called "negative".

About 50 % of all children have positive after-images of a peculiarly persistent nature. Thus if a child has been looking at a vase, and the vase is removed, the child may continue to see an image of the vase, coloured like the original, solid and projected in space, so that in every way it appears real and objective. This "Eidetic Image" as it is called, persists for as long as half an hour in some cases.

One case is reported of a boy who had difficulty in reading, because some of the pages he had completed reading were projected onto the page he was busy with, resulting in him seeing only a highly confusing jumble of words.

(a) As far as you can remember, did you ever experience such imagery as a child, (up to about 13 years of age ?) YES NO

(b) Do you still experience this type of imagery as an adult ? YES NO

(c) If you answer yes to (a) or (b) please give examples:

PERSONALITY

(1) Are you generally sensitive to the moods of people well known to you ? YES NO

(2) Are you generally sensitive to the moods of strangers ? YES NO

(3) Are you generally aware of undercurrents of feeling in conversations ? YES NO

(4) Are you generally sensitive to the atmosphere of a place ? YES NO

(5) Are you generally forgetful ? YES NO

(6) If yes, state briefly under what circumstances:

(7) Has anyone ever tried to hypnotise you ? YES NO

(8) If yes, was the attempt successful ? YES NO

(9) Do you sometimes find unaccountable "gaps" in your memory ? YES NO

(10) Do you sometimes act in a way that surprises you, because you feel that you didn't intend to act like that ? YES NO

(11) Do you sometimes find yourself "slipping away" i.e. being not fully conscious of the events taking place around you ? YES NO

(12) From your personal knowledge, or from the reports of others whom you consider reliable, can you say how often you have walked in your sleep:

Up to 13 years of age:	After becoming 13.
(a) Often	(a) Often
(b) Occasionally	(b) Occasionally
(c) Never.	(c) Never.

(13) In the same way, can you say how often you have talked in your sleep:

Up to 13 years of age:	After becoming 13.
(a) Often	(a) Often
(b) Occasionally	(b) Occasionally
(c) Never	(c) Never.

(14) Have you ever had a feeling of unfamiliarity with yourself, so that you felt like a strange person ? YES NO

(15) Do the other people you meet often irritate you ? YES NO

RELIGIOUS ATTITUDE:

(1) What is your religious denomination ?

(2) How often do you attend church of your own free will ?

(3) Do you believe that any part of you will persist after death ? YES NO

(4) If yes, give brief details:

(5) Have your religious beliefs undergone any change since you reached the age of 13 ? YES NO

(6) If yes, give brief details:

(7) How would you describe yourself today from a religious point of view ?

(8) Give Details of any striking religious or mystical experiences you have had:

PSYCHICAL EXPERIENCES & ATTITUDES.

(1) Read through the list of psychical phenomena given below, and underline "P" next to those of which you have had personal experience,
"I" next to those that interest you.
"E" next to any that you consider to have been established scientifically.
"B" next to those you accept, although you would not go so far as to say that they have been scientifically proved.
If none of these apply to you, leave a blank. You may underline more than one symbol next to each type of phenomena. For instance, you would underline "P", "I" and "B" if you came across one that interested you, which you had had personal experience of, and which you would personally accept.

I. MENTAL PHENOMENA:

(a) Telepathy: (Becoming aware of another person's thoughts in a super-normal way.) P I E B

(b) Clairvoyance: (Becoming aware of an event happening elsewhere in a super-normal way.) P I E B

(c) Precognition: (Becoming aware of what a person is going to think, or an event that is still going to happen, in a super-normal way (i.e. Dreams fulfilled, premonitions fulfilled, etc.) P I E B

(d) Scrying: (The use of an instrument such as a crystal, or tea-leaves to obtain knowledge such as in (a) (b) or (c) above. P I E B

(e) Automatisms: (Production of messages through automatic writing, Planchette, etc.,) P I E B

(f) Trance Mediumship: (A special psycho-physical state, usually self-induced, and said to facilitate the occurrence of super-normal phenomena. Often a person with the ability to go into trance will claim to be a medium through which spirits are manifesting themselves.) P I E B

II INTERMEDIATE PHENOMENA:

(a) Alleged communications from the dead. P I E B

(b) Apparitions and visions P I E B

(c) Fire-walking. P I E B

(d) Hauntings by Poltergeists: (A poltergeist is a ghost that bangs doors, throws objects, moves furniture, breaks crockery, makes noises, starts fires, and especially throws stones.) P I E B

(e) Physical mediumship: (Here a

person may claim to be the channel through which a mysterious force is acting to produce physical effects, such as the supernormal movement of objects, the production of sounds, the mysterious appearance of objects, etc. In some cases it is claimed that spirits are responsible for these effects.) P I E B

(f) Psycho-kinetic effects: (The influence of mind over inanimate matter, such as causing a dice to fall with a certain face uppermost, merely by willing it to do so.) P I E B

(g) Formal Seances: P I E B

(h) Dowsing: (Water divining etc.,) P I E B

III PHYSICAL PHENOMENA: (Occurring spontaneously and seemingly unconnected with any human medium.)

(a) The supernormal movement of objects (Such as the disturbance of coffins in sealed vaults.) P I E B

(b) Spirit photography: (Spontaneous appearance in photographs of things not visible when photograph was taken, which may be claimed to be spirits, fairies, etc.) P I E B

IV. PSYCHOLOGICAL PHENOMENA:

(a) Dreams. P I E B

(b) Hallucinations: P I E B

(c) Déja Vu: (False recognition: the feeling that "this has all happened before", although this is manifestly impossible, or the feeling of familiarity with a place you are seeing for the first time, or the feeling that you knew that a person was going to say what he did before he began to speak.) P I E B

(d) Multiple personality: (Alterations in an individual's personality, so that at times he acts completely differently from his normal behaviour (Jekyll & Hyde cases.) P I E B

(e) Psychological aspects of mediumship: (The psychological states involved in mediumship, and their causes.) P I E B

(f) Hypnotism and suggestion: P I E B

(g) Faith Healing: (The curing of disease by prayer, Christian Science, etc.) P I E B

V. PHILOSOPHIES OR SYSTEMS:

(a) Yoga: P I E B

(b) Black or White magic: P I E B

(c) Witchcraft: P I E B

(d) Societies or groups claiming occult powers: (Such as the Masons, Rosicrucians etc.,)

Specify names: P I E B

(e) Any additional phenomena not specifically outlined above that you would like to comment on or mention:

(2) Do you consider yourself, or any members of your family, or any blood relations, "psychic" ? P I E B

(3) If yes, give brief details:

(4) Have you ever, when believing yourself to be completely awake, had a vivid impression of seeing or being touched by a living being, or an inanimate object, or of hearing a voice, which impression, as far as you could discover, was not due to any external physical cause ? YES NO

(5) How often has this happened: (a) Never

(b) Once

(c) More than once.

(6) If you have had such experiences, please give details below and if necessary ask for more paper on which to write your description.

(7) If there are any events in your personal experience that you feel cannot be explained normally, please describe them below, or on paper that will be supplied on request.

APPENDIX C.

CALCULATIONS Nos: 1 TO 218.

Calculation Serial No.: C. 1 ..... Source Data Serial No.: D. 1 & 2 .....

Type A ..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED EXPERIMENTAL AND CONTROL group subjects.

RAW SCORES- ALL JUDGES - UNCORRECTED

Observed hits on Exp. Originals 133	Total No: of Trials 17,440
Observed hits on Control Originals 37	Less Combined Hits 170
Combined hits (sum) 170	Total no: of Misses (difference) 17,270
Dividing by 2 gives expected hits for E. or C. Originals = ... 85	Dividing by 2 gives the expected misses for E or C Originals. = ... 8,635
Observed hits on Exp. Originals 133	Expected misses on Exp. Originals 8,635
Less Expected hits: 85	Add difference as found opposite ..... +48
Difference ..... +48	Observed misses on Exp. Originals 8,587
Observed hits on Control Originals 37	Expected misses on Control Originals 8,635
Less expected hits 85	Add difference as found opposite ..... -48
Difference ..... -48	Observed misses on Control Originals 8,683

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E. Hits	133	85	+48	2,304	27.11
C. Hits	37	85	-48	2,304	27.11
E. Misses	8,587	8,635	-48	2.304	0.27
C. Misses	8,683	8,635	+48	2,304	0.27
			Total = χ^2		54.76

Degrees of freedom = ...

P = ...

Calculation checked ? Yes .....

Calculation Serial No.: C...2.....

Source Data Serial No.: D. 1 & 2.....

Type.....D..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for EXPERIMENTAL AND CONTROL .....group subjects.

ALL JUDGES - RAW SCORES - UNCORRECTED.

Observed hits on Exp. Originals... 335....
Observed hits on Control Originals... 342....
Combined hits (sum).....677....

Dividing by 2 gives expected hits for E. or C. Originals

= .....338.5..

Total No: of Trials.....17,440.....
Less Combined Hits.....677.....
Total no: of Misses (difference) 16,763.....

Dividing by 2 gives the expected misses for E or C Originals.

= .....8,381.5....

Observed hits on Exp. Originals.....335....
Less Expected hits:.....338.5..

Difference.....-3.5..

Expected misses on Exp. Originals..8,381.5....
Add difference as found opposite.....-3.5....
Observed misses on Exp. Originals.....8,385.0....

Observed hits on Control Originals...342.....
Less expected hits.....338.5...

Difference.....+3.5...

Expected misses on Control Originals..8,381.5....
Add difference as found opposite.....+3.5.....
Observed misses on Control Originals..8,378.0....

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
Exp. Hits.	335	338.5	-3.5	12.25	0.036
Exp. Misses	8,385.0	8,381.5	+3.5	12.25	0.001
Con. Misses	8,378.0	8,381.5	-3.5	12.25	0.001
Con. Hits.	342	338.5	+3.5	12.25	0.036
	17,440	17,440			
				Total = χ^2	0.074

Degrees of freedom = ...

P = ...

Calculation checked ? .....Yes.....

Calculation Serial No.: C.....3.....

Source Data Serial No.: D. 1 & 2.....

Type..COMBINED. E. & C..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED. EXPERIMENTAL & CONTROL ..group subjects.

....RAW. SCORES. - ALL. JUDGES. - UNCORRECTED.....

Observed hits on Exp. Originals.....337.	Total No: of Trials.....17,440....
Observed hits on Control Originals.....350.	Less Combined Hits.....687....
Combined hits (sum).....687.	Total no: of Misses (difference).16,753...
Dividing by 2 gives expected hits for E. or C. Originals = ...343.5	Dividing by 2 gives the expected misses for E or C Originals. = ...8,376.5.

Observed hits on Exp. Originals.....337.	Expected misses on Exp. Originals....8,376.5.
Less Expected hits:.....343.5	Add difference as found opposite.....-6.5.
Difference.....-6.5	Observed misses on Exp. Originals.....8,383.0.

Observed hits on Control Originals.....350	Expected misses on Control Originals....8,376.5.
Less expected hits.....343.5	Add difference as found opposite.....+6.5..
Difference.....+6.5	Observed misses on Control Originals....8,370.0.

Type	Observed No:	Expected No:	Difference.	(Difference)^2 / nce	(Diff.)^2 / Expected N.
E.Hits	337	343.5	-6.5	42.25	0.12
E.Misses	8,383.0	8,376.5	+6.5	42.25	0.01
C.Hits	350.0	343.5	+6.5	42.25	0.12
C.Misses	8,370.0	8,376.5	-6.5	42.25	0.01
	17,440.0	17,440.0			
				Total = χ^2	

Degrees of freedom = ...

P = ...

Calculation checked ? .....Yes.....,

Calculation Serial No.: C.....4.....

Source Data Serial No.: D. 1 & 2.....

Type.....C..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for EXPERIMENTAL AND CONTROL.....group subjects.

MEAN SCORES - ALL JUDGES - UNCORRECTED.

.....

Observed hits on Exp. Originals.....2.....	Total No: of Trials.....17,440.....
Observed hits on Control Originals.....8.....	Less Combined Hits.....10.....
Combined hits (sum).....10.....	Total no: of Misses (difference).....17,430.....
Dividing by 2 gives expected hits for E. or C. Originals = ...5.....	Dividing by 2 gives the expected misses for E or C Originals. = ...8,715.....

Observed hits on Exp. Originals.....2.....	Expected misses on Exp. Originals.....8,715.....
Less Expected hits:.....5.....	Sub. difference as found opposite.....-3.....
Difference.....-3.....	Observed misses on Exp. Originals.....8,718.....

Observed hits on Control Originals.....8.....	Expected misses on Control Originals.....8,715.....
Less expected hits.....5.....	Sub.difference as found opposite.....+3.....
Difference.....+3.....	Observed misses on Control Originals.....8,712.....

Type	Observed No:	Expected No:	Difference.	(Difference)^2 / nce	(Diff.)^2 / Expected N.
E. Hits	2	5*	-3	9	1.8
E. Misses	8,718	8,715	+3	9	0.0010
C. Hits	8	5*	+3	9	1.8
C. Misses	8,712	8,715	-3	9	0.0010
	17.440	17,440			
*Frequencies too small for χ^2 to be valid.					
				Total = χ^2	3.6020

Degrees of freedom = ...

P = ...

Calculation checked ? .....Yes.....

Calculation Serial No.: C.....5.....

Source Data Serial No.: D..1.&.2.....

Type.....D..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL & EXPERIMENTAL ...group subjects.

...RAW SCORES - ALL JUDGES - UNCORRECTED.....

Observed hits on Exp. Originals.....114..
Observed hits on Control Originals.....180..
Combined hits (sum).....294..

Dividing by 2 gives expected hits for E. or C. Originals

= .....147..

Total No: of Trials.....17,440...
Less Combined Hits.....294...
Total no: of Misses (difference)..17,146...

Dividing by 2 gives the expected misses for E or C Originals.

= .....8,573...

Observed hits on Exp. Originals.....114..
Less Expected hits:.....147..

Difference.....-33..

Expected misses on Exp. Originals.....8,573...
Sub.difference as found opposite.....-33...
Observed misses on Exp. Originals.....8,606...

Observed hits on Control Originals.....180..
Less expected hits.....147..

Difference.....+33..

Expected misses on Control Originals.....8,573...
Sub.difference as found opposite.....+33....
Observed misses on Control Originals.....8,540....

Type	Observed No:	Expected No:	Diff-erence.	(Differe-)^2 nce	(Diff.)^2 Expected N.
E.Hits	114	147	-33	1,089	7.41
C.Hits	180	147	+33	1,089	7.41
E.Misses	8,606	8,573	+33	1,089	0.13
C.Misses	8,540	8,573	-33	1,089	0.13
	17,440	17,440			
				Total = χ^2	15.08

Degrees of freedom = ...

P = ...

Calculation checked ? ....Yes.....

Calculation Serial No.: C. 6

Source Data Serial No.: D. 1 & 2.

Type E. hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL & EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals	32	Total No: of Trials	17,440
Observed hits on Control Originals	126	Less Combined Hits	158
Combined hits (sum)	158	Total no: of Misses (difference)	17,282
Dividing by 2 gives expected hits for E. or C. Originals =	79	Dividing by 2 gives the expected misses for E or C Originals. =	8,641
Observed hits on Exp. Originals	32	Expected misses on Exp. Originals	8,641
Less Expected hits:	79	Sub.difference as found opposite	-47
Difference	-47	Observed misses on Exp. Originals	8,688
Observed hits on Control Originals	126	Expected misses on Control Originals	8,641
Less expected hits	79	Sub.difference as found opposite	+47
Difference	+47	Observed misses on Control Originals	8,594

Type	Observed No:	Expected No:	Difference.	(Difference)^2 nce	(Diff.)^2 Expected N.
E.Hits	32	79	-47	2,209	27.96
C.Hits	126	79	+47	2,209	27.96
E. Misses	8,688	86,41	+47	2,209	0.25
C. Misses	8,594	86,41	-47	2,209	0.25
	17,440	17.440			
				Total = χ^2	56.42

Degrees of freedom = ...

P = ...

Calculation checked ? Yes

Calculation Serial No.: C.....7.....

Source Data Serial No.: D. 1 & 2.....

Type.....F3..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for .....COMBINED CONTROL AND EXPERIMENTAL.....group subjects.

.....RAW SCORES - ALL JUDGES - UNCORRECTED.....

Observed hits on Exp. Originals.....151.....	Total No: of Trials.....17,440.....
Observed hits on Control Originals.....52.....	Less Combined Hits.....203.....
Combined hits (sum).....203.....	Total no: of Misses (difference)..17,237...
Dividing by 2 gives expected hits for E. or C. Originals = ...101.5.....	Dividing by 2 gives the expected misses for E or C Originals. = ...8,618.5.....
Observed hits on Exp. Originals.....151.0.....	Expected misses on Exp. Originals.....8,618.5.....
Less Expected hits:.....101.5.....	Sub.difference as found opposite.....+49.5.....
Difference.....+49.5.....	Observed misses on Exp. Originals.....8,569.5.....
Observed hits on Control Originals.....52.....	Expected misses on Control Originals.....8,618.5.....
Less expected hits.....101.5.....	Sub.difference as found opposite.....-49.5.....
Difference.....-49.5.....	Observed misses on Control Originals.....8,668.0.....

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	151	101,5	+49.5	2,450.25	24.14
C. Hits	52	101.5	-49.5	2,450.25	24.14
E. Misses	8,569.0	8,618.5	-49.5	2,450.25	0.28
C. Misses	8,668.0	8,618.5	+49.5	2,450.25	0.28
	17,440	17,440			
				Total = χ^2	48.84

Degrees of freedom = ...

P = ...

Calculation checked ? ...Yes.....

Calculation Serial No.: C. 8 Source Data Serial No.: D.1.&2.

Type F2 hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant, for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES -ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals	390	Total No: of Trials	17,440
Observed hits on Control Originals	212	Less Combined Hits	602
Combined hits (sum)	602	Total no: of Misses (difference)	16,838
Dividing by 2 gives expected hits for E. or C. Originals =	301	Dividing by 2 gives the expected misses for E or C Originals. =	8,419

Observed hits on Exp. Originals	390	Expected misses on Exp. Originals	8,419
Less Expected hits:	301	Sub.difference as found opposite	+89
Difference	+89	Observed misses on Exp. Originals	8,330

Observed hits on Control Originals	212	Expected misses on Control Originals	8,419
Less expected hits	301	Sub.difference as found opposite	-89
Difference	-89	Observed misses on Control Originals	8,508

Type	Observed No:	Expected No:	Difference.	(Difference)^2 / nce	(Diff.)^2 / Expected N.
E.Hits	390	301	+89	7,921	26.31
C.Hits	212	301	-89	7,921	26.31
E.Misses	8,330	8,419	-89	7,921	0.94
C.Misses	8,508	8,419	+89	7,921	0.94
	17,440	17,440			
				Total = χ^2	54.50

Degrees of freedom = ...

P = ...

Calculation checked ? Yes

Calculation Serial No.: C.....9..... Source Data Serial No.: D. 1 & 2.....

Type.....F1..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

.....RAW SCORES - ALL JUDGES - UNCORRECTED.....

Observed hits on Exp. Originals	595	Total No: of Trials	17,440
Observed hits on Control Originals	329	Less Combined Hits	924
Combined hits (sum)	924	Total no: of Misses (difference)	16,516
Dividing by 2 gives expected hits for E. or C. Originals =	462	Dividing by 2 gives the expected misses for E or C Originals. =	8,258

Observed hits on Exp. Originals	595	Expected misses on Exp. Originals	8,258
Less Expected hits:	462	Sub. difference as found opposite	+133
Difference	+133	Observed misses on Exp. Originals	8,125

Observed hits on Control Originals	329	Expected misses on Control Originals	8,258
Less expected hits	462	Sub. difference as found opposite	-133
Difference	-133	Observed misses on Control Originals	8,391

Type	Observed No:	Expected No:	Diff-erence.	(Differe-)^2 nce	(Diff.)^2 Expected N.
E. Hits	595	462	+133	17,689	38.29
C. Hits	329	462	-133	17,689	38.29
E.Misses	8,125	8,258	-133	17,689	2.14
C.Misses	8,391	8,258	+133	17,689	2.14
	17,440	17,440			
				Total = χ^2	80.86

Degrees of freedom = ...

P = ...

Calculation checked ? Yes

Calculation Serial No.: C 10 Source Data Serial No.: D 1 & 2

Type G1 hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED EXPERIMENTAL AND CONTROL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals	22	Total No: of Trials	17,440
Observed hits on Control Originals	11	Less Combined Hits	33
Combined hits (sum)	33	Total no: of Misses (difference)	17,407
Dividing by 2 gives expected hits for E. or C. Originals =	16.5	Dividing by 2 gives the expected misses for E or C Originals. =	8,703.5

Observed hits on Exp. Originals	22	Expected misses on Exp. Originals	8,703.5
Less Expected hits:	16.5	Sub.difference as found opposite	+5.5
Difference	+5.5	Observed misses on Exp. Originals	8,698.0

Observed hits on Control Originals	11	Expected misses on Control Originals	8,703.5
Less expected hits	16.5	Sub.difference as found opposite	-5.5
Difference	-5.5	Observed misses on Control Originals	8,709.0

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	22	16.5	+5.5	30.25	1.83
C.Hits	11	16.5	-5.5	30.25	1.83
E.Misses	8,698.0	8,703.5	-5.5	30.25	0.00
C.Misses	8,709.0	8,703.5	+5.5	30.25	0.00
	17,440	17,440			
				Total = χ^2	3.66

Degrees of freedom = ...

P = ...

Calculation checked ? Yes

Calculation Serial No.: C 11 Source Data Serial No.: D 1 & 2

Type G2 hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant, for COMBINED EXPERIMENTAL AND CONTROL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals: 5	Total No: of Trials: 17,440
Observed hits on Control Originals: 0	Less Combined Hits: 5
Combined hits (sum): 5	Total no: of Misses (difference): 17,435
Dividing by 2 gives expected hits for E. or C. Originals = 2.5	Dividing by 2 gives the expected misses for E or C Originals. = 8,717.5
Observed hits on Exp. Originals: 5.0	Expected misses on Exp. Originals: 8,717.5
Less Expected hits: 2.5	Sub. difference as found opposite: +2.5
Difference: +2.5	Observed misses on Exp. Originals: 8,715.0
Observed hits on Control Originals: 0	Expected misses on Control Originals: 8,717.5
Less expected hits: 2.5	Sub. difference as found opposite: -2.5
Difference: -2.5	Observed misses on Control Originals: 8,720.0

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	5	2.5*	+2.5	6.25	2.5
C.Hits	0	2.5*	-2.5	6.25	2.5
E.Misses	8,715.0	8,717.5	-2.5	6.25	0.0007
C.Misses	8,720.0	8,717.5	+2.5	6.25	0.0007
	17,440.0	17,440.0			

*Frequencies too small for χ^2 to be valid.

Total = χ^2 5.0014

Degrees of freedom = ...

P = ...

Calculation checked ? Yes

Calculation Serial No.: C.....12..... Source Data Serial No.: D..1 & 2.....

Type.....63..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals	1	Total No: of Trials	17,440
Observed hits on Control Originals	0	Less Combined Hits	1
Combined hits (sum)	1	Total no: of Misses (difference)	17,439
Dividing by 2 gives expected hits for E. or C. Originals =	0.5	Dividing by 2 gives the expected misses for E or C Originals. =	8,719.5

Observed hits on Exp. Originals	1	Expected misses on Exp. Originals	8,719.5
Less Expected hits:	0.5	Sub.difference as found opposite	+0.5
Difference	+0.5	Observed misses on Exp. Originals	8,719.0

Observed hits on Control Originals	0	Expected misses on Control Originals	8,719.5
Less expected hits	0.5	Sub.difference as found opposite	-0.5
Difference	-0.5	Observed misses on Control Originals	8,720.0

Type	Observed No:	Expected No:	Difference.	(Difference)^2 / nce	(Diff.)^2 / Expected N.
E.Hits	1	0.5*	+0.5		
C.Hits	0	0.5*	-0.5		
E.Misses	8,719.0	8,719.5	-0.5		
C.Misses	8,720.0	8,719.5	+0.5		
	17,440.0	17,440.0			

*Frequencies too small for χ^2 to be valid.

Total = χ^2

Degrees of freedom = ...

P = ...

Calculation checked ? Yes

Calculation Serial No.: C.....13..... Source Data Serial No.: D.....1 & 2.....

Type G3, G2 & G1 Hits Combined hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for EXPERIMENTAL AND CONTROL .....group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals.....28.....
Observed hits on Control Originals.....11.....
Combined hits (sum).....39.....

Dividing by 2 gives expected hits for E. or C. Originals

= .....19.5.....

Total No: of Trials.....17,440.....
Less Combined Hits.....39.....
Total no: of Misses (difference).....17,401.....

Dividing by 2 gives the expected misses for E or C Originals.

= .....8,700.5.....

Observed hits on Exp. Originals.....28.0.....
Less Expected hits:.....19.5.....

Difference.....+8.5.....

Expected misses on Exp. Originals.....8,700.5.....
Sub.difference as found opposite.....+8.5.....
Observed misses on Exp. Originals.....8,692.0.....

Observed hits on Control Originals.....11.....
Less expected hits.....19.5.....

Difference.....-8.5.....

Expected misses on Control Originals.....8,700.5.....
Sub. difference as found opposite.....-8.5.....
Observed misses on Control Originals.....8,709.0.....

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	28	19.5	+8.5	72.25	3.71
C.Hits	11	19.5	-8.5	72.25	3.71
E.Misses	8,692.0	8,700.5	-8.5	72.25	0.01
C.Misses	8,709.0	8,700.5	+8.5	72.25	0.01
	17,440.0	17,440.0			
				Total = χ^2	7.44

Degrees of freedom = ...

P = ...

Calculation checked ? Yes .....

Calculation Serial No.: C.....14..... Source Data Serial No.: D..1.&.2.....

Type.....H3..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals.....80.....
Observed hits on Control Originals.....29.....
Combined hits (sum).....109.....

Dividing by 2 gives expected hits for E. or C. Originals

= .....54.5.....

Total No: of Trials.....17,440.....
Less Combined Hits.....109.....
Total no: of Misses (difference).....17,331.....

Dividing by 2 gives the expected misses for E or C Originals.

= .....8,665.5.....

Observed hits on Exp. Originals.....80.....
Less Expected hits:.....54.5.....

Difference.....+25.5.....

Expected misses on Exp. Originals.....8,665.5.....
Sub.difference as found opposite.....+25.5.....
Observed misses on Exp. Originals.....8,640.0.....

Observed hits on Control Originals.....29.....
Less expected hits.....54.5.....

Difference.....-25.5.....

Expected misses on Control Originals.....8,665.5.....
Sub.difference as found opposite.....-25.5.....
Observed misses on Control Originals.....8,691.0.....

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	80	54.5	+25.5	650.25	11.93
C.Hits	29.0	54.5	-25.5	650.25	11.93
E.Misses	8,640.0	8,665.5	-25.5	650.25	0.07
C.Misses	8,691.0	8,665.5	+25.5	650.25	0.07
	17,440.0	17,440.0			
				Total = χ^2	24.00

Degrees of freedom = ...

P = ...

Calculation checked ? ....Yes.....

Calculation Serial No.: C.....15.....

Source Data Serial No.: D. 1. & 2.....

Type.....H2..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals... 220
Observed hits on Control Originals..... 330
Combined hits (sum)..... 550

Dividing by 2 gives expected hits for E. or C. Originals

= 275

Total No: of Trials..... 17,440
Less Combined Hits..... 550
Total no: of Misses (difference)..... 16,890

Dividing by 2 gives the expected misses for E or C Originals.

= 8,445

Observed hits on Exp. Originals..... 220
Less Expected hits:..... 275

Difference..... -55

Expected misses on Exp. Originals.... 8,445
Sub. difference as found opposite..... -55
Observed misses on Exp. Originals..... 8,500

Observed hits on Control Originals..... 330
Less expected hits..... 275

Difference..... +55

Expected misses on Control Originals..... 8,445
Sub. difference as found opposite..... +55
Observed misses on Control Originals.... 8,390

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	220	275	-55	3025	11.00
C.Hits	330	275	+55	3025	11.00
E.Misses	8,500	8,445	+55	3025	0.36
C.Misses	8,390	8,445	-55	3025	0.36
	17,440	17,440			
				Total = χ^2	22.72

Degrees of freedom = ...

P = ...

Calculation checked ? Yes

Calculation Serial No.: C.....16.....

Source Data Serial No.: D..1.&.2.....

Type.....R1..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

.....

Observed hits on Exp. Originals.....356.....	Total No: of Trials.....17,440.....
Observed hits on Control Originals.....434...	Less Combined Hits.....790.....
Combined hits (sum).....790.....	Total no: of Misses (difference).16,650.....
Dividing by 2 gives expected hits for E. or C. Originals = ...395...	Dividing by 2 gives the expected misses for E or C Originals. = ...8,325....

Observed hits on Exp. Originals.....356.....	Expected misses on Exp. Originals....8,325....
Less Expected hits:.....395.....	Sub. difference as found opposite.....-39....
Difference.....-39...	Observed misses on Exp. Originals.....8,364.....

Observed hits on Control Originals.....434.....	Expected misses on Control Originals....8,325....
Less expected hits.....395.....	Sub. difference as found opposite.....+39.....
Difference.....+39...	Observed misses on Control Originals....8,286.....

Type	Observed No:	Expected No:	Difference.	(Difference)^2 / nce	(Diff.)^2 / Expected N.
E.Hits	356	395	-39	1,521	3.85
C.Hits	434	395	+39	1,521	3.85
E.Misses	8,364	8,325	+39	1,521	0.18
C.Misses	8,286	8,325	-39	1,521	0.18
	17,440	17,440			
				Total = χ^2	8.06

Degrees of freedom = ...

P = ...

Calculation checked ? Yes .....

Calculation Serial No.: C.....17..... Source Data Serial No.: D..1.&.2.....

Type.....I..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals	689	Total No: of Trials	17,440
Observed hits on Control Originals	570	Less Combined Hits	1,259
Combined hits (sum)	1,259	Total no: of Misses (difference)	16,181
Dividing by 2 gives expected hits for E. or C. Originals =	629.5	Dividing by 2 gives the expected misses for E or C Originals. =	8,090.5

Observed hits on Exp. Originals	689	Expected misses on Exp. Originals	8,090.5
Less Expected hits:	629.5	Sub.difference as found opposite	+59.5
Difference	+59.5	Observed misses on Exp. Originals	8,031.0

Observed hits on Control Originals	570	Expected misses on Control Originals	8,090.5
Less expected hits	629.5	Sub.difference as found opposite	-59.5
Difference	-59.5	Observed misses on Control Originals	8,150.0

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	689	629.5	+59.5	3,540.25	5.62
C.Hits	570	629.5	-59.5	3,540.25	5.62
E.Misses	8,031.0	8,090.5	-59.5	3,540.25	0.44
C.Misses	8,150.0	8,090.5	+59.5	3,540.25	0.44
	17,440.0	17,440.0			
				Total = χ^2	12.12

Degrees of freedom = ...

P = ...

Calculation checked ? ...Yes.....

Calculation Serial No.: C.....18.....

Source Data Serial No.: D..1.&.2.....

Type.....J..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals.....133...

Observed hits on Control Originals.....258.....

Combined hits (sum).....391.....

Dividing by 2 gives expected hits for E. or C. Originals

= 195.5

Total No: of Trials.....17,440.....

Less Combined Hits.....391.....

Total no: of Misses (difference).....17,049.....

Dividing by 2 gives the expected misses for E or C Originals.

= .....8,524.5..

Observed hits on Exp. Originals.....133.....

Less Expected hits:.....195.5

Difference.....-62.5

Expected misses on Exp. Originals....8,524.5.....

Sub. difference as found opposite.....-62.5

Observed misses on Exp. Originals.....8,587.0..

Observed hits on Control Originals.....258.....

Less expected hits.....195.5

Difference.....+62.5

Expected misses on Control Originals.....8,524.5..

Sub. difference as found opposite.....+62.5...

Observed misses on Control Originals....8,462.0...

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	133	195.5	-62.5	3,906.25	19.98
C.Hits	258	195.5	+62.5	3,906.25	19.98
E.Misses	8,587.0	8,524.5	+62.5	3,906.25	0.46
C.Misses	8,462.0	8,524.5	-62.5	3,906.25	0.46
	17,440.0	17,440.0			
				Total = χ^2	40.88

Degrees of freedom = ...

P = ...

Calculation checked ? Yes .....

Calculation Serial No.: C.....19..... Source Data Serial No.: D..1.&.2.....

Type.....K..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals.....57...
Observed hits on Control Originals.....39...
Combined hits (sum).....96...

Dividing by 2 gives expected hits for E. or C. Originals

= .....48...

Total No: of Trials.....17,440.....
Less Combined Hits.....96.....
Total no: of Misses (difference).....17,344.....

Dividing by 2 gives the expected misses for E or C Originals.

= .....8,672.....

Observed hits on Exp. Originals.....57...
Less Expected hits:.....48.....

Difference.....+9...

Expected misses on Exp. Originals.....8,672.....
Sub. difference as found opposite.....+9....
Observed misses on Exp. Originals.....8,663.....

Observed hits on Control Originals.....39...
Less expected hits.....48.....

Difference.....-9...

Expected misses on Control Originals.....8,672.....
Sub. difference as found opposite.....-9.....
Observed misses on Control Originals.....8,681.....

Type	Observed No:	Expected No:	Diff-erence.	(Differe-)^2 nce	(Diff.)^2 Expected N.
E.Hits	57	48	+9	81	1.69
C.Hits	39	48	-9	81	1.69
E.Misses	8,663	8,672	-9	81	0.01
C.Misses	8,681	8,672	+9	81	0.01
	17,440	17,440			
				Total = χ^2	3.40

Degrees of freedom = ...

P = ...

Calculation checked ? Yes .....

Calculation Serial No.: C.....20..... Source Data Serial No.: D..1 & 2.....

Type ALL COMBINED ..... hits on Experimental Originals compared with those made on Control Originals to find whether the difference is big enough to be statistically significant,

for COMBINED CONTROL AND EXPERIMENTAL group subjects.

RAW SCORES - ALL JUDGES - UNCORRECTED.

Observed hits on Exp. Originals	2,770	Total No: of Trials	17,440
Observed hits on Control Originals	2,419	Less Combined Hits	5,189
Combined hits (sum)	5,189	Total no: of Misses (difference)	12,251
Dividing by 2 gives expected hits for E. or C. Originals =	2,594.5	Dividing by 2 gives the expected misses for E or C Originals. =	6,125.5

Observed hits on Exp. Originals	2,770	Expected misses on Exp. Originals	6,125.5
Less Expected hits:	2,594.5	Sub.difference as found opposite	+175.5
Difference	+175.5	Observed misses on Exp. Originals	5,950.0

Observed hits on Control Originals	2,419	Expected misses on Control Originals	6,125.5
Less expected hits	2,594.5	Sub.difference as found opposite	-175.5
Difference	-175.5	Observed misses on Control Originals	6,301.0

Type	Observed No:	Expected No:	Difference.	(Difference)^2	(Diff.)^2 / Expected N.
E.Hits	2,770	2,594.5	+175.5	30,800.25	11.87
C.Hits	2,419	2,594.5	-175.5	30,800.25	11.87
E.Misses	5,950.0	6,125.5	-175.5	30,800.25	5.03
C.Misses	6,301.0	6,125.5	+175.5	30,800.25	5.03
	17,440.0	17,440.0			
				Total = χ^2	33.80

Degrees of freedom = ...

P = ...

Calculation checked ? .....Yes.....

Calculation
Serial No: C21A

Source Data
Serial No: D 4.

Calculation to find the significance of the difference in number of Fully Corrected A hits scored on Experimental as compared with Control Series Originals.

(1) Only classes I to V of Mrs. Forster's A hits have been used.
(2) Only one A hit has been allowed on "Candlestick".
(3) Six hits made by subjects on titles suggested by them in the Preliminary Frequency Experiment have been eliminated.
(4) The initial difference in difficulty of the two Series of originals has been allowed for by proportionate adjustment to the theoretically expected frequencies.

Data:

Number of trials:	17,440.
Hits on Experimental Series Originals:	89.
Hits on Control Series Originals:	27.
Misses:	17,324.

Calculation of the theoretically expected hit frequencies on the basis of the Preliminary Frequency Experiment:

56 hits were scored on E.S.O. titles in the 15,835 suggestions of the P.F.E. Hence in the 17,440 trials of the Main Experiment one would expect (56 ÷ 15,835 x 17,440) hits = 61.68 hits

51 hits were scored on C.S.O. titles in the 15,835 suggestions of the P.F.E. Hence in the 17,440 trials of the Main Experiment one would expect (51 ÷ 15,835 x 17,440) hits = 56.17 hits.

Of the hits actually observed in the Main Experiment, one would expect

$\frac{61.68}{117.85}$ of 116 on E.S.O. = 60.71 hits

$\frac{56.17}{117.85}$ of 116 on C.S.O. = 55.29 hits

if chance and the initial difference in difficulty of the two series were the only factors influencing the distribution of hits between the two series of originals.

χ^2 for the hits is therefore:

E.S.O.:	Observed hits:	89	C.S.O.:	27
	Expected	60.71		55.29
	Deviation	+28.29		-28.29

$\frac{28.29^2}{60.71}$ = 13.18 $\frac{28.29^2}{55.29}$ = 14.47

χ^2 total for hits: 27.65

Calculation of theoretically expected misses:
The most conservative value for significance will be obtained if we assume as previously that equal numbers of misses would be expected on each series originals, ie. half of the total 17,324 misses on each, = 8,662.

χ^2 for misses is therefore:

E.S.O. misses: Deviation -28.29 C.S.O. misses +28.29

$\frac{28.29^2}{8,662}$ =.0924 each. Total for misses: .18

χ^2 = 27.65 (hits) + .18 (misses) = 27.83

P is less than .001

Calculation checked ? Yes.

Calculation Serial No: C21B.

Source Data Serial No: D4.

Comparison of the Fully Corrected A hits scored on a set of Experimental Series Originals with those scored on a set of Control Series Originals, the sets being of equal initial difficulty in terms of the Preliminary Frequency Experiment.

(1) Only classes I to V of Mrs. Forster's A hits have been used.
(2) Only one of the hits on "Candlestick" has been included.
(3) Six hits made by subjects on titles suggested by them in the Preliminary Frequency Experiment have been discarded.
(4) The following originals, each occurring twice in the suggestions of the Preliminary Frequency Experiment, have been eliminated from the Experimental series: "Vice", "Dumb-bell", "Beacon", "Penguin", "Barbed Wire Barb" and "Petrol Pump". The following originals have been eliminated from the Control Series Originals: "Organ" (occurring twice in the P.F.E.), "Accordeon", "Aladdin's Lamp", "Antbear", "Arc de Triomphe", and "Bag Pipes" (each occurring once in the P.F.E. lists.) This leaves 44 originals of equal initial difficulty in each Series.

Data: Trials: 17,440
Hits on Experimental Series Originals: 76.
Hits on Control Series Originals: 23
Misses: 17,341.

Calculation of theoretically expected frequencies:

Total hits: 99. Hence 49.5 theoretically expected on each series of originals.

Total misses: 17,341. Hence 8,670.5 theoretically expected on each Series Originals.

χ^2 for the hits is therefore:

		E.S.O.	C.S.O.
E.S.O.	Observed hits:	76	23
	Expected hits:	49.5	49.5
	Deviation	+26.5.	-26.5

$\frac{+26.5^2}{49.5}$ = 14.19 for each series of originals.

χ^2 total for hits: 28.38

χ^2 for the misses is therefore:

$\frac{26.5^2}{8,670.5}$ for each series, = .081

χ^2 total for misses: .162

χ^2 = 28.38 (hits) + .162 (misses) = 28.542

P is less than .001

Calculation checked ? Yes.

Calculation
Serial No: C22A and C22B.

Source Data
Serial No: D1 & 2.

Calculation to find whether the deviation of the Observed A type hits from those expected from chance is large enough to be statistically significant. Raw scores, all judges, True chance frequencies from the Preliminary Frequency Experiment.

Calculation C22A Data for Experimental Originals:

Expected hits: 61.68 Observed hits: 133. Trials 17,440.

Hit deviation: 133 - 61.68 = 71.32

Expected failures: 17,440 - 61.68 = 17,378.32

Observed failures: 17,440 - 133 = 17,307.00

Difference between observed and expected failures: = -71.32

$$\chi^2 = \frac{(71.32)^2}{61.68} + \frac{(71.32)^2}{17,378.32} = \frac{5,086.542,4}{61.68} + \frac{5,086.542,4}{17,378.32}$$

$$= 82.436,6 + 0.292,7 = 82.759,3 \text{ (With 1 d.f.)}$$

A Chi square with one degree of freedom can be converted to a critical ratio by extracting the square root: This gives C.R. = 9.097.

Reference to the appropiate tables shows P to be less than 10^{-11} which is highly significant.

Calculation C22B Data for the Control Series Originals:

Expected hits: 56.17 Observed hits: 37. Total trials 17,440

E_h minus O_h = 56.17 - 37 = -19.17

E_f = 17,440 minus 56.17 = 17,383.83

O_f = 17,440 minus 37 = 17,403.00

E_f minus O_f = 17,383.83 - 17403.00 = + 19.17

$$\chi^2 = \frac{(19.17)^2}{56.17} + \frac{(19.17)^2}{17,383.83} = \frac{367.488,9}{56.17} + \frac{367.488,9}{17,383.83}$$

$$= 6.542,4 + .021,1 = 6.563,5 \text{ (With one degree of freedom)}$$

This gives a critical ratio of 2.562

P lies between .02 and .01 which is probably significant.

Calculations checked ? Yes.

Calculation Serial No: C23A

Source Data Serial No: D 4.

Calculation to find whether the obtained numbers of A hits made on Experimental Series Originals are significantly different from the true chance frequencies established by the Preliminary Frequency Experiment, after the following corrections have been made:-

(1) Elimination of the doubtfully valid type A Hits. (Only classes I to V of Forster's review have been used.)

(2) Elimination of the six hits made by subjects on titles suggested by them in the Preliminary Frequency Experiment.

(3) Elimination of the "bunching error" on "Candle stick" by allowing only one hit to stand on that original.

The figures for the "Fully corrected A hits on Experimental Originals are:-

Expected hits on basis of Preliminary Frequency Experiment:	61.68 hits	per 17,440 trials.
Obtained hits:	89.00	"
Deviation	+ 27.32	"

$$\chi^2 = \frac{(\text{E hits} - \text{O hits})^2}{\text{Expected hits}} + \frac{(\text{E failures} - \text{O failures})^2}{\text{Expected failures.}}$$

Expected failures = 17,440 - 61.68 = 17,378.32

Observed failures = 17,440 - 89.00 = 17,351.00

Deviation - 27.32

$$\chi^2 = \frac{27.32^2}{61.68} + \frac{27.32^2}{17,378.32}$$

$$= \frac{746.3824}{61.68} + \frac{746.3824}{17,378.32}$$

$$= 12.1009 + 0.042,9$$

$$= 12.143,8 \text{ with one degree of freedom.}$$

Hence C.R. = $\sqrt{12.143,8} = 3.485$

P is less than .001

Calculation checked ? Yes.

Calculation Serial No: C23B.

Source Data Serial No: D 4.

Calculation to find whether the obtained number of A hits made on Control Series Originals are significantly different from the true chance frequencies established by the Preliminary Frequency Experiment, after the following corrections have been made:-

(1) Elimination of the doubtfully valid type A hits (Only classes I to V of Forster's review have been used.)

(2) Elimination of the six hits made by subjects on titles suggested by them in the Preliminary Frequency Experiment.

(3) Elimination of the "bunching error" on "Candle stick" by allowing only one hit to stand on that original.

The figures for the "Fully corrected A hits on the Control Series Originals" are:-

Expected hits on the basis of the Preliminary Frequency Experiment: 56.17 per 17,440 trials

Observed hits: 27.00 "

Deviation - 29.17 "

Expected failures on the basis of the Preliminary Frequency Experiment: 17,440 - 56.17

= 17,383.83

Observed failures = 17,440 - 27 = 17,413 per 17,440 trials.

Deviation - 29.17

$$\chi^2 = \frac{(\text{E hits} - \text{O hits})^2}{\text{Expected hits.}} + \frac{(\text{E failures} - \text{O failures})^2}{\text{Expected failures.}}$$

$$= \frac{29.17^2}{56.17} + \frac{29.17^2}{17,383.83}$$

$$= \frac{850.888,9}{56.17} + \frac{850.838,9}{17,383.83}$$

$$= 15.148,5 + 0.048,9$$

$$= 15.197,4 \text{ with one degree of freedom.}$$

Hence C.R. = $\sqrt{15.197,4}$ = 3.899

P is less than .001

Calculation checked ? Yes.

Calculation Serial No: C24.

Source Data Sheets not reproduced.

Frequency Distribution of total A Hits (uncorrected) scored on Series comprising 50 titles each, selected at random from all the singles titles of the Preliminary Frequency Experiment.

A hit scores		frequency "f"
75-79	111	3
70-74	111	3
65-69	1111 1	6
60-64	1111 1	6
55-59	1111 11	7
50-54	1111 1111 1111 111	18
45-49	1111 1111 1111 1111 1111 1	26
40-44	1111 1111 1111 1111 1111	25
35-39	1111 1111 1111 1111 1111 1111 111	33
30-34	1111 1111 1111 1111 1111 1111 1111 11	37
25-29	1111 1111 1111 1	16
20-24	1111 1111 1111	15
15-19	1111	4
10-14	1	1

Step Midpoint:	f	'x'	fx'	fx'^2
77	3	7	21	147
72	3	6	18	108
67	6	5	30	150
62	6	4	24	96
57	7	3	21	63
52	18	2	36	72
47	26	1	26	26
42	25	0	+176	
37	33	-1	-33	33
32	37	-2	-74	148
27	16	-3	-48	144
22	15	-4	-60	240
17	4	-5	-20	100
12	1	-6	-6	36
	200		-241	1363

Assumed mean: (A.M.) 42. i (Step interval) = 5

$c = \frac{-65}{200.} = -.325$ ci = -1.625

True mean = (AM + ci) 42 - 1.625 = 40.375

Standard Deviation = $\sqrt{\frac{\Sigma fx'^2}{N} - c^2} \times i$

$= \sqrt{\frac{1363}{200} - .105625} \times 5$

$= \sqrt{6.815 - .105625} \times 5 = \sqrt{6.709375} \times 5$

$= 2.59 \times 5 = 12.95$

Standard error of S.D. $= \frac{S.D.}{\sqrt{2N}} = \frac{12.95}{\sqrt{400}} = \frac{12.95}{20} = .6475$

Calculation checked ?
Yes.

Calculation Serial No: C.....25.....

Source Data Serial No: D.5.....

Type.....A.....Hits on.....EXPERIMENTAL.....Originals

Made by.....EXPERIMENTAL..... Group subjects. .....(RAW SCORES).....

.....

Originals of sections:-	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	2	3	4	5	9	23	$= a_1$
B	6	1	3	1	4	15	$= a_2$
C	0	3	4	3	3	13	$= a_3$
D	0	1	3	1	3	8	$= a_4$
E	1	2	4	2	2	11	$= a_5$
Totals	9	10	18	12	21	70	
	$= b_1$	$= b_2$	$= b_3$	$= b_4$	$= b_5$	$= N$	

Diagonal Total = 10 O_w

a_1b_1	207	$a_1 + b_1$	32	$a_1b_1(a_1 + b_1)$	accumulating
a_2b_2	150	$a_2 + b_2$	25	$a_2b_2(a_2 + b_2)$	
a_3b_3	234	$a_3 + b_3$	31	$a_3b_3(a_3 + b_3)$	
a_4b_4	96	$a_4 + b_4$	20	$a_4b_4(a_4 + b_4)$	
a_5b_5	231	$a_5 + b_5$	32	$a_5b_5(a_5 + b_5)$	
S_{ab}	918	S_{a+b}	140	$S_{ab(a+b)}$	26,940

$E_w = \frac{N}{5} = \frac{70}{5} = 14$ $\quad O_w - E_w - 4 = D.$

N 70 $\quad N^2$ 4,900 $\quad N^2(N-1)$ 338,100

Whence S^2_{ab} = 842,724

$N^2.S_{ab}$ = 4,498,200

Sum 5,340,924

$N.S_{\overline{(ab)(a+b)}}$ 1,885,800

Subtracting: 3,455,124

Dividing by $N^2(N-1)$ gives 10.22 $= \sigma^2$

Whence σ = 3.197

So that $\frac{D}{\sigma} = \frac{-4}{3.197} = -1.25$

P <

Calculation checked ? ..... Yes

Calculation Serial No: C.....26.....

Source Data Serial No: D..5.....

Type.....A P C D &E Hits on..EXPERIMENTAL.....Originals

Made by..EXPERIMENTAL..... Group subjects. (R W SCORES).....

.....

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	12	10	13	33	37	105	$= a_1$
B	10	2	9	7	7	35	$= a_2$
C	10	8	12	20	23	73	$= a_3$
D	4	19	7	13	16	59	$= a_4$
E	10	4	9	9	10	42	$= a_5$
Totals	46	43	50	82	93	314	
	$= b_1$	$= b_2$	$= b_3$	$= b_4$	$= b_5$	$= N$	

Diagonal Total = 49 O_w

a_1b_1	4,830	a_1+b_1	151	$a_1b_1(a_1+b_1)$	729,330 accum.
a_2b_2	1,505	a_2+b_2	78	$a_2b_2(a_2+b_2)$	846,720
a_3b_3	3,650	a_3+b_3	123	$a_3b_3(a_3+b_3)$	1,295,670
a_4b_4	4,838	a_4+b_4	141	$a_4b_4(a_4+b_4)$	1,977,828
a_5b_5	3,906	a_5+b_5	135	$a_5b_5(a_5+b_5)$	2,505,138
S_{ab}	18,729	S_{a+b}	628	$S_{ab(a+b)}$	2,505,138

$E_w = \frac{N}{5} = \frac{314}{5} = 62.8$ $O_w - E_w$ -13.8 = D.

N 314 N^2 98,596 $N^2(N-1)$ 30,850,548

Whence S^2_{ab} = 350,775,441

$N^2.S_{ab}$ = 1,848,804,484

Sum 2,197,579,925

$N.S_{\overline{(ab)(a+b)}}$ 786,813,332

Subtracting: 1,410,766,593

Dividing by $N^2(N-1)$ gives 45.71 = σ^2

Whence σ = 6.761

So that $\frac{D}{\sigma} = \frac{-13.8}{6.761} = -2.04$

P <

Calculation checked ? Yes .....

Calculation Serial No: C.....27.....

Source Data Serial No: D.5.....

Type.....FG&H 3/2.....Hits on.....EXPERIMENTAL.....Originals

Made by.....EXPERIMENTAL..... Group subjects. ..(RAW SCORES - UNCORRECTED).....

Originals of sections:-	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	9	12	15	21	29	86	$= a_1$
B	12	8	19	16	15	70	$= a_2$
C	23	18	23	23	17	104	$= a_3$
D	12	17	27	33	22	111	$= a_4$
E	7	9	12	5	9	42	$= a_5$
Totals	63 $= b_1$	64 $= b_2$	96 $= b_3$	98 $= b_4$	92 $= b_5$	413 $= N$	

Diagonal Total = 82 O_w

a_1b_1	5,418	$a_1 + b_1$	149	$a_1b_1(a_1 + b_1)$	807,282
a_2b_2	4,480	$a_2 + b_2$	134	$a_2b_2(a_2 + b_2)$	600,320
a_3b_3	9,984	$a_3 + b_3$	200	$a_3b_3(a_3 + b_3)$	1,996,800
a_4b_4	10,878	$a_4 + b_4$	209	$a_4b_4(a_4 + b_4)$	2,273,502
a_5b_5	3,864	$a_5 + b_5$	134	$a_5b_5(a_5 + b_5)$	517,776
S_{ab}	34,624	S_{a+b}	826	$S_{ab(a+b)}$	6,195,680

$E_w = \frac{N}{5} = \frac{413}{5} = 82.6$ $\quad O_w \sim E_w \quad -0.6 = D.$

N 413 $\quad N^2$ 170,569 $\quad N^2(N-1)$ 70,274,428

Whence S^2_{ab} = 1,198,821,376

$N^2 . S_{ab}$ = 5,905,781,056

Sum 7,104,602,432

$N . S_{\overline{(ab)(a+b)}}$ 2,558,815,840

Subtracting: 4,545,786,592

Dividing by $N^2(N-1)$ gives 64.69 = σ^2

Whence σ = 8.043

So that $\frac{D}{\sigma} = \frac{-0.6}{8.043} = -0.07 \rightarrow$

P ←

Calculation checked ? ..... Yes

Calculation Serial No: C28 Source Data Serial No: D.....

Type F, G and H hits on Experimental Series Originals.

Made by Experimental Group Subjects. (Raw scores, all judges, uncorrected.)

Originals of section	Hits made during Experimental Sections: A	B	C	D	E	Totals:
A	15	18	23	26	40	122 = a_1
B	50	31	50	43	48	222 = a_2
C	45	34	48	51	41	219 = a_3
D	30	41	42	52	41	206 = a_4
E	13	29	29	15	30	116 = a_5
Totals:	153 = b_1	153 = b_2	192 = b_3	187 = b_4	200 = b_5	885 = N

Diagonal Total (O_w) = 176.

a_1b_1 = 18,666 a_1+b_1 = 275 $a_1b_1(a_1+b_1)$ = 5,133,150

a_2b_2 = 33,966 a_2+b_2 = 375 $a_2b_2(a_2+b_2)$ = 17,870,400 (accum).

a_3b_3 = 42,048 a_3+b_3 = 411 $a_3b_3(a_3+b_3)$ = 35,152,128

a_4b_4 = 38,522 a_4+b_4 = 393 $a_4b_4(a_4+b_4)$ = 50,291,274

a_5b_5 = 23,200 a_5+b_5 = 316 $a_5b_5(a_5+b_5)$ = 57,622, 474

S_{ab} = 156,402 S_{a+b} =1,770 $S_{ab(a+b)}$ = 57,622,474.

$E_w = \frac{N}{5} = \frac{885}{5} = 177.$ $D = (O_w \sim S_w) = -1.0$

N = 885 N^2 = 783,225 $N^2(N-1)$ = 692,370,900.

Whence S^2_{ab} = 24,461,585,604.

$N^2.S_{ab}$ = 122,497,956,450

Sum: 146,959,542,054

$\frac{N.S}{(ab)(a+b)}$ = 50,995,889,490

Difference: 95,963,652,554

Dividing by $N^2(N-1)$ gives: 138.601 = σ^2

Hence σ = 11.773

So that $\frac{D}{\sigma} = \frac{-1}{11.773} = -0.0849$

Calculation checked ? Yes.

Calculation Serial No: C.....29.....

Source Data Serial No: D..5.....

Type..I, J & K...Hits on...EXPERIMENTAL.....Originals

Made by..EXPERIMENTAL..... Group subjects. ..(RAW SCORES-.....

.....ALL JUDGES - UNCORRECTED).....

Originals of sections:-	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	13	32	8	18	17	88	$= a_1$
B	11	11	21	12	19	74	$= a_2$
C	5	5	10	3	9	32	$= a_3$
D	11	23	10	23	10	77	$= a_4$
E	35	19	18	74	48	194	$= a_5$
Totals	75 $= b_1$	90 $= b_2$	67 $= b_3$	130 $= b_4$	103 $= b_5$	465 $= N$	

Diagonal Total = 105 O_w

a_1b_1	6,600	$a_1 + b_1$	163	$a_1b_1(a_1 + b_1)$	1,075,800
a_2b_2	6,660	$a_2 + b_2$	164	$a_2b_2(a_2 + b_2)$	2,168,040 (acc)
a_3b_3	2,144	$a_3 + b_3$	99	$a_3b_3(a_3 + b_3)$	2,380,296
a_4b_4	10,010	$a_4 + b_4$	207	$a_4b_4(a_4 + b_4)$	4,452,366
a_5b_5	19,982	$a_5 + b_5$	297	$a_5b_5(a_5 + b_5)$	10,387,020
S_{ab}	45,396	S_{a+b}	930	$S_{ab(a+b)}$	10,387,020

$E_w = \frac{N}{5} = \frac{465}{5} = 93$ $\quad O_w \sim E_w + 12 = D.$

N 465 N^2 216,225 $N^2(N-1)$ 100,328,400

Whence S^2_{ab} = 2,060,796,816

$N^2.S_{ab}$ = 9,815,750,100

Sum 11,876,546,916

$N.S_{\overline{(ab)(a+b)}}$ 4,829,964,300

Subtracting: 7,046,582,616

Dividing by $N^2(N-1)$ gives $\frac{70.235}{70.23} = \sigma^2$

Whence σ = 8.381

So that $\frac{D}{\sigma} = \frac{+12}{8.381} = +1.43$

P <

Calculation checked ? .....Yes.

Calculation Serial No: C.....30.....

Source Data Serial No: D..6.....

Type.....A.....Hits on.....EXPERIMENTAL.....Originals

Made by.....CONTROL..... Group subjects. .....(RAW SCORES)....

.....

Originals of sections:-	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	4	1	5	1	6	17	$= a_1$
B	7	1	4	3	2	17	$= a_2$
C	2	3	2	3	2	12	$= a_3$
D	0	3	1	1	2	7	$= a_4$
E	1	1	3	3	2	10	$= a_5$
Totals	14 $= b_1$	9 $= b_2$	15 $= b_3$	11 $= b_4$	14 $= b_5$	63 $= N$	

Diagonal Total = 10 O_w

a_1b_1	238	a_1+b_1	31	$a_1b_1(a_1+b_1)$	7,378
a_2b_2	153	a_2+b_2	26	$a_2b_2(a_2+b_2)$	11,356 (accum.)
a_3b_3	180	a_3+b_3	27	$a_3b_3(a_3+b_3)$	16,216
a_4b_4	77	a_4+b_4	18	$a_4b_4(a_4+b_4)$	17,602
a_5b_5	140	a_5+b_5	24	$a_5b_5(a_5+b_5)$	20,962
S_{ab}	788	S_{a+b}	126	$S_{ab(a+b)}$	20,962

$E_w = \frac{N}{5} = \frac{63}{5} = 12.6$ $O_w - E_w$ -2.6 = D.

N 63 N^2 3,969 $N^2(N-1)$ 246,078

Whence S^2_{ab} = 620,944

$N^2.S_{ab}$ = 3,127,572

Sum 3,748,516

$N.S_{\overline{(ab)(a+b)}}$ 1,320,606

Subtracting: 2,427,910

Dividing by $N^2(N-1)$ gives 9.866 = σ^2

Whence σ = 3.141

So that $\frac{D}{\sigma} = \frac{-2.6}{3.141} = -0.83$

P <

Calculation checked ? Yes .....

Calculation Serial No: C.....31.....

Source Data Serial No: D...6.....

Type..ABCDE....Hits on...EXPERIMENTAL.....Originals

Made by....CONTROL..... Group subjects. ..(RAW SCORES).....

.....(ALL JUDGES - UNCORRECTED).....

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	20	11	21	18	22	92	$= a_1$
B	9	4	10	9	12	44	$= a_2$
C	13	9	19	13	12	66	$= a_3$
D	5	16	9	16	11	57	$= a_4$
E	7	6	9	13	8	43	$= a_5$
Totals	54 $= b_1$	46 $= b_2$	68 $= b_3$	69 $= b_4$	65 $= b_5$	302 $= N$	

Diagonal Total = 67 O_w

a_1b_1	4,968	$a_1 + b_1$	146	$a_1b_1(a_1 + b_1)$	725,328 accum.
a_2b_2	2,024	$a_2 + b_2$	90	$a_2b_2(a_2 + b_2)$	907,488
a_3b_3	4,488	$a_3 + b_3$	134	$a_3b_3(a_3 + b_3)$	1,508,880
a_4b_4	3,933	$a_4 + b_4$	126	$a_4b_4(a_4 + b_4)$	2,004,438
a_5b_5	2,795	$a_5 + b_5$	108	$a_5b_5(a_5 + b_5)$	2,306,298
S_{ab}	18,208	S_{a+b}	604	$S_{ab(a+b)}$	2,306,298

$E_w = \frac{N}{5} = \frac{302}{5} = 60.4$ $\quad O_w - E_w + 6.6 = D.$

N 302 $\quad N^2$ 91,204 $\quad N^2(N-1)$ 27,452,404

Whence S^2_{ab} = 331,531,264

$N^2.S_{ab}$ = 1,660,642,432

Sum 1,992,173,696

$N.S_{\overline{(ab)(a+b)}}$ 696,501,996

Subtracting: 1,295,671,700

Dividing by $N^2(N-1)$ gives 47.20 = σ^2

Whence σ = 6.870

So that $\frac{D}{\sigma} = \frac{+6.6}{6.870} = +0.96$

P <

Calculation checked ? Yes

Calculation Serial No: C.....32.....

Source Data Serial No: D.....6.....

Type F. G. & H. 2/5 Hits on. EXPERIMENTAL .....Originals

Made by.....CONTROL..... Group subjects. ..(RAW SCORES-.....

.....UNCORRECTED).....

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	19	12	16	11	14	72	$= a_1$
B	20	10	22	25	27	104	$= a_2$
C	19	18	18	23	24	102	$= a_3$
D	9	23	11	33	23	99	$= a_4$
E	12	12	6	12	15	57	$= a_5$
Totals	79 $= b_1$	75 $= b_2$	73 $= b_3$	104 $= b_4$	103 $= b_5$	434 $= N$	

Diagonal Total = 95 O_w

a_1b_1	5,688	a_1+b_1	151	$a_1b_1(a_1+b_1)$ accumulating
a_2b_2	7,800	a_2+b_2	179	$a_2b_2(a_2+b_2)$
a_3b_3	7,446	a_3+b_3	175	$a_3b_3(a_3+b_3)$
a_4b_4	10,296	a_4+b_4	203	$a_4b_4(a_4+b_4)$
a_5b_5	5,871	a_5+b_5	160	$a_5b_5(a_5+b_5)$

S_{ab} 37,101 S_{a+b} 868 $S_{ab(a+b)}$ 6,587,586

$E_w = \frac{N}{5} = \frac{434}{5} = 86.8$ $O_w \sim E_w$ +8.2 = D.

N 434 N^2 188,356 $N^2(N-1)$ 81,558,148

Whence S^2_{ab} = 1,376,484,201

$N^2.S_{ab}$ = 6,988,195,956

Sum 8,364,680,157

$N.S_{\overline{(ab)(a+b)}}$ 2,859,012,324

Subtracting: 5,505,667,833

Dividing by $N^2(N-1)$ gives 67.51 = σ^2

Whence σ = 8.217

So that $\frac{D}{\sigma} = \frac{+8.2}{8.217} = +.997 = +1.00$

P <

Calculation checked ? ..... Yes

Calculation Serial No: C.....33.....

Source Data Serial No: D..6.....

Type..F.G.H....Hits on..EXPERIMENTAL.....Originals

Made by...CONTROL..... Group subjects. .(RAW SCORES -.....

...ALL JUDGES - UNCORRECTED).....

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	25	16	25	25	24	115	$= a_1$
B	51	32	58	55	64	260	$= a_2$
C	50	34	47	43	46	220	$= a_3$
D	33	44	29	56	44	206	$= a_4$
E	24	29	19	26	36	134	$= a_5$
Totals	183 $= b_1$	155 $= b_2$	178 $= b_3$	205 $= b_4$	214 $= b_5$	935 $= N$	

Diagonal Total = 196 O_w

a_1b_1	21,045	$a_1 + b_1$	298	$a_1b_1(a_1 + b_1)$	6,271,410 accum.
a_2b_2	40,300	$a_2 + b_2$	415	$a_2b_2(a_2 + b_2)$	22,995,910
a_3b_3	39,160	$a_3 + b_3$	398	$a_3b_3(a_3 + b_3)$	38,581,590
a_4b_4	42,230	$a_4 + b_4$	411	$a_4b_4(a_4 + b_4)$	55,938,120
a_5b_5	28,676	$a_5 + b_5$	348	$a_5b_5(a_5 + b_5)$	65,917,368
S_{ab}	171,411	S_{a+b}	1870	$S_{ab(a+b)}$	65,917,368

$E_w = \frac{N}{5} = \frac{935}{5} = 187$ $\quad O_w \sim E_w$ +9.0 = D.

N 935 $\quad N^2$ 874,225 $\quad N^2(N-1)$ 816,526,150

Whence S^2_{ab} = 29,381,730,921

$N^2.S_{ab}$ = 149,851,781,475

Sum 179,233,512,396

$N.S_{\overline{(ab)(a+b)}}$ 61,632,739,080

Subtracting: 117,600,773,316

Dividing by $N^2(N-1)$ gives 144.0257 = σ^2

Whence σ = 12.01

So that $\frac{D}{\sigma} = \frac{+9.0}{12.01} = +0.75$

P <

Calculation checked ? Yes

Calculation Serial No: C.....34.....

Source Data Serial No: D...6.....

Type..I J K....Hits on..EXPERIMENTAL.....Originals

Made by..CONTROL..... Group subjects. ...(RAW SCORES -...
ALL JUDGES - UNCORRECTED)
.....

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	10	3	8	9	9	39	$= a_1$
B	12	24	23	14	26	99	$= a_2$
C	10	5	14	4	8	41	$= a_3$
D	14	26	12	16	7	75	$= a_4$
E	29	31	34	33	33	160	$= a_5$
Totals	75	89	91	76	83	414	
	$= b_1$	$= b_2$	$= b_3$	$= b_4$	$= b_5$	$= N$	

Diagonal Total = 97 O_w

a_1b_1	2,925	a_1+b_1	114	$a_1b_1(a_1+b_1)$	333,450 accum.
a_2b_2	8,811	a_2+b_2	188	$a_2b_2(a_2+b_2)$	1,989,918
a_3b_3	3,731	a_3+b_3	132	$a_3b_3(a_3+b_3)$	2,482,410
a_4b_4	5,700	a_4+b_4	151	$a_4b_4(a_4+b_4)$	3,343,110
a_5b_5	13,280	a_5+b_5	243	$a_5b_5(a_5+b_5)$	6,570,150
S_{ab}	34,447	S_{a+b}	828	$S_{ab(a+b)}$	6,570,150

$E_w = \frac{N}{5} = \frac{414}{5} = 82.8$ $O_w \sim E_w + 14.2 = D.$

N 414 N^2 171,396 $N^2(N-1)$ 70,786,548

Whence S^2_{ab} = 1,186,595,809

$N^2.S_{ab}$ = 5,904,678,012

Sum 7,090, 673,821

$N.S_{\overline{(ab)(a+b)}}$ 2,720,042,100

Subtracting: 4,370,631,721

Dividing by $N^2(N-1)$ gives 61.74 = σ^2

Whence σ = 7.858

So that $\frac{D}{\sigma} = \frac{+14.2}{7.858} = +1.81$

P <

Calculation checked ? ...Yes..

Calculation Serial No: C.....35.....

Source Data Serial No: D..7.....

Type...A.....Hits on..EXPERIMENTAL.....Originals

Made by..EXPERIMENTAL..... Group subjects. (CORRECTED FOR BUNCHING)

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals
A	2	3	4	5	9	23 = a_1
B	2	1	3	1	4	11 = a_2
C	0	3	4	3	3	13 = a_3
D	0	1	3	1	3	8 = a_4
E	1	2	4	2	2	11 = a_5
Totals	5 = b_1	10 = b_2	18 = b_3	12 = b_4	21 = b_5	66 = N

Diagonal Total = 10 O_w

a_1b_1	115	a_1+b_1	28	$a_1b_1(a_1+b_1)$	3,220
a_2b_2	110	a_2+b_2	21	$a_2b_2(a_2+b_2)$	5,530 (accum)
a_3b_3	234	a_3+b_3	31	$a_3b_3(a_3+b_3)$	12,784
a_4b_4	96	a_4+b_4	20	$a_4b_4(a_4+b_4)$	14,704
a_5b_5	231	a_5+b_5	32	$a_5b_5(a_5+b_5)$	22,096
S_{ab}	786	S_{a+b}	132	$S_{ab(a+b)}$	22,096

$E_w = \frac{N}{5} = \frac{66}{5} = 13.2$ $O_w - E_w$ -3.2 = D.

N 66 N^2 4,356 $N^2(N-1)$ 283,140

Whence S^2_{ab} = 617,796

$N^2.S_{ab}$ = 3,423,816

Sum 4,041,612

$N.S_{\overline{(ab)(a+b)}}$ 1,458,336

Subtracting: 2,583,276

Dividing by $N^2(N-1)$ gives 9.124 = σ^2

Whence σ = 3.021

So that $\frac{D}{\sigma} = \frac{-3.2}{3.021} = -1.06$

P

Calculation checked ? ..Yes...

Calculation Serial No: C.....36.....

Source Data Serial No: D..7.....

Type A.B.C.D.E.Hits on..EXPERIMENTAL.....Originals

Made by..EXPERIMENTAL..... Group subjects. ..(Corrected for bunching).....

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	12	10	13	21	29	85	$= a_1$
B	6	2	9	7	7	31	$= a_2$
C	10	8	12	20	23	73	$= a_3$
D	4	6	7	9	11	37	$= a_4$
E	10	4	9	9	10	42	$= a_5$
Totals	42 $= b_1$	30 $= b_2$	50 $= b_3$	66 $= b_4$	80 $= b_5$	268 $= N$	

Diagonal Total = 45 O_w

a_1b_1	3,570	a_1+b_1	127	$a_1b_1(a_1+b_1)$ accumulating.
a_2b_2	930	a_2+b_2	61	$a_2b_2(a_2+b_2)$
a_3b_3	3,650	a_3+b_3	123	$a_3b_3(a_3+b_3)$
a_4b_4	2,442	a_4+b_4	103	$a_4b_4(a_4+b_4)$
a_5b_5	3,360	a_5+b_5	122	$a_5b_5(a_5+b_5)$

S_{ab} 15,952 S_{a+b} 536 $S_{ab(a+b)}$ 1,620,516

$E_w = \frac{N}{5} = \frac{268}{5} = 53.6$ $O_w - E_w$ -8.6 = D.

N 268 N^2 71,824 $N^2(N-1)$ 19,177,008

Whence S^2_{ab} = 194,658,304

$N^2.S_{ab}$ = 1,002,088,448

Sum 1,196,746,752

$N.S_{\overline{(ab)(a+b)}}$ 434,298,288

Subtracting: 762,448,464

Dividing by $N^2(N-1)$ gives 39.7585 = σ^2

Whence σ = 6.306

So that $\frac{D}{\sigma} = \frac{-8.6}{6.306} = -1.36$

P <

Calculation checked ? .....Yes

Calculation Serial No: C.....37.....

Source Data Serial No: D...7.....

Type F G H 2/3 Hits on EXPERIMENTAL .....Originals

Made by EXPERIMENTAL ..... Group subjects. (Corrected for bunching)

Originals of sections:	Sections of exp. in which hits were made: A	B	C	D	E	Totals	
A	9	12	15	16	29	81	$= a_1$
B	12	8	19	16	15	70	$= a_2$
C	23	18	23	23	17	104	$= a_3$
D	12	17	27	27	17	100	$= a_4$
E	7	9	12	5	9	42	$= a_5$
Totals	63 $= b_1$	64 $= b_2$	96 $= b_3$	87 $= b_4$	87 $= b_5$	397 $= N$	

Diagonal Total = 76 O_w

a_1b_1	5,103	$a_1 + b_1$	144	$a_1b_1(a_1 + b_1)$	734,832
a_2b_2	4,480	$a_2 + b_2$	134	$a_2b_2(a_2 + b_2)$	600,320
a_3b_3	9,984	$a_3 + b_3$	200	$a_3b_3(a_3 + b_3)$	1,996,800
a_4b_4	8,700	$a_4 + b_4$	187	$a_4b_4(a_4 + b_4)$	1,626,900
a_5b_5	3,654	$a_5 + b_5$	129	$a_5b_5(a_5 + b_5)$	471,366
S_{ab}	31,921	S_{a+b}	794	$S_{ab(a+b)}$	5,430,218

$E_w = \frac{N}{5} = \frac{397}{5} = 79.4$ $\quad O_w - E_w - 3.4 = D.$

N 397 $\quad N^2$ 157,609 $\quad N^2(N-1)$ 62,413,164

Whence S^2_{ab} = 1,018,950,241

$N^2 . S_{ab}$ = 5,031,036,889

Sum 6,049,987,130

$N . S_{\overline{(ab)(a+b)}}$ 2,155,796,546

Subtracting: 3,894,190,584

Dividing by $N^2(N-1)$ gives $62.39 = \sigma^2$

Whence σ = 7.90

So that $\frac{D}{\sigma} = \frac{-3.4}{7.9} = -0.43$

P <

Calculation checked ? Yes

Calculation Serial No: C.....38.....

Source Data Serial No: D.7.....

Type All. F.G.H. Hits on EXPERIMENTAL Originals

Made by EXPERIMENTAL Group subjects. (Scores corrected for bunching)

Originals of sections:-	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	15	18	23	21	40	117	$= a_1$
B	50	31	50	43	48	222	$= a_2$
C	45	34	48	51	41	219	$= a_3$
D	30	32	42	46	36	186	$= a_4$
E	13	16	29	15	30	103	$= a_5$
Totals	153 $= b_1$	131 $= b_2$	192 $= b_3$	176 $= b_4$	195 $= b_5$	847 $= N$	

Diagonal Total = 170 O_w

a_1b_1 17,901 $a_1 + b_1$ 270 $a_1b_1(a_1 + b_1)$ accumulating

a_2b_2 29,082 $a_2 + b_2$ 353 $a_2b_2(a_2 + b_2)$

a_3b_3 42,048 $a_3 + b_3$ 411 $a_3b_3(a_3 + b_3)$

a_4b_4 32,736 $a_4 + b_4$ 362 $a_4b_4(a_4 + b_4)$

a_5b_5 20,085 $a_5 + b_5$ 298 $a_5b_5(a_5 + b_5)$

S_{ab} 141,852 S_{a+b} 1,694 $S_{ab(a+b)}$ 50,216,706

$E_w = \frac{N}{5} = \frac{847}{5} = 169.4$ $O_w - E_w + 0.6 = D.$

N 847 N^2 717,409 $N^2(N - 1)$ 606,928,014

Whence S^2_{ab} = 20,121,989,904

$N^2 . S_{ab}$ = 101,765,901,468

Sum 121,887,891,372

$N . S_{\overline{(ab)(a+b)}}$ 42,533,549,982

Subtracting: 79,354,341,390

Dividing by $N^2(N - 1)$ gives 130.7475 = σ^2

Whence σ = 11.43

So that $\frac{D}{\sigma} = \frac{+0.6}{11.43} = 0.052$

P <

Calculation checked ? Yes

Calculation Serial No: C39. Source Data Serial No: D..7....

Type I, J and K hits on Experimental Series Originals.

Made by Experimental Group Subjects. (Scores corrected for bunching: all judges.)

Originals of Section:	Hits made during Experimental Sections: A	B	C	D	E	Totals:
A	13	4	8	18	17	60 = a_1
B	20	11	21	12	19	83 = a_2
C	5	5	10	3	9	32 = a_3
D	11	12	10	17	10	60 = a_4
E	35	19	18	30	29	131 = a_5
Totals:	84 = b_1	51 = b_2	67 = b_3	80 = b_4	84 = b_5	366 = N

Diagonal Total: (O_w) = 80.

a_1b_1 = 5,040 a_1+b_1 = 144 $a_1b_1(a_1+b_1)$ = 725,760

a_2b_2 = 4,233 a_2+b_2 = 134 $a_2b_2(a_2+b_2)$ = 1,292,982 (accum.)

a_3b_3 = 2,144 a_3+b_3 = 99 $a_3b_3(a_3+b_3)$ = 1,505,238

a_4b_4 = 4,800 a_4+b_4 = 140 $a_4b_4(a_4+b_4)$ = 2,177,238

a_5b_5 = 11,004 a_5+b_5 = 215 $a_5b_5(a_5+b_5)$ = 4,543,098

S_{ab} = 27,221 S_{a+b} = 732 $S_{ab(a+b)}$ = 4,543,098

$E_w = \frac{N}{5} = \frac{366}{5}$ = 73.2 $(O_w \sim E_w)$ = D = +6.8

N = 366 N^2 = 133,956 $N^2(N-1)$ = 48,893,940

Whence: S^2_{ab} = 740,982,841

$N^2.S_{ab}$ = 3,646,416,276

Sum = 4,387,399,117

$N.S_{(ab)(a+b)}$ = 1,562,772,868

Difference: 2,724,625,249

Dividing by $N^2(N-1)$ gives: 55.725 = S.D.^{2}

hence S.D. = 7.465

So that $\frac{D}{s.d.} = \frac{+6.8}{7.465}$ = +.91

Calculation checked ? Yes.

Calculation Serial No: C.....40.....

Source Data Serial No: D...8.....

Type....A.....Hits on..EXPERIMENTAL.....Originals Made by.....CONTROL..... Group subjects. (Corrected for bunching)

Originals of sections:-	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	4	1	5	1	6	17	$= a_1$
B	3	1	4	3	2	13	$= a_2$
C	2	3	2	3	2	12	$= a_3$
D	0	3	1	1	2	7	$= a_4$
E	1	1	3	3	2	10	$= a_5$
Totals	10 $= b_1$	9 $= b_2$	15 $= b_3$	11 $= b_4$	14 $= b_5$	59 $= N$	

Diagonal Total = 10 O_w

a_1b_1	170	$a_1 + b_1$	27	$a_1b_1(a_1 + b_1)$ accumulating
a_2b_2	117	$a_2 + b_2$	22	$a_2b_2(a_2 + b_2)$
a_3b_3	180	$a_3 + b_3$	27	$a_3b_3(a_3 + b_3)$
a_4b_4	77	$a_4 + b_4$	18	$a_4b_4(a_4 + b_4)$
a_5b_5	140	$a_5 + b_5$	24	$a_5b_5(a_5 + b_5)$
S_{ab}	684	S_{a+b}	118	$S_{ab(a+b)}$ 16,770

$E_w = \frac{N}{5} = \frac{59}{5} = 11.8$ $O_w - E_w - 1.8 = D.$

N 59 N^2 3,481 $N^2(N - 1)$ 201,898

Whence S^2_{ab} = 467,856

$N^2 . S_{ab}$ = 2,381,004

Sum 2,848,860

$N . S_{\overline{(ab)(a+b)}}$ 989,430

Subtracting: 1,859,430

Dividing by $N^2(N - 1)$ gives 9.20974 = σ^2

Whence σ = 3.035

So that $\frac{D}{\sigma} = \frac{-1.8}{3.035} = -0.59$

P <

Calculation checked ? Yes

Calculation Serial No: C.....41.....

Source Data Serial No: D..8.....

Type A B C D E .Hits on..EXPERIMENTAL.....Originals

Made by.....CONTROL..... Group subjects. (Corrected for bunching).

Originals of sections:-	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	20	11	21	16	20	88	$= a_1$
B	5	4	10	9	12	40	$= a_2$
C	13	9	19	13	12	66	$= a_3$
D	5	12	9	4	7	37	$= a_4$
E	7	6	9	13	8	43	$= a_5$
Totals	50 $= b_1$	42 $= b_2$	68 $= b_3$	55 $= b_4$	59 $= b_5$	274 $= N$	

Diagonal Total = 55 O_w

a_1b_1	4,400	$a_1 + b_1$	138	$a_1b_1(a_1 + b_1)$	607,200
a_2b_2	1,680	$a_2 + b_2$	82	$a_2b_2(a_2 + b_2)$	137,760
a_3b_3	4,488	$a_3 + b_3$	134	$a_3b_3(a_3 + b_3)$	601,392
a_4b_4	2,035	$a_4 + b_4$	92	$a_4b_4(a_4 + b_4)$	187,220
a_5b_5	2,537	$a_5 + b_5$	102	$a_5b_5(a_5 + b_5)$	258,774
S_{ab}	15,140	S_{a+b}	548	$S_{ab(a+b)}$	1,792,346

$E_w = \frac{N}{5} = \frac{274}{5} = 54.8$ $O_w - E_w + .2 = D.$

$N = 274$ N^2 75,076 $N^2(N - 1)$ 20,495,748

Whence S^2_{ab} = 229,219,600

$N^2 . S_{ab}$ = 1,136,650,640

Sum 1,365,870,240

$N . S_{\overline{(ab)(a+b)}}$ 491,102,804

Subtracting: 874,767,436

Dividing by $N^2(N - 1)$ gives 42.68 = σ^2

Whence σ = 6.533

So that $\frac{D}{\sigma} = \frac{+.2}{6.533} =$ +0.0306

P <

Calculation checked ? Yes

Calculation Serial No: C..43.....

Source Data Serial No: D...8.....

Type F,G,H /2,3 Hits on..EXPERIMENTAL.....Originals

Made by..CONTROL..... Group subjects. (Corrected for .... bunching: all judges.).....

Originals of sections:-	Sections of exp. in which hits were made A	B	C	D	E	Totals
A	19	12	16	7	14	68 = a_1
B	20	10	22	25	27	104 = a_2
C	19	18	18	23	24	102 = a_3
D	9	23	11	25	22	90 = a_4
E	12	12	6	12	15	57 = a_5
Totals	79 = b_1	75 = b_2	73 = b_3	92 = b_4	102 = b_5	421 = N

Diagonal Total = 87 O_w

a_1b_1	5,372	a_1+b_1	147	$a_1b_1(a_1+b_1)$	789,684
a_2b_2	7,800	a_2+b_2	179	$a_2b_2(a_2+b_2)$	1,396,200
a_3b_3	7,446	a_3+b_3	175	$a_3b_3(a_3+b_3)$	1,303,050
a_4b_4	8,280	a_4+b_4	182	$a_4b_4(a_4+b_4)$	1,506,960
a_5b_5	5,814	a_5+b_5	159	$a_5b_5(a_5+b_5)$	924,426
S_{ab}	34,712	S_{a+b}	842	$S_{ab(a+b)}$	5,920,320

$E_w = \frac{N}{5} = \frac{421}{5} = 84.2$ $\quad O_w - E_w + 2.8 = D.$

$N = 421 \quad N^2 = 177,241 \quad N^2(N-1) = 74,441,220$

Whence S^2_{ab} = 1,204,922,944

$N^2.S_{ab}$ = 6,152,389,592

Sum 7,357,312,536

$N.S_{\overline{(ab)(a+b)}}$ 2,492,454,720

Subtracting: 4,864,857,816

Dividing by $N^2(N-1)$ gives 65.35 = σ^2

Whence σ = 8.084

So that $\frac{D}{\sigma} = \frac{+2.8}{8.084} = +.3464$

P <

Calculation checked ? Yes

Calculation Serial No: C.....43.....

Source Data Serial No: D.8.....

Type ALL F G H Hits on EXPERIMENTAL Originals

Made by CONTROL Group subjects. (Scores corrected for bunching)

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals
A	25	16	25	16	24	106 = a_1
B	51	32	58	55	64	260 = a_2
C	50	34	47	43	46	220 = a_3
D	33	32	29	48	43	185 = a_4
E	24	29	19	26	36	134 = a_5
Totals	183 = b_1	143 = b_2	178 = b_3	188 = b_4	213 = b_5	905 = N

Diagonal Total = 188 O_w

a_1b_1	19,398	a_1+b_1	289	$a_1b_1(b_1+b_1)$ accumulating.
a_2b_2	37,180	a_2+b_2	403	$a_2b_2(a_2+b_2)$
a_3b_3	39,160	a_3+b_3	398	$a_3b_3(a_3+b_3)$
a_4b_4	34,780	a_4+b_4	373	$a_4b_4(a_4+b_4)$
a_5b_5	28,542	a_5+b_5	347	$a_5b_5(a_5+b_5)$

S_{ab} 159,060 S_{a+b} 1810 $S_{ab(a+b)}$ 59,052,256

$E_w = \frac{N}{5} = \frac{905}{5} = 181.0$ $O_w - E_w$ +7.0 = D.

N 905 N^2 819,025 $N^2(N-1)$ 740,398,600

Whence S^2_{ab} = 25,300,083,600

$N^2.S_{ab}$ = 130,274,116,500

Sum 155,574,200,100

$N.S_{\overline{(ab)(a+b)}}$ 53,442,291,680

Subtracting: 102,131,908,420

Dividing by $N^2(N-1)$ gives 137.94 = σ^2

Whence σ = 11.74

So that $\frac{D}{\sigma} = \frac{+7.0}{11.74} = +0.596$

+0.60

P <

Calculation checked ? Yes

Calculation Serial No: C.....44.....

Source Data Serial No: D.8.....

Type All I J K Hits on... EXPERIMENTAL .....Originals

Made by..... CONTROL ..... Group subjects. (Scores .....

.....corrected - All Judges).....

Originals of sections:	Sections of exp. in which hits were made A	B	C	D	E	Totals	
A	10	3	8	9	9	39	$= a_1$
B	20	24	23	14	26	107	$= a_2$
C	10	5	14	4	8	41	$= a_3$
D	14	12	12	13	7	58	$= a_4$
E	29	31	34	30	29	153	$= a_5$
Totals	83	75	91	70	79	398	
	$= b_1$	$= b_2$	$= b_3$	$= b_4$	$= b_5$	$= N$	

Diagonal Total = 90 O_w

a_1b_1	3,237	$a_1 + b_1$	122	$a_1b_1(a_1 + b_1)$ accumulating
a_2b_2	8,025	$a_2 + b_2$	182	$a_2b_2(a_2 + b_2)$
a_3b_3	3,731	$a_3 + b_3$	132	$a_3b_3(a_3 + b_3)$
a_4b_4	4,060	$a_4 + b_4$	128	$a_4b_4(a_4 + b_4)$
a_5b_5	12,087	$a_5 + b_5$	232	$a_5b_5(a_5 + b_5)$

S_{ab} 31,140 S_{a+b} 796 $S_{ab(a+b)}$ 5,671,820

$E_w = \frac{N}{5} = \frac{398}{5} = 79.6$ $O_w - E_w + 10.4 = D.$

N 398 N^2 158,404 $N^2(N - 1)$ 62,886,388

Whence S^2_{ab} = 969,699,600

$N^2.S_{ab}$ = 4,932,700,560

Sum 5,902,400,160

$N.S_{\overline{(ab)(a+b)}}$ 2,257,384,360

Subtracting: 3,645,015,800

Dividing by $N^2(N - 1)$ gives 57.96 = σ^2

Whence σ = 7.613

So that $\frac{D}{\sigma} = \frac{+10.4}{7.613} = +1.37$

P <

Calculation checked ? ...yes..

Calculation Serial No: C 45

Source Data Serial No: D 13

Product moment correlation between STUDY OF VALUES THEORETICAL SCORES

and Type Total Hits hits on Experimental Originals made by Control and Experimental group subjects.

(All judges - uncorrected)(Expectancy for 50 drawings p.s.)

Number of cases = 353

Totals: ΣX 11,056 ; ΣY 2,787 ; ΣX^2 365,308 ; ΣXY 87,346 ; ΣY^2 24,871

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\ 353 \times 87,346\ ) - (\ 11,056 \times 2,787\ )}{\sqrt{(\ 353 \times 365,308 - (11,056)^2\ ).(\ 353 \times 24,871 - (2,787)^2\ )}}$$

$$= \frac{30,833,138 - 30,813,072}{\sqrt{(\ 128,955,724 - 122,235,136\ ).(\ 8,779,463 - 7,767,369\ )}}$$

$$= \frac{+\ 20,066}{\sqrt{(6,718,588)(1,012,094)}} = \frac{+\ 20,066}{\sqrt{6,799,842,603,272}}$$

$$= \frac{+\ 20,066}{2,607,651} \qquad +\ .007,695$$

$$\sigma_{r_o} = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{(353) - 1}} = \frac{1}{\sqrt{352}}$$

$$= \frac{1}{18.76} = .0533$$

$$\text{Critical Ratio} = \frac{r}{\sigma_{r_o}} = \frac{.007,695}{.055,3} = \frac{.14}{}$$

Hence P = lies between 1.0 and .84

Calculation checked ? Yes.

Calculation Serial No: C.....46.....

Source Data Serial No: D...13.....

Product moment correlation between.....STUDY OF VALUES.....

.....ECONOMIC SCORE.....

and Type....Total.....hits on ....Experimental Originals

made by....Control and Experimental.....group subjects.

.(All hits. All judges. Uncorrected)(Expectancy for 50..... drawings per student).

Number of cases = 353

Totals:	ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
	8,919	2,787	245,815	70,873	24,871

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\quad 353 \times 70,873 \quad) - (\quad 8,919 \times 2,787 \quad)}{\sqrt{(\quad 353 \times 245,815 - (8,919)^2 \quad).(\quad 353 \times 24,871 - (2,787)^2 \quad)}}$$

$$= \frac{25,018,169 - 24,857,253}{\sqrt{(\quad 86,772,695 - 79,548,561 \quad).(\quad 8,779,463 - 7,767,369 \quad)}}$$

$$= \frac{+160,916}{\sqrt{7,224,134 \times 1,012,094}} = \frac{+160,916}{77,311,502,676,596}$$

$$= \frac{+160,916}{2,703,979} = .0595$$

$$\sigma r_o = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{353 - 1}} = \frac{1}{\sqrt{352}}$$

$$= \frac{1}{18.76} = .0533$$

$$\text{Critical Ratio} = \frac{r}{\sigma r_o} = \frac{+.0595}{.0533} = 1.11$$

Hence P = lies between .32 and .23

Calculation checked ? Yes.

Calculation Serial No: C...47.....

Source Data Serial No: D...13.....

Product moment correlation between...STUDY OF VALUES AESTHETIC SCORE.....

and ~~Type~~ All .....hits on .....Experimental.....Originals made by.....Control and Experimental.....group subjects.

(All hits: All judges: Uncorrected)(Hit expectancy for 50 drawings returned per subject).

Number of cases = 353

Totals: ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
11,416	2,787	402,836	90,344	24,871

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\quad 353 \times 90,344 \quad) - (\quad 11,416 \times 2,787 \quad)}{\sqrt{(\quad 353 \times 402,836 \quad - (11,416)^2 \quad).(353 \times 24,871 - (2,787)^2)}}$$

$$= \frac{31,891,432 - 31,816,392}{\sqrt{(\quad 142,201,108 - \quad).(\quad 8,779,463 - 7,767,369 \quad)}}$$
$$130,325,056$$

$$= \frac{+ 75,040}{\sqrt{11,876,052 \times 1,012,094}} = \frac{+ 75,040}{\sqrt{12,019,680,972,888}}$$

$$= \frac{+ 75,040}{3,466,941} = + .0216$$

$$\sigma r_o = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{353 - 1}} = \frac{1}{\sqrt{352}}$$

$$= \frac{1}{18.76} = .0533$$

$$\text{Critical Ratio} = \frac{r}{\sigma r_o} = \frac{.0216}{.0533} = \frac{.41}{}$$

Hence P = lies between .69 and .55

Calculation checked ? Yes.

Calculation Serial No: ..C.....48..... Source Data Serial No: D...13.....

Product moment correlation between...STUDY OF VALUES.....

.....SOCIAL VALUE SCORE.....

and Type..All.....hits on ..Experimental....Originals

made by.....Control and Experimental.....group subjects.

(All judges.: Uncorrected.)(Hit Expectancy for 50 drawings..... per subject).

Number of cases = 353

Totals: ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
11,449	2,787	383,553	90,459	24,871

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\quad 353 \times 90,459 \quad) - (\quad 11,449 \times 2,787 \quad)}{\sqrt{(\quad 353 \times 383,553 \quad - (11,449)2 \quad).(353 \times 24,871 - (2,787)^2)}}$$

$$= \frac{31,932,027 - 31,908,363}{\sqrt{(\quad 135,394,209 - \quad 131,079,601 \quad).(\quad 8,779,483 - 7,767,369 \quad)}}$$

$$= \frac{+ 23,664}{\sqrt{(4,314,608 \times 1,012,094)}} = \frac{+23,664}{\sqrt{4,366,788,869,152}}$$

$$= \frac{+ 23,664}{2,089,686} = + .0113 ----$$

$$\sigma r_o = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{353 - 1}} = \frac{1}{\sqrt{352}}$$

$$= \frac{1}{18.76} = .0533$$

$$\text{Critical Ratio} = \frac{r}{\sigma r_o} = \frac{.0113}{.0533} = \frac{.21}{\quad}$$

Hence P = lies between .84 and .69

Calculation checked ? Yes.

Calculation Serial No: C.....49.....

Source Data Serial No: D.13.....

Product moment correlation between.....Study of Values.....
Political Value Score
.....

and Type.....All.....hits on .....Experimental.....Originals made by.....Control and Experimental.....group subjects. (All judges -Uncorrected)(Hit Expectancy for 50 drawings per subject).

Number of cases = 353

Totals: ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
10,636	2,787	336,920	83,696	24,871

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\quad 353 \times 83,696 \quad) - (\quad 10,636 \times 2,787 \quad)}{\sqrt{(\quad 353 \times 336,920 \quad - (10,636)^2 \quad).(\quad 353 \times 24,871 - (2,787)^2 \quad)}}$$

$$= \frac{29,544,688 - 29,642,532}{\sqrt{(\quad 118,932,760 - 113,124,496 \quad).(\quad 1,012,094 \quad)}}$$

$$= \frac{- 97,844}{\sqrt{5,808,264 \times 1,012,094}} = \frac{- 97,844}{\sqrt{5,878,509,144,816}}$$

$$= \frac{-97,844}{2,424,564} = - .0403$$

$$\sigma r_o = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{353 - 1}} = \frac{1}{\sqrt{352}}$$

$$= \frac{1}{18.76} = .0533$$

$$\text{Critical Ratio} = \frac{r}{\sigma r_o} = \frac{- .0403}{.0533} = \frac{.76 \text{ ---}}{}$$

Hence P :: lies between .55 and .42

Calculation checked ? Yes.

Calculation Serial No: C 50 Source Data Serial No: D.13

Product moment correlation between STUDY OF VALUES TEST RELIGIOUS VALUE SCORE

and ~~Type~~ all hits on Experimental Originals made by Control and Experimental group subjects.

(All judges: Uncorrected). (Hit expectancy for 50 drawings per subject used).

Number of cases = 353

Totals: ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
10,053	2,787	325,463	78,947	24,871

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\ 353 \times 78,947\ ) - (\ 10,053 \times 2,787\ )}{\sqrt{(\ 353 \times 325,463 - (10,053)^2\ ).(\ 1,012,094\ )}}$$

$$= \frac{27,868,291 - 28,017,711}{\sqrt{(\ 114,888,439 - 101,062,809\ ).(\ 1,012,094\ )}}$$

$$= \frac{-149,420}{\sqrt{13,825,630 \times 1,012,094}} = \frac{-149,420}{\sqrt{13,992,837,189,220}}$$

$$= \frac{-149,420}{3,740,700} = -.0399$$

$$\sigma_{r_o} = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{353 - 1}} = \frac{1}{\sqrt{352}}$$

$$= \frac{1}{18.76} = .0533$$

$$\text{Critical Ratio} = \frac{r}{\sigma_{r_o}} = \frac{.0399}{.0533} = .75$$

Hence P lies between ,55 and .42

Calculation checked ? Yes.

Calculation Serial No: C 51 Source Data Serial No: D 13

Product moment correlation between PRESSEY X - O TEST TOTAL NUMBER OF WORDS CROSSED OUT

and all hits on Experimental Originals made by Control and Experimental group subjects.

(All hits: All judges: Uncorrected)(Hit Expectancy for 50 drawings per subject).

Number of cases = 357

Totals:	ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
	59,631	2,795	10,872,891	465,525	24,905

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\quad 357 \times 465,525 \quad) - (\quad 59,631 \times 2,795 \quad)}{\sqrt{(\quad 357,\times 10,872,891 \quad - (59,631)^2 \quad).(\quad 357 \times 24,905 - (2,795)^2)}}$$

$$= \frac{166,192,425 - 166,668,645}{\sqrt{(\quad 3,881,622,087 - \quad 3,555,856,161 \quad).(\quad 8,891,085 - 7,812,025)}}$$

$$= \frac{- 476,220}{\sqrt{325,765,926 \times 1,079,060}} = \frac{- 476,220}{\sqrt{351,520,980,109,560}}$$

$$= \frac{- 476,220}{18,748,893} = - .0254 ---$$

$$\sigma r_o = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{357 - 1}} = \frac{1}{\sqrt{356}}$$

$$= \frac{1}{18.868} = .05299$$

$$\text{Critical Ratio} = \frac{r}{\sigma r_o} = \frac{.0254}{.053} = \frac{.48}{}$$

Hence P = lies between .69 and .55

Calculation chocked ? Yes.

Calculation Serial No: C.....52..... Source Data Serial No: D...13.....

Product moment correlation between.....WASHBURNE SOCIAL ADJUSTMENT INVENTORY SUBTOTAL SCORE.....

and Type all.....hits on .....Experimental.....Originals made by.....Control and Experimental.....group subjects. (All hits: All judges: Uncorrected)(Hit Expectancy per 50 drawings per subject).

Number of cases = 355

Totals: ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
40,747	2,792	5,124,909	319,175	24,896

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(355 \times 319,175) - (40,747 \times 2,792)}{\sqrt{(355 \times 5,124,909 - (40,747)^2).(355 \times 24,896 - (2,792)^2)}}$$

$$= \frac{- 458,499}{\sqrt{(159,024,686).(1,042,816)}}$$

$$= \frac{- 458,499}{\sqrt{165,855,486,955,776}} = \frac{- 458,499}{12,877,635}$$

$$= - .036$$

$$\sigma_{r_o} = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{355 - 1}} = \frac{1}{\sqrt{354}}$$

$$= \frac{1}{18.8149} = .053$$

$$\text{Critical Ratio} = \frac{r}{\sigma_{r_o}} = \frac{.036}{.053} = .68$$

Hence P = lies between .55 and .42

Calculation checked ? Yes.

Calculation Serial No: C 53

Source Data Serial No: D 13

Product moment correlation between Bernreuter FIC Confidence Score (+200 to eliminate negative scores).

and ~~Type~~ all hits on Experimental Originals made by Control and Experimental group subjects. (All hits: All judges: Uncorrected) (Hit expectancy per 50 drawings per subject taken).

Number of cases = 349

Totals: ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
74,153	2,763	18,515,463	580,041	24,665

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\ 349 \times 580,041\ ) - (\ 74,153 \times 2,763\ )}{\sqrt{(\ 349 \times 18,515,463 - (74,153)^2\ ).(\ 349 \times 24,665 - (2,763)^2)}}$$

$$= \frac{202,434,309 - 204,684,739}{\sqrt{(\ 6,461,896,587 - 5,498,667,409\ ).(\ 8;608,085 - 7,634,169\ )}}$$

$$= \frac{-\ 2,450,430}{\sqrt{963,229,178 \times 973,916}} = \frac{-\ 2,450,430}{\sqrt{938,104,308,121,048}}$$

$$= \frac{-\ 2,450,430}{30,628,488.5} = -\ .080$$

$$\sigma r_o = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{\ 349 - 1}} = \frac{1}{\sqrt{\ 348}}$$

$$= \frac{1}{18.655} = .0536$$

$$\text{Critical Ratio} = \frac{r}{\sigma r_o} = \frac{.08}{.0536} = 1.49$$

Hence P = lies between .16 and .11

Calculation checked ? Yes.

Calculation Serial No: C.....54..... Source Data Serial No: D....13.....

Product moment correlation between Bernreuter F2S Sociability Score (+ 200 to eliminate negative scores).

and all hits on Experimental Originals made by Control and Experimental group subjects. (All hits: All judges: Uncorrected) (Hit expectancy per 50 drawings per subject taken).

Number of cases = 349

Totals:	ΣX	ΣY	ΣX^2	ΣXY	ΣY^2
	67541	2,763	14,131,391	530,042	24,665

$$r_{xy} = \frac{N.\Sigma XY - (\Sigma X).(\Sigma Y)}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right].\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

$$= \frac{(\quad 349 \times 530,042 \quad) - (\quad 67,541 \times 2,763 \quad)}{\sqrt{(\quad 349 \times 14,131,391 \quad - (67,541)^2 \quad).(\quad 349 \times 24,665 - (2,763)^2)}}$$

$$= \frac{184,984,658 - 186,615,783}{\sqrt{(\quad 4,931,855,459 - \quad 4,561,786,681 \quad).(\quad 8,608,085 - 7,634,169 \quad)}}$$

$$= \frac{- 1,631,125}{\sqrt{570,068,778 \times 973,916}} = \frac{- 1,631,125}{\sqrt{380,415,903,994,648}}$$

$$= \frac{- 1,631,125}{18,984,204} = - .0859 \text{ ----}$$

$$\sigma r_o = \frac{1}{\sqrt{N - 1}} = \frac{1}{\sqrt{349 - 1}} = \frac{1}{\sqrt{348}}$$

$$= \frac{1}{18.655} = .0536$$

$$\text{Critical Ratio} = \frac{r}{\sigma r_o} = \frac{.0859}{.0536} = 1.6$$

Hence P = .11 exactly.

Calculation checked ? Yes.

Calculation:
Serial No: C.....55.....

Source Data
Serial No: D...14.....

Type of Score:.....WASHBURNE SOCIAL ADJUSTMENT INVENTORY.....
SUBTOTAL SCORE.

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a).....Scoring 1,2 or 3 A Hits. (All judges, uncorrected).....	Group (b).....Scoring no A Hits.....
N = 103	N = 252
$\sum X$ = 11,990	$\sum Y$ = 28,757
$\sum x^2$ = 1,570,932	$\sum Y^2$ = 3,553,977
$M_X = \frac{11,990}{103} = 116.41$	$M_Y = \frac{28,757}{252} = 114.12$
$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$
$= \sqrt{\frac{1,570,932}{103} - (116.41)^2}$	$= \sqrt{\frac{3,553,977}{252} - (114.12)^2}$
$= \sqrt{15,251.77 - 13,551.29}$	$= \sqrt{14,103.08 - 13,023.37}$
$= \sqrt{1,700.48} = 41.24$	$= \sqrt{1,079.71} = 32.86$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{41.24}{\sqrt{102}}$	$= \frac{32.86}{\sqrt{251}}$
$= \frac{41.24}{10.10} = 4.08$	$= \frac{32.86}{15.84} = 2.07$

Greater mean: 116.41

Lesser mean: 114.12

Difference: 2.29

$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{4.08^2 + 2.07^2}$

$= \sqrt{16.65 + 4.28} = \sqrt{20.93} = 4.575$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{2.29}{4.57} = .50$

Hence P = lies between .69 and .55

Calculation checked ? Yes.

Calculation: Source Data
Serial No: C. 56 Serial No: D. 14

Type of Score: Washburne Social Adjustment Inventory, Subtotal Score,

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 2 or more A Hits (All judges, uncorrected)	Group (b) Failing to score A Hits
$N = 24$ $\quad \Sigma X = 2{,}614$ $\quad \Sigma X^2 = 315{,}956$	$N = 252$ $\quad \Sigma Y$ $\quad \Sigma Y^2$
$M_X = \frac{2{,}614}{24} = 108.92$	$M_Y =$ ——— $= 114.12$
$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$
$= \sqrt{\frac{315{,}956}{24} - (108.92)^2}$	$= \sqrt{\text{———} - (\quad)^2}$
$= \sqrt{13{,}164.83 - 11{,}863.57}$	$= \sqrt{\quad -}$
$= \sqrt{1{,}301.26} = 36.07$	$= \sqrt{\quad} = 32.86$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{36.07}{\sqrt{23}}$	$= \frac{\quad}{\sqrt{\quad}}$
$= \frac{36.07}{4.796} = 7.52$	$=$ ——— $= 2.07$

Greater mean: 114.12

Lesser mean: 108.92

Difference: 5.20

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{2.07^2 + 7.52^2}$$

$$= \sqrt{4.28 + 56.55} = \sqrt{60.83} = 7.799$$

Critical Ratio $= \frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{5.20}{7.799} = .67$

Hence P lies between .55 and .42

Calculation checked ? Yes.

Calculation: Serial No: C. 57 | Source Data Serial No: D. 14

Type of Score: Pressey X -O Test. Melancholic Word Score.

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Subjects scoring 1, 2 or 3 A Hits.	Group (b) Subjects failing to score A Hits.
N 102 $\quad \Sigma X$ 946 $\quad \Sigma X^2$ 10,918	N 255 $\quad \Sigma Y$ 2,283 $\quad \Sigma Y^2$ 26,585
$M_X = \frac{946}{102} = 9.27$	$M_Y = \frac{2,283}{255} = 8.95$
$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$
$= \sqrt{\frac{10,918}{102} - (9.27)^2}$	$= \sqrt{\frac{26,585}{255} - (8.95)^2}$
$= \sqrt{107.04 - 85.93}$	$= \sqrt{104.25 - 80.10}$
$= \sqrt{21.11} = 4.594$	$= \sqrt{24.42} = 4.942$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{4.59}{\sqrt{101}}$	$= \frac{4.94}{\sqrt{254}}$
$= \frac{4.59}{10.05} = .4567$	$= \frac{4.94}{15.94} = .3099$

Greater mean: 9.27

Lesser mean: 8.95

Difference: .32

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{.4567^2 + .3099^2}$$

$$= \sqrt{.2086 + .0960} = \sqrt{.3046} = .5519$$

Critical Ratio $= \frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{.32}{.5519} = .58$

Hence P = lies between .69 - .55

Calculation checked ? Yes.

Calculation: 58 Source Data
Serial No: C..... Serial No: D..14.....
Pressey X - O Test. Melancholic Word Score.
Type of Score:.....

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 2 or more uncorrected A Hits.	Group (b) Failing to score A Hits.
N = 24	N = 255
ΣX = 201	ΣY = 2,283
ΣX^2 = 2,043	ΣY^2 = 26,585
$M_X = \frac{201}{24} = 8.38$	$M_Y = \frac{2,283}{255} = 8.95$
$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$	$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$
$= \sqrt{\frac{2,043}{24} - (8.38)^2}$	$= \sqrt{\frac{26,585}{255} - (8.95)^2}$
$= \sqrt{85.13 - 70.22}$	$= \sqrt{104.25 - 80.10}$
$= \sqrt{14.91} = 3.86$	$= \sqrt{24.15} = 4.94$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{3.86}{\sqrt{23}}$	$= \frac{4.94}{\sqrt{254}}$
$= \frac{3.86}{4.796} = .8048$	$= \frac{4.94}{15.94} = .3099$

Greater mean: 8.95
Lesser mean: 8.38
Difference: .57

$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{.8048^2 + .3099^2}$

$= \sqrt{.6477 + .0960} = \sqrt{.7437} = .8624$

Critical Ratio $= \frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{.57}{.8624} = .66$

Hence P lies between .55 - .42

Calculation checked ? Yes.

Calculation Serial No: C. 59 Source Data Serial No: D. 14

Type of Score: Pressey X - O Test. Total words crossed out.

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Subjects scoring 1, 2 or 3 A Hits. (All judges uncorrected).	Group (b) Subjects scoring no A Hits. (All judges, uncorrected).
N = 103	N = 258
ΣX = 17,339	ΣY = 43,107
ΣX^2 = 3,166,919	ΣY^2 = 7,840,958
$M_X = \frac{17,399}{103} = 168.34$	$M_Y = \frac{43,107}{258} = 167.08$
$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$	$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$
$= \sqrt{\frac{3,166,919}{103} - (168.34)^2}$	$= \sqrt{\frac{7,840,958}{258} - (167.08)^2}$
$= \sqrt{30,746.79 - 28,338.35}$	$= \sqrt{30,391.31 - 27,915.73}$
$= \sqrt{2,408.44} = 49.07$	$= \sqrt{2,475.58} = 49.76$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{49.07}{\sqrt{102}}$	$= \frac{49.76}{\sqrt{257}}$
$= \frac{49.07}{10.1} =$	$= \frac{49.76}{16.03} = 3.1042$

Greater mean: 168.34

Lesser mean: 167.08

Difference: 1.26

$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{4.86^2 + 3.10^2}$

$= \sqrt{23.6196 + 9.61} = \sqrt{33.23} = 5.765$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{1.26}{5.765} = .22$

Hence P = lies between .64 and .69

Calculation checked ? Yes.

Calculation:
Serial No: C....60.....

Source Data
Serial No: D..14.....

Type of Score: Pressey X - O Test. Total Words Crossed out...

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a). Group scoring..2 or more A Hits. (All judges uncorrected).....

N	ΣX	ΣX^2
24	3,791	650,011

$$M_X = \frac{3,791}{24} = 157.96$$

$$\sigma_X = \sqrt{M_X^2 - (M_X)^2}$$

$$= \sqrt{\frac{650,011}{24} - (157.96)^2}$$

$$= \sqrt{27,083.37 - 24,951.36}$$

$$= \sqrt{2132.01} = 46.17$$

$$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$$

$$= \frac{46.17}{\sqrt{23}}$$

$$= \frac{46.17}{4.796} = 9.6268$$

Group (b). Group scoring..... no. A Hits.....

N	ΣY	ΣY^2
258	43,107	7,840,958

$$M_Y = \frac{43,107}{258} = 167.08$$

$$\sigma_Y = \sqrt{M_Y^2 - (M_Y)^2}$$

$$= \sqrt{\frac{7,840,958}{258} - (167.08)^2}$$

$$= \sqrt{30,391.31 - 27,915.73}$$

$$= \sqrt{2,475.58} = 49.76$$

$$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$$

$$= \frac{49.76}{\sqrt{257}}$$

$$= \frac{49.76}{16.03} = 3.1042$$

Greater mean: 167.08

Lesser mean: 157.96

Difference: 9.12

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{9.63^2 + 3.1^2}$$

$$= \sqrt{92.7369 + 9.61} = \sqrt{102.3469} = 10.11$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{9.12}{10.11} = .90$

Hence P = lies between .42 and .32

Calculation checked ? Yes.

Calculation:
Serial No: C.....61.....

Source Data
Serial No: D....14.....

Type of Score:.....Bernreuter F10 (Confidence) Scores.(+200).....

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1, 2 or 3	Group (b) Failing to score
A Hits (All judges, uncorrected)	A Hits.
N = 103	N = 246
$\Sigma X = 21,716$	$\Sigma Y = 52,437$
$\Sigma X^2 = 5,465,702$	$\Sigma Y^2 = 13,049,761$
$M_X = \frac{21,716}{103} = 210.83$	$M_Y = \frac{52,437}{246} = 213.16$
$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$
$= \sqrt{\frac{5,465,702}{103} - (210.83)^2}$	$= \sqrt{\frac{13,049,761}{246} - (213.15854)^2}$
$= \sqrt{53,065.068 - 44,451.376}$	$= \sqrt{53,047.8089 - 45,436.562}$ 32
$= \sqrt{8,613.692} = 92.806$	$= \sqrt{7,611.2457} = 87.241$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{92.806}{\sqrt{102}}$	$= \frac{87.24}{\sqrt{245}}$
$= \frac{92.806}{10.1} = 9.1887$	$= \frac{87.24}{15.65} = 5.574$

Greater mean: 213.16

Lesser mean: 210.83

Difference: 2.33

$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{9.19^2 + 5.57^2}$

$= \sqrt{84.4561 + 31.0249} = \sqrt{115.4810} = 10.746$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{2.33}{10.746} = .217$

Hence P = lies between .84 and .69

Calculation checked ? Yes.

Calculation:
Serial No: C...62.....

Source Data
Serial No: D..14.....

Type of Score: Bernreuter FIC (Confidence) Score (+200).....

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Subjects scoring 2 or more A Hits (All judges uncorrected).....

N	ΣX	ΣX^2
24	4,318	916,888

$$M_X = \frac{4,318}{24} = 179.917$$

$$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$$

$$= \sqrt{\frac{916,888}{24} - (179.917)^2}$$

$$= \sqrt{38203.6^r - 32,370.127}$$

$$= \sqrt{5,833.54} = 76.377$$

$$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$$

$$= \frac{76,38}{\sqrt{23}}$$

$$= \frac{76.38}{4.796} = 15.9258$$

Group (b) Subjects scoring..... no A Hits.....

N	ΣY	ΣY^2

$M_Y =$ ——— $= 213.16$

$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$

$= \sqrt{\text{———} - (\quad)^2}$

$= \sqrt{\quad -}$

$= \sqrt{\quad} = 87.24$

$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$

$= \sqrt{\quad}$

$= \text{———} = 5.574$

Greater mean: 213.16

Lesser mean: 179.917

Difference: 33.24

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{15.93^2 + 5.57^2}$$

$$= \sqrt{253.7649 + 31.0249} = \sqrt{284.7898} = 16.87$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{33.24}{16.87} = 1.97$

Hence P = lies between .5 and .045

Calculation checked ? Yes.

Calculation Serial No: C. 63 Source Data Serial No: D. 14

Type of Score: Bernreuter F2S Sociability Scores (+200)

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1, 2 or 3 A Type Hits (All judges, uncorrected).

Group (b) Scoring no A Type Hits.

	N	ΣX	ΣX^2
(a)	103	19,623	4,063,667
(b)	246	47,918	10,067,724

$$M_X = \frac{19,623}{103} = 190.51$$

$$M_Y = \frac{47,918}{246} = 194.79$$

$$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$$

$$= \sqrt{\frac{4,063,667}{103} - (190.51)^2}$$

$$= \sqrt{39,453.08 - 36,295.81}$$

$$= \sqrt{3,157.27} = 56.19$$

$$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$$

$$= \sqrt{\frac{10,067,724}{246} - (194.79)^2}$$

$$= \sqrt{40,925.71 - 37,942.60}$$

$$= \sqrt{2,983.11} = 54.62$$

$$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$$

$$= \frac{56.19}{\sqrt{102}}$$

$$= \frac{56.19}{10.1} = 5.563$$

$$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$$

$$= \frac{54.62}{\sqrt{245}}$$

$$= \frac{54.62}{15.65} = 3.490$$

Greater mean: 194.79

Lesser mean: 190.51

Difference: 4.28

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{5.56^2 + 3.49^2}$$

$$= \sqrt{30.9136 + 12.1801} = \sqrt{43.0937} = 6.56$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{4.28}{6.56} = .65$

Hence P lies between .55 and .42

Calculation checked ? Yes.

Calculation Serial No: C....64..... Source Data Serial No: D....14.....

Type of Score: Bernreuter F23 Sociability Scores (+200).

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 2 or 3 A type Hits, (All judges, uncorrected).

Group (b) Scoring no A Hits.

	Group (a)	Group (b)
N	24	
ΣX	4,426	
ΣX^2	894,294	
ΣY		
ΣY^2		

$$M_X = \frac{4,426}{24} = 184.417$$

$$M_Y = \frac{\quad}{\quad} = 194.79$$

$$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$$

$$= \sqrt{\frac{894,294}{24} - (184.417)^2}$$

$$= \sqrt{37,262.25 - 34,009.81}$$

$$= \sqrt{3,252.44} = 57.03$$

$$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$$

$$= \sqrt{\frac{\quad}{\quad} - (\quad)^2}$$

$$= \sqrt{\quad - \quad}$$

$$= \sqrt{\quad} = 54.62$$

$$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$$

$$= \frac{57.03}{\sqrt{23}}$$

$$= \frac{57.03}{4.796} = 11.891$$

$$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$$

$$= \frac{\quad}{\sqrt{\quad}}$$

$$= \frac{\quad}{\quad} = 3.490$$

Greater mean: 194.79

Lesser mean: 184.417

Difference: 10.373

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{11.89^2 + 3.49^2}$$

$$= \sqrt{141.3721 + 12.1801} = \sqrt{153.5522} = 12.391$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{10.373}{12.39} = .84$

Hence P lies between .42 and .32

Calculation checked ? Yes.

Calculation: Serial No: C. 65 ..... Source Data Serial No: D. 14 .....

Type of Score: Bernreuter B3I (Introversion) Scores (+200).

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) ..... Scoring 1, 2 or 3 A Type Hits. (All judges - uncorrected).	Group (b) ..... Scoring no A Type Hits. .....
N = 103	N = 246
ΣX = 19,436	ΣY = 46,529
ΣX^2 = 3,898,744	ΣY^2 = 10,111,923
$M_X = \frac{19,436}{103} = 188.699$	$M_Y = \frac{46,529}{246} = 197.27$
$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$
$= \sqrt{\frac{3,898,744}{103} - (188.70)^2}$	$= \sqrt{\frac{10,111,923}{246} - (197.27)^2}$
$= \sqrt{37,851.88 - 35,607.69}$	$= \sqrt{41,105.38 - 38,915.45}$
$= \sqrt{2,244.19} = 47.37$	$= \sqrt{2,189.93} = 46.797$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{47.37}{\sqrt{102}}$	$= \frac{46.80}{\sqrt{245}}$
$= \frac{47.37}{10.1} = 4.690$	$= \frac{46.80}{15.65} = 2.990$

Greater mean: 197.27

Lesser mean: 188.70

Difference: 8.57

$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{4.69^2 + 2.99^2}$

$= \sqrt{21.9961 + 8.9401} = \sqrt{30.9362} = 5.563$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{8.57}{5.563} = 1.54$

Hence P lies between .16 and .11

Calculation checked ? Yes.

Calculation: Source Data
Serial No: C.....66..... Serial No: D.14.....

Type of Score: **Bernreuter B3I (Introversion) Scores. (200).**

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) **Scoring 2 or 3 A Type Hits. (All judges uncorrected).**	Group (b) **Scoring no A Hits.**
N = 24	N = 246
ΣX = 4,034	ΣY = 48,529
ΣX^2 = 714,612	ΣY^2 = 10,111,923
$M_X = \frac{4,034}{24} = 168.08$	$M_Y =$ ——— $= 197.27$
$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$	$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$
$= \sqrt{\frac{714,612}{24} - (168.08)^2}$	$= \sqrt{\text{———} - (\quad)^2}$
$= \sqrt{29,775.5 - 28,250.89}$	$= \sqrt{\quad -}$
$= \sqrt{1,524.61} = 39.05$	$= \sqrt{\quad} = 46.80$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{39.05}{\sqrt{23}}$	$= \frac{\quad}{\sqrt{\quad}}$
$= \frac{39.05}{4.796} = 8.142$	$= \text{———} = 2.990$

Greater mean: 197.27

Lesser mean: 168.08

Difference: 29.19

$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{8.14^2 + 2.99^2}$

$= \sqrt{63.2596+8.9401} = \sqrt{75.1997} = 8.672$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{29.19}{8.67} = 3.37$

Hence P lies between .01 and .007

Calculation checked ? Yes.

Calculation Serial No: C. 67 ..... Source Data Serial No: D. 14 .....

Type of Score: Bernreuter F1C Confidence Scores (+200). .....

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1 A Hit. (All judges, uncorrected).	Group (b) Scoring o or 1 A Hits.
N 79 $\quad \sum X$ 17,398 $\quad \sum X^2$ 4,548,814	N 325 $\quad \sum Y$ 69,835 $\quad \sum Y^2$ 17,598,575
$M_X = \frac{17,398}{79} = 220.23$	$M_Y = \frac{69,835}{325} = 214.88$
$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$
$= \sqrt{\frac{4,548,814}{79} - (220.23)^2}$	$= \sqrt{\frac{17,598,575}{325} - (\frac{69,835}{325})^2}$
$= \sqrt{57,579.92 - 48,501.25}$	$= \sqrt{54,149.46 - 46,173.41}$
$= \sqrt{9,078.67} = 95.28$	$= \sqrt{7,976.05} = 89.31$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{95.28}{\sqrt{78}}$	$= \frac{89.31}{\sqrt{324}}$
$= \frac{95.28}{8.832} = 10.788$	$= \frac{89.31}{18.00} = 4.962$

Greater mean: 220.23

Lesser mean: 214.88

Difference: 5.35

$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{10.79^2 + 4.96^2}$

$= \sqrt{116.4241 + 24.6016} = \sqrt{141.0257} = 11.875$

Critical Ratio $= \frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{5.35}{11.87} = .45$

Hence P lies between .69 and .55

Calculation checked ? Yes.

Calculation Serial No: C. 68 Source Data Serial No: D.14

Type of Score: Bernreuter F1C Confidence Scores. (+200).

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1 A Hit. (All judges, uncorrected).	Group (b) Scoring 2 or more A Hits.
N = 79	N = 24
ΣX = 17,398	ΣY = 4,318
ΣX^2 = 4,548,814	ΣY^2 = 916,888
$M_X = \frac{\Sigma X}{N} = 220.23$	$M_Y = \frac{\Sigma Y}{N} = 179.92$
$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$	$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$
$= \sqrt{\quad - (\quad)^2}$	$= \sqrt{\quad - (\quad)^2}$
$= \sqrt{\quad -}$	$= \sqrt{\quad -}$
$= \sqrt{\quad} = 95.28$	$= \sqrt{\quad} = 76.38$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{95.28}{\sqrt{78}}$	$= \frac{76.38}{\sqrt{23}}$
$= \frac{95.28}{8.832} = 10.788$	$= \frac{76.38}{4.796} = 15.9258$

Greater mean: 220.23

Lesser mean: 179.92

Difference: 40.31

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{10.79^2 + 15.93^2}$$

$$= \sqrt{116.4241 + 253.7649} = \sqrt{370.1890} = 19.24$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{40.31}{19.24} = 2.09$

Hence P lies between .036 and .045

Calculation checked ? Yes.

Calculation:
Serial No: C.....69.....

Source Data
Serial No: D..14.....

Type of Score: Bernreuter B3I ..(+200).....

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a). Scoring no A Hits.	Group (b). Scoring ..1. A Hits..
.....	.....
.....	.....
N = 246	N = 79
ΣX = 48,529	ΣY = 15,402
ΣX^2 = 10,111,923	ΣY^2 = 3,184,132
$M_X = \frac{\Sigma X}{N} = \frac{48,529}{246} = 197.27$	$M_Y = \frac{15,402}{79} = 194.96$
$\sigma_X = \sqrt{M_X^2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y^2 - (M_Y)^2}$
$= \sqrt{\frac{\quad}{\quad} - (\quad)^2}$	$= \sqrt{\frac{3,184,132}{79} - (194.96)^2}$
$= \sqrt{\quad -}$	$= \sqrt{40,305.47 - 38,009.40}$
$= \sqrt{\quad} = 46.80$	$= \sqrt{2,296.07} = 47.92$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{46.80}{\sqrt{245}}$	$= \frac{47.92}{\sqrt{78}}$
$= \frac{46.80}{15.65} = 2.990$	$= \frac{47.92}{8.832} = 5.43$

Greater mean: 197.27

Lesser mean: 194.96

Difference: 2.31

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{2.992^2 + 5.43^2}$$

$$= \sqrt{8.9401 + 29.4849} = \sqrt{38.4250} = 6.199$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{2.31}{6.199} = .37$

Hence P lies between .84 and .69

Calculation checked ? Yes.

Calculation Serial No: C. 70 Source Data Serial No: D. 14

Type of Score: Bernreuter B3I Scores. (+200).

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1 A Hit. (All judges, uncorrected).	Group (b) Scoring 1 or more A Hits.
N = 79	N = 103
ΣX = 15,402	ΣY = 19,436
ΣX^2 = 3,184,132	ΣY^2 = 3,898,744
$M_X = \frac{\Sigma X}{N} = 194.96$	$M_Y = \frac{\Sigma Y}{N} = 188.699$
$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$
$= \sqrt{\quad - (\quad)^2}$	$= \sqrt{\quad - (\quad)^2}$
$= \sqrt{\quad -}$	$= \sqrt{\quad -}$
$= \sqrt{\quad} = 47.92$	$= \sqrt{\quad} = 47.37$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{47.92}{\sqrt{78}}$	$= \frac{47.37}{\sqrt{102}}$
$= \frac{47.92}{8.832} = 5.43$	$= \frac{47.37}{10.1} = 4.690$

Greater mean: 194.96

Lesser mean: 188.699

Difference: 6.261

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{5.43^2 + 4.69^2}$$

$$= \sqrt{29.4849 + 21.9961} = \sqrt{51.4810} = 7.175$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{6.261}{7.175} = .87$

Hence P lies between .42 and .32

Calculation checked ? Yes.

Calculation Serial No: C.....71..... Source Data Serial No: D.14.....

Type of Score: Bernreuter B3I Scores. (+200).....

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1 A Hit. (All judges, uncorrected).	Group (b) Scoring 2 or more A Hits.
N = 79	N = 24
ΣX = 15,402	ΣY = 4,034
ΣX^2 = 3,184,132	ΣY^2 = 714,612
$M_X = \frac{\Sigma X}{N} = 194.96$	$M_Y = \frac{\Sigma Y}{N} = 168.08$
$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$	$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$
$= \sqrt{\quad\quad - (\quad\quad)^2}$	$= \sqrt{\quad\quad - (\quad\quad)^2}$
$= \sqrt{\quad\quad -}$	$= \sqrt{\quad\quad -}$
$= \sqrt{\quad\quad} = 47.92$	$= \sqrt{\quad\quad} = 39.05$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{47.92}{\sqrt{78}}$	$= \frac{39.05}{\sqrt{23}}$
$= \frac{47.92}{8.832} = 5.43$	$= \frac{39.05}{4.796} = 8.142$

Greater mean: 194.96

Lesser mean: 168.08

Difference: 26.88

$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{5.43^2 + 8.14^2}$

$= \sqrt{29.4849 + 66.2596} = \sqrt{95.7445} =$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{26.88}{9.785} = 2.75$

Hence P lies between .007 and .005 Calculation checked ? Yes.

Calculation Serial No: C.....72..... Source Data Serial No: D..14.....

Type of Score: Bernreuter B3I Scores. (+200).....

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1, 2 or more	Group (b) Scoring 2 or more
A Hits....(All judges, uncorrected).....	A Hits. .....
N = 103	N = 24
ΣX = 19,436	ΣY = 4,034
ΣX^2 = 3,898,744	ΣY^2 = 714,612.
$M_X = \frac{\Sigma X}{N} = 188.699$	$M_Y = \frac{\Sigma Y}{N} = 168.08$
$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$	$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$
$= \sqrt{\frac{\Sigma X^2}{N} - (\quad)^2}$	$= \sqrt{\frac{\Sigma Y^2}{N} - (\quad)^2}$
$= \sqrt{\quad -}$	$= \sqrt{\quad -}$
$= \sqrt{\quad} = 47.37$	$= \sqrt{\quad} = 39.05$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{\quad}{\sqrt{\quad}}$	$= \frac{39.05}{\sqrt{23}}$
$= \frac{\quad}{\quad} = 4.69$	$= \frac{39.05}{4.796} = 8.142$

Greater mean: 188.699

Lesser mean: 168.08

Difference: 20.619

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{4.69^2 + 8.14^2}$$

$$= \sqrt{21.9961 + 66.2596} = \sqrt{88.2557} = 9.394$$

Critical Ratio $= \frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{20.619}{9.394} = 2.19$

Hence P lies between .036 and .028 Calculation checked ? Yes.

Calculation Serial No: C. 73 Source Data Serial No: D. 14

Type of Score: Bernreuter Introversion B3I Scores. (+200).

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring no A Hits in the Main Experiment.	Group (b) Scoring 2 or more ESO or CSO titles in the Prelimnary Frequency Experiment.
N = 246	N = 15
ΣX = 48,529	ΣY = 2,885
ΣX^2 = 10,111,923	ΣY^2 = 576,265
$M_X = \frac{\Sigma X}{N} = 197.27$	$M_Y = \frac{\Sigma Y}{N} = 192.33$
$\sigma_X = \sqrt{M_{X^2} - (M_X)^2}$	$\sigma_Y = \sqrt{M_{Y^2} - (M_Y)^2}$
$= \sqrt{\quad - (\quad)^2}$	$= \sqrt{\quad - (\quad)^2}$
$= \sqrt{\quad -}$	$= \sqrt{\quad -}$
$= \sqrt{\quad} = 46.80$	$= \sqrt{\quad} = 37.77$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{46.80}{\sqrt{245}}$	$= \frac{37.77}{\sqrt{14}}$
$= \frac{\quad}{\quad} = 2.990$	$= \frac{37.77}{3.742} = 10.093$

Greater mean: 197.27

Lesser mean: 192.33

Difference: 4.94

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{2.99^2 + 10.09^2}$$

$$= \sqrt{8.9401 + 101.8081} = \sqrt{110.7482} = 10.52$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{4.94}{10.52} = .47$

Hence P = Chances in 100 that this difference is greater than zero lies between 69 and 67.

Calculation checked ? Yes.

Calculation Serial No: C. 74 ..... Source Data Serial No: D. 14 .....

Type of Score: Bernreuter Introversion B3I Score. (+200). .....

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) ..... Subjects scoring two or more A Hits in Main ..... Experiment.	Group (b) ..... Subjects suggesting two or more ESO or CSO Original ..... titles in Preliminary Frequency Experiment. .....
N_{24} ΣX 4,034 ΣX^2 714,612	N 15 ΣY 2,885 ΣY^2 576,265
$M_X = \frac{4,034}{24} = 168.08$	$M_Y = \frac{2,885}{15} = 192.33$
$\sigma_X = \sqrt{M_X^2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y^2 - (M_Y)^2}$
$= \sqrt{\quad - (\quad)^2}$	$= \sqrt{\frac{576,265}{15} - (192.33)^2}$
$= \sqrt{\quad -}$	$= \sqrt{38,417.67 - 36,990.83}$
$= \sqrt{\quad} = 39.05$	$= \sqrt{1,426.84} = 37.77$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{\quad}{\sqrt{\quad}}$	$= \frac{37.77}{\sqrt{14}}$
$= \frac{\quad}{\quad} = 8.142$	$= \frac{37.77}{3.742} = 10.093$

Greater mean: 192,33

Lesser mean: 168.08

Difference: 24.25

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{8.14^2 + 10.09^2}$$

$$= \sqrt{66.2596 + 101.8081} = \sqrt{168.1068} = 12.96$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{24.25}{12.96} = 1.87$

Hence = chances are between 97 and 98 in 100 that true difference is greater that zero.

Calculation checked ? Yes.

Calculation Serial No: C. 75 Source Data Serial No: D. 14

Type of Score: Bernreuter B3I Introversion Scores. (+200).

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1 or more A Hits in Main Experiment.	Group (b) Suggesting 1 or more CSO or ESO titles in Preliminary Frequency Experiment.
N = 103	N = 84
ΣX = 19436	ΣY = 15,955
ΣX^2 = 3,898,744	ΣY^2 = 3,197,249
$M_X = \frac{\Sigma X}{N} = 188.699$	$M_Y = \frac{\Sigma Y}{N} = 189.94$
$\sigma_X = \sqrt{M_X 2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y 2 - (M_Y)^2}$
$= \sqrt{\quad - (\quad)^2}$	$= \sqrt{\quad - (189.94)^2}$
$= \sqrt{\quad -}$	$= \sqrt{38,062.49 - 36,077.20}$
$= \sqrt{\quad} = 47.37$	$= \sqrt{1,985.29} = 44.56$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{\quad}{\sqrt{\quad}}$	$= \frac{44.56}{\sqrt{84-1=83}}$
$= \frac{\quad}{\quad} = 4.690$	$= \frac{44.56}{9.11} = 4.89$

Greater mean: 189.94

Lesser mean: 188.699

Difference: 1.241

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{4.59^2 + 4.89^2}$$

$$= \sqrt{21.0681+23.9121} = \sqrt{44.9802} = 6.707$$

$$\text{Critical Ratio} = \frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{1.24}{6.707} = .18$$

Hence I ::there are between 56 and 58 chances in 100 that the difference is significant.

Calculation checked ? Yes.

Calculation Serial No: C.....76..... Source Data Serial No: D.14.....

Type of Score: Bernreuter B3I Introversion Score. (+200).

Assessment of the significance of the difference in mean scores of the two groups shown below:

Group (a) Scoring 1 A Hit in Main Experiment.	Group (b) Scoring 1 title suggestion in Prelimnary Frequency Experiment.
N	N
ΣX	ΣY
ΣX^2	ΣY^2
	69
	13,070
	2,620,984
$M_X = \frac{\quad}{\quad} = 194.96$	$M_Y = \frac{13,070}{69} = 189.42$
$\sigma_X = \sqrt{M_X^2 - (M_X)^2}$	$\sigma_Y = \sqrt{M_Y^2 - (M_Y)^2}$
$= \sqrt{\frac{\quad}{\quad} - (\quad)^2}$	$= \sqrt{\frac{\quad}{\quad} - (189.42)^2}$
$= \sqrt{\quad -}$	$= \sqrt{37,985.27 - 35,879.94}$
$= \sqrt{\quad} = 47.92$	$= \sqrt{2,105.33} = 45.88$
$\sigma_{M_X} = \frac{\sigma_X}{\sqrt{N-1}}$	$\sigma_{M_Y} = \frac{\sigma_Y}{\sqrt{N-1}}$
$= \frac{\quad}{\sqrt{\quad}}$	$= \frac{45.88}{\sqrt{68}}$
$= \frac{\quad}{\quad} = 5.43$	$= \frac{45.88}{8.246} = 5.56$

Greater mean: 194.96

Lesser mean: 189.42

Difference: 5.54

$$\sigma_{diff} = \sqrt{\sigma_{M_X}^2 + \sigma_{M_Y}^2} = \sqrt{5.43^2 + 5.56^2}$$

$$= \sqrt{29.4849 + 30.9136} = \sqrt{60.3985} = 7.772$$

Critical Ratio = $\frac{\text{Diff. in means}}{\sigma_{diff.}} = \frac{5.54}{7.772} = .71$

Hence P = there are between 76 and 77 chances in 100 that the difference is significant.

Calculation checked ? Yes.

Calculation Serial No: C 77 Source data serial No: D 15

Bernreuter EIC (Confidence) Scores for groups of subjects in terms of Uncorrected A Hits. (Including subjects not returning all 50 drawings, but excluding subjects returning no drawings at all).

Combination of a) Group scoring 2 or more A Hits (N=24) with
b) Group scoring 0 A Hits. (N=246) Total N= 270
giving a median score falling between the 135th and 136th score, i.e. between the step intervals 11 and 12. Splitting the groups 12 to 289 and 11 to -185 gives the following frequencies:

	S's above Median		S's below Median		Totals
Group scoring 0 A Hits	A	127	B	119	246
Group scoring 2 or more Hits.	C	8	D	16	24
Totals		135		135	270

Smallest theoreticalfrequency $^{C}t = 135 \times 24 \div 270 = >5$

$(A+B)(C+D)(A+C)(B+D) = 246 \times 24 \times 135 \times 135 = 107,600,400$

$|AD-BC| = 2,032-952 = 1,080 \quad 1,080^2 = 1,166,400 \times N = 314,928,000$

$\frac{1}{2}N = 135 \quad 1080-135 = 945 \quad 945^2 = 893,025 \times N = 241,116,750$

$$\chi^2 = \frac{314,928,000}{107,600,400} \qquad \chi^2 = \frac{241,116,750}{107,600,400}$$

$$= 2.93 \qquad = 2.24 \text{ (1df)}$$

P lies between .1 and .05 .2 and .1

Calculation checked? Yes.

Calculation Serial Number: C. 78 Source Data Serial Number: D 15.

Bernreuter FIC Confidence Scores for Groups of Subjects in Terms of Uncorrected A Hits Scored.

(Excluding subjects returning less than 50 drawings in the Experiment).

Combination of: a) Groups scoring 2 or more A Hits (N = 21)

b) Groups scoring 0 A Hits (N = 192)

Total. (213)

gives a 107th median score falling in the step 15.5 to16.5. Discarding the 2 cases falling in this step gives the following frequencies:

	Subjects above Median	Subjects below Median	Totals.
Group scoring 2 or more A Hits	A 7	B 14	21
Group scoring 0 A Hits	C 98	D 92	190
Totals	105	106	211

Smallest expected frequency A_t = 105 x 21 ÷ 211 = >5

$(A+B)(C+D)(A+C)(B+D)$ = 21 x 190 x 105 x 106

= 44,408,700

$|AD - BC|$ = 1,372 - 644 = 728

728^2 = 529,984

$\frac{1}{2}N = 105.5$ 529,984 x N = 111,826,624

728 - 105.5 = 622.5

622.5^2 = 387,506.25

387,506.25 x N = 81,763,818.75

$\frac{111,826,624}{44,408,700}$ = 2.52 (1df)

P les between .2 and .1

$\frac{81,763,818.75}{44,408,700}$ = 1.84 (1df)

P les between .2 and .1

Calculation Checked? Yes.

Calculation Serial Number: C 79. Source Data Serial Number: D 15.

Bernreuter B3I Introversion Scores for Groups of Subjects in Terms of Uncorrected A Hits Scored.

(Including subjects not returning full 50 drawings but excluding those returning no drawings.)

Combination of: a) Group scoring 2 or more A Hits (N=24) with
b) Group scoring 0 A Hits (N=246)
Total (270)

gives a median score falling between the 135th and 136th score in the step interval - 8.5 to - 9.5. After discarding 4 scores falling in this step, the following frequency of scores is observed:

	Number of Scores above Median		Number of Scores below Median		Total
Group scoring no A Hits	A	126	B	116	242
Groups scoring 2 or more A Hits	C	7	D	17	24
		133		133	266

Smallest theoretical frequency: ^{C}t = 133 x 24 ÷ 266 = >5

$(A+B)(C+D)(A+C)(B+D)$ = 242 x 24 x 133 x 133

= 102,737,712

$|AD - CB|$ = 2142 - 812 = 1330

1330^2 = 1,768,900

1,768,900 x N = 470,527,400

$\frac{1}{2}N = 133$ 1330 - 133 = 1197

1197^2 = 1,432,809

1,432,809 x N = 381,127,194.

$\frac{470,527,400}{102,737,712}$ = 4.58 (1df)

P lies between .05 and .02

$\frac{381,127,194}{102,737,712}$ = 3.71 (1df)

P lies between .1 and .05

Calculation checked?
Yes.

Calculation Serial Number: C. 80 Source Data serial Number: D 15.

Bernreuter B3I Scores for groups of subjects in terms of uncorrected A Hits scored.
(Excluding subjects who did not return 50 drawings).

Combination of: a) Group scoring 2 or more A Hits.(N = 21)
b) Group scoring 0 A Hits . (N = 192)
gives a median score falling at the 107th score, in the step interval 9.5 to 8.5. Discarding the 3 scores falling in this interval gives N = 210 and the following frequencies:

	Number of Score above Median	Number of Scores below Median	Total
Group scoring no A Hits	A 98	B 91	189
Group scoring 2 or more A Hits.	C 7	D 14	21
	105	105	N = 210

Smallest expected frequency: $C_t = 105 \times 21 \div 210 = > 5$

$(A+B)(C+D)(A+C)(B+D)$ $= 189 \times 21 \times 105 \times 105$

$= 43,758,225$

$|AD - BC|$ $1,372 - 637 = 735$

$735^2 = 540,225$

$540,225 \times N = 113,447,250$

$\frac{1}{2}N = 105$ $735 - 105 = 630$

$630^2 = 396,900$

$396,900 \times N = 83,349,000$

$$\frac{113,447,250}{43,758,225} = 2.59 \text{ (1df)}$$

P lies between .2 and .1

$$\frac{83,349,000}{43,758,225} = 1.90 \text{ (1df)}$$

P lies between .2 and .1

Calculation checked? Yes.

Calculation
Serial No: C81

Source data sheets
not reproduced.

Comparison of the number of A hits (All judges, uncorrected), scored by Sheep, Goat and Open-minded subjects with the numbers to be expected on a chance basis.

Observed frequencies:

Subjects:	Total Trials	Hits	Misses	Hit av. per trial
Goats:	2,798	17	2,781	.006076
Open-minded:	7,778	61	7,717	.007843
Sheep:	6,505	54	6,451	.008301
Totals:	17,081	132	16,949	

Expected frequencies from chance:

Goats should score $\frac{2,798}{17,081}$ of the total hits.

$= \frac{132}{1} \times \frac{2,798}{17,081} = \frac{369,336}{17,081} =$ 21.6226 hits.

Hence expected misses = 2,798 - 21.6226 = 2,776.3774 misses

Open-minded should score $\frac{7,778}{17,081}$ of the total hits.

$= \frac{132}{1} \times \frac{7,778}{17,081} = \frac{1,026,696}{17,081} =$ 60.1075 hits.

Hence misses = 7,778 - 60.1075 = 7,717.8925 misses

Sheep should score $\frac{6,505}{17,081}$ of the total hits.

$= \frac{132}{1} \times \frac{6,505}{17,081} = \frac{858,660}{17,081} =$ 50.2699 hits.

Hence misses = 6,505 - 50.2699 = 6,454.7301 misses

		Hits:	Misses	Totals:
Goats:	Observed:	17	2,781	
	Expected:	21.6226	2,776.3774	2,798
	Difference:	4.6226	4.6226	
Open-minded:	Observed:	61	7,717	
	Expected:	60.1075	7,717.8925	7,778
	Difference:	0.8925	0.8925	
Sheep	Observed:	54	6,451	
	Expected	50.2699	6,454.7301	6,505
	Difference	3.7301	3.7301	
TOTALS:		132	16,949	17,081

Calculation
serial No: C81 continued: page 2.

A Chi-square value is found for each cell from the formula: $\frac{(\text{Difference})^2}{\text{Expected frequency}}$.

For the Goats: $= \frac{4.6226^2}{21.6226} + \frac{4.6226^2}{2,776.3774}$

$= \frac{21.3684}{21.6226} + \frac{21.3684}{2,776.3774}$

$= .9882 + .0077$

For the Open-minded: $= \frac{.8925^2}{60.1075} + \frac{.8925^2}{7,717.8925}$

$= \frac{.7965}{60.1075} + \frac{.7965}{7,717.8925}$

$= .0133 + .0001$

For the Sheep: $= \frac{3.7301^2}{50.2699} + \frac{3.7301^2}{6,454.7301}$

$= \frac{13.9136}{50.2699} + \frac{13.9136}{6,454.7301}$

$= .2768 + .0021$

The Chi-square values for each cell are therefore as follows:

Subject category:	Hits:	Misses:	Chi square total:
Goats:	.9882	.0077	
Open-minded:	.0133	.0001	
Sheep:	.2768	.0021	
Totals:	1.2783	.0099	1.2882

Since both row and column totals are fixed, the degrees of freedom are given by the formula: d.f. = (r - 1)(c - 1) where r is the number of rows, and c the number of columns.

Hence d.f. = (3 - 1)(2 - 1) = 2 X 1 = 2 degrees of freedom

Entering Fisher's table of Chi-square, with $\chi^2 = 1.2882$ and two degrees of freedom we find

P lies between .70 and .50
which is not significant.

Calculation checked ? Yes.

Calculation
Serial No: C82

Source Data
Sheets not reproduced.

Comparison of the number of A hits (all judges, uncorrected) scored by the Sheep and Goat subjects only, with the frequencies that would be expected on a chance basis. (Open-minded subjects have been excluded from this calculation.)

Observed frequencies:

Subject category:	Total trials	Hits	Misses	Hit av. per trial
Goats:	2,798	17	2,781	.006076
Sheep:	6,505	54	6,451	.008301
Totals:	9,303	71	9,232	

Expected frequencies:

Goats: $\frac{2,798}{9,303} \times \frac{71}{1} = \frac{198,658}{9,303} =$ 21.3542 hits.

Hence misses = 2,798 - 21.3542 = 2,776.6458 misses.

Sheep: $\frac{6,505}{9,303} \times \frac{71}{1} = \frac{461,855}{9,303} =$ 49.6458 hits

Hence misses:= 6,505 - 49.6458 = 6,455.3542 misses.

Subject category:		Hits:	Misses:	Totals:
Goats:	Observed:	17	2,781	2,798
	Expected	21.3542	2,776.6458	
	Difference:	4.3542	4.3542	
Sheep:	Observed:	54	6,451	6,505
	Expected:	49.6458	6,455.3542	
	Difference	4.3542	4.3542	
	Totals:	71	9,232	9,303

A χ^2 value is found for each cell of this table from the formula:-

$$\frac{\text{Difference}^2}{\text{Expected frequency.}}$$

Calculation
Serial No: 082 continued: page 2.

For the Goats:	Hits:	Misses:
	$\frac{4.3542^2}{21.3542}$	$\frac{4.3542^2}{2,776.6458}$
	$\frac{18.9591}{21.3542}$	$\frac{18.9591}{2,776.6458}$
	.8878	.0068

For the Sheep:		
	$\frac{4.3542^2}{49.6458}$	$\frac{4.3542^2}{6,445.3542}$
	$\frac{18.9591}{49.6458}$	$\frac{18.9591}{6,445.3542}$
	.3819	.0029

Summing these values gives:

$$.8878 + .0068 + .3819 + .0029 = 1.2794$$

Since both row and column totals are fixed, the number of degrees of freedom $= (r - 1)(c - 1)$

$= (2 - 1)(2 - 1)$

$= 1 \times 1 = 1$

Entering appropiate tables of Chi square, with $\chi^2 = 1.2794$ and one degree of freedom we find

P lies between .30 and .20

Calculation
checked ? Yes.

Calculation
Serial No: C83

Source data sheets not reproduced.

Comparison of the number of sheep and goats falling in:
(a) The group scoring no A hits } All judges
(b) The group scoring 1 or more A hits } uncorrected.
with the numbers to be expected on a chance basis.

Expected numbers in each category for Sheep from chance alone: $\frac{134}{191}$ = .701571 of total.

N for group sans A hits = 134 134 X .701571 = 94.01

N for 1 or more group = 57 57 X .701571 = 39.99

Expected numbers in each category for Goats from chance alone: $\frac{57}{191}$ = .298429 of total.

N for group sans A hits = 134 134 X .298429 = 39.99

N for group 1 or more = 57 57 X .298429 = 17.01

Subject Category:		No: of S's in group sans A hits	No: of S's in group scoring A hits:	Totals:
Sheep:	Observed	91	43	134
	Expected	94.01	39.99	
	Difference	3.01	3.01	
Goats	Observed	43	14	57
	Expected	39.99	17.01	
	Difference	3.01	3.01	
Totals		134	57	191

$$\chi^2 = \frac{3.01^2}{94.01} + \frac{3.01^2}{39.99} + \frac{3.01^2}{39.99} + \frac{3.01^2}{17.01}$$

$$= \frac{9.0601}{94.01} + \frac{9.0601}{39.99} + \frac{9.0601}{39.99} + \frac{9.0601}{17.01}$$

$$= .10 + .23 + .23 + .53 = 1.09$$

Hence χ^2 = 1.09 with one degree of freedom.

P lies between .50 and .20

Calculation checked ? Yes.

Calculation
Serial No: C84

Source Data Sheets
not reproduced.

Calculation of the Quartile Deviation Q for the Washburne Subtotal Adjustment scores for men.

Step Intervals:			Frequency:
30	to	44	0
45		59	0
60		74	18
75		89	33
90		104	35
105		119	42
120		134	36
135		149	11
150		164	5
165		179	13
180		194	4
195		209	2
210		224	1
225		259	0
240		254	1
255		269	0
270		285	1
			202

N = 202

Step Interval = 15

Calculation of Q_1: Quota $= \frac{N}{4} = \frac{202}{4} = 50.5$

To the beginning of step (75 to 89) gives 18 cases, leaving a deficit of 32.5 still required.

$$Q_1 = \text{(Beginning of step)} + \frac{\text{Deficit}}{\text{No. of cases in step}} \times \frac{\text{Step interval}}{1}$$

$$= 74.6 + \frac{32.5}{33} \times \frac{15}{1} = 74.6 + 14.77 = \underline{89.37}$$

Calculation of Q_3 Quota $= \frac{3N}{4} = \frac{202}{1} \times \frac{3}{4} = 151.5$

To the beginning of step (120 to 134) gives 128 cases, leaving a deficit of 23.5

$$Q_3 = 119.6 + \frac{23.5}{36} \times \frac{15}{1} = 119.6 + \frac{352.5}{36}$$

$$= 119.6 + 9.79 = \underline{129.39}$$

$$\text{Hence } Q = \frac{Q_3 \text{ minus } Q_1}{2} = \frac{129.39 - 89.37}{2} = \frac{40.02}{2}$$

$$= 20.01$$

Thus the best adjusted 25% get scores of 89 and less
The worst adjusted 25% get scores of 130 and more.

Calculation
Checked ? Yes.

Calculation
Serial No: C85.

Source Data Sheets
not reproduced.

Calculation of the Quartile Deviation Q, for the Washburne Subtotal Adjustment scores for women.

Step Intervals:			Frequency:
30	to	44	1
45		59	2
60		74	13
75		89	21
90		104	21
105		119	20
120		134	24
135		149	12
150		164	11
165		179	7
180		194	3
195		209	2
210		224	0
225		239	1
240		254	0
255		269	0
270		285	0
			138

N = 138

Step interval = 15.

Calculation of Q_1 Quota = $\frac{N}{4} = \frac{138}{4} = 34.5$ cases.

To the beginning of step (75 to 89) gives 16 cases, leaving a deficit of 18.5 cases. The step begins at 74.6

$$74.6 + \frac{18.5}{21} \times \frac{15}{1} = 74.6 + \frac{277.5}{21}$$

$$74.6 + 13.21 = 87.81$$

Calculation of Q_3 Quota = $\frac{N}{1} \times \frac{3}{4}$ $\frac{138}{1} \times \frac{3}{4} = 103.5$

To beginning of step (135 to 149) gives 102 cases, leaving a deficit of 1.5 cases still to get. The step begins at 134.6

$$134.6 + \frac{1.5}{12} \times \frac{15}{1} = 134.6 + \frac{22.5}{12}$$

$$134.6 + 1.875 = 136.47$$

Hence $Q = \frac{Q_3 - Q_1}{2} = \frac{136.47 - 87.81}{2} = \frac{48.66}{2} = 24.33$

Thus the best adjusted 25% get scores of 87 and less

The worst adjusted get scores of 136 and above.

Calculation
checked ? Yes.

Calculation Serial No: C86.

Source Data Sheets not reproduced.

Examination of the numbers of subjects rated Well Adjusted, Averagely Adjusted, and Poorly Adjusted on the Washburne Subtotal Score, falling into each of the three groups:-

(a) Group sans A hits.
(b) Group scoring 1 A hit.
(c) Group scoring 2 or more A hits.

} All judges, uncorrected.

to find whether the observed frequencies differ significantly from those to be expected on a chance basis.

Expected frequencies in each category if the numbers are distributed according to chance:

Well-adjusted: $\frac{88}{343}$ of the totals in each group. = .256,560

No A's: = 240 X .256,560 = 61.57 subjects

1 A: = 79 X .256,560 = 20.27

2 or more A's: = 24 X .256,560 = 6.16

Averagely adjusted: $\frac{164}{343}$ of the total no. of subjects in each group. = .478,134

No A's: = 240 X .478,134 = 114.75 subjects.

1 A: = 79 37.77

2 & 2+ = 24 11.47

Poorly adjusted: $\frac{91}{343}$ of the totals in each group. = .265,306

No A's: 240 X .265,306 = 63.67 subjects.

1 A: 79 20.96

2 & 2+ 24 6.37

Subject category:		No A Hits	1 A Hit	2 or more	Totals
Well-adjusted	Obs.	62	19	7	88
	Exp.	61.57	20.27	6.16	
	Diff.	.43	1.27	.84	
Averagely adjusted	Obs.	118	34	12	164
	Exp.	114.75	37.77	11.47	
	Diff.	3.25	3.77	.53	
Poorly adjusted	Obs.	60	26	5	91
	Exp.	63.67	20.96	6.37	
	Diff.	3.67	5.04	1.37	
Totals:		240	79	24	343

Calculation
Serial No: C86. continued. page 2.

The next step is to find the Chi-square value for each of the nine cells in the table as follows:-

$$\frac{.43^2}{61.57} = .00$$

$$\frac{1.27^2}{20.27} = .08$$

$$\frac{.84^2}{6.16} = .11$$

$$\frac{3.25^2}{114.75} = .09$$

$$\frac{3.77^2}{37.77} = .38$$

$$\frac{.53^2}{11.47} = .02$$

$$\frac{3.67^2}{65.67} = .21$$

$$\frac{5.04^2}{20.96} = 1.21$$

$$\frac{1.37^2}{6.57} = .29$$

$\underline{2.39}$ Total χ^2

Since both row and column totals are fixed, the degrees of freedom are given by the formula $(r - 1)(c - 1)$

$= (3 - 1)(3 - 1) = 2 \times 2 = \underline{4 \text{ d.f.}}$

Entering appropiate tables of Chi-square with $\chi^2 = 2.39$ and 4 degrees of freedom gives:

P lies between .70 and .50

Calculation
checked ? Yes.

Calculation
Serial No: C'87.

Source Data Sheets
not reproduced.

Calculation to find whether the 9 subject categories obtained by classifying subjects as "Sheep", "Goats" & "Open-minded", and "Well-adjusted", "Averagely-adjusted" and "Poorly-adjusted" show frequencies of scoring A hits per trial which differ significantly from those to be expected from chance.

Expected frequencies:

Well-adjusted:

Sheep:	$\frac{1,728}{16,679}$	=	.103,603	X	129	= 13.36 hits
Open-minded:	$\frac{1,897}{16,679}$	=	.113,736			14.67
Goats:	$\frac{670}{16,679}$	=	.040,170			5.18

Averagely-adjusted:

Sheep:	$\frac{2,804}{16,679}$	=	.168,115	21.69
Open-minded:	$\frac{3,892}{16,679}$	=	.233,347	30.10
Goats:	$\frac{1,242}{16,679}$	=	.074,465	9.61

Poorly-adjusted:

Sheep	$\frac{1,669}{16,679}$	=	.100,066	12.91
Open-minded:	$\frac{1,939}{16,679}$	=	.116,254	15.00
Goats:	$\frac{838}{16,679}$	=	.050,243	6.48

continued:

Calculation
Serial No: C87, continued, page 2.

Subject category		Hits	Misses	Totals:
Well adjusted Sheep	Obs.	14	1,714	
	Exp.	13.36	1,714.64	1,728
	Diff.	.64	.64	
Well-adjusted Open-minded:	Obs.	15	1,882	
	Exp.	14.67	1,882.33	1,897
	Diff.	.33	.33	
Well-adjusted Goats:	Obs.	5.	665	
	Exp.	5.18	664.82	670
	Diff.	.18	.18	
Averagely-adjusted Sheep:	Obs.	25	2,779	
	Exp.	21.69	2,782.31	2,804
	Diff.	3.31	3.31	
Averagely-adjusted Open-minded:	Obs.	27.	3,865	
	Exp.	30.10	3,861.90	3,892
	Diff.	3.10	3.10	
Averagely-adjusted Goats:	Obs.	6	1,236	
	Exp.	9.61	1,232.39	1,242
	Diff.	3.61	3.61	
Poorly-adjusted Sheep:	Obs.	13.	1,656	
	Exp.	12.91	1,656.09	1,669
	Diff.	.09	.09	
Poorly-adjusted Open-minded:	Obs.	18	1,921	
	Exp.	15.00	1,924.00	1,939
	Diff.	3.00	3.00	
Poorly-adjusted Goats:	Obs.	6.	832.	
	Exp.	6.48	831.52	838
	Diff.	.48	.48	
Totals:		129	16,550	16,679

Calculation
Serial No: C87, continued, page 3.

Chi-square totals for each cell are given by the formula: $\frac{\text{Difference}^2}{\text{Expected frequency.}}$

	Hits:		Misses:	
WAS	$\frac{.64^2}{13.36} = \frac{.4096}{13.36}$	.031	$\frac{.64^2}{1,714.64} = \frac{.4096}{1,714.64}$	.0002
WAO	$\frac{.33^2}{14.67} = \frac{.1089}{14.67}$	.007	$\frac{.33^2}{1,882.33} = \frac{.1089}{1,882.33}$	.0001
WAG	$\frac{.18^2}{5.18} = \frac{.0324}{5.18}$	.006	$\frac{.18^2}{664.82} = \frac{.0324}{664.82}$	.0000
AAS	$\frac{3.31^2}{21.69} = \frac{10.9561}{21.69}$	.505	$\frac{3.31^2}{2,782.31} = \frac{10.9561}{2,782.31}$	.0039
AAO	$\frac{3.10^2}{30.10} = \frac{9.61}{30.10}$	.319	$\frac{3.10^2}{3,861.90} = \frac{9.61}{3,861.90}$	.0025
AAG	$\frac{3.61^2}{9.61} = \frac{13.0321}{9.61}$	1.356	$\frac{3.61^2}{1,232.39} = \frac{13.0321}{1,232.39}$	.0106
PAS	$\frac{.09^2}{12.91} = \frac{.0081}{12.91}$	.001	$\frac{.09^2}{1,656.09} = \frac{.0081}{1,656.09}$	.0000
PAO	$\frac{3.00^2}{15.00} = \frac{9.00}{15.00}$	.600	$\frac{3.00^2}{1,924.00} = \frac{9.00}{1,924.00}$	.0047
PAG	$\frac{.48^2}{6.48} = \frac{.2304}{6.48}$	.035	$\frac{.48^2}{831.52} = \frac{.2304}{831.52}$	.0003

Total for whole table: 2.8823

Degrees of freedom for the whole table = (r - 1)(c - 1)

= (9 - 1)(2 - 1) = 8 X 1 = Eight degrees of freedom.

Entering appropriate tables with these values

P lies between .95 and .90

Calculation
checked ? Yes.

Calc. Serial No: C 88 Source data serial No: D Table XI

DREAM FREQUENCIES

Data:	E.S.P. Group	Non E.S.P. Group	Totals:
Once a week or less:	A 7	B 121	128
Oftener than once a week:	C 17	D 127	144
Totals:	24	248	272=N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be $>$ 5 It is: $E_a = 24 \times 128 \div 272 = < 5$

$(A+B)(C+D)(A+C)(B+D) = 128 \times 144 \times 24 \times 248 = 109,707,264$

$|AD-BC| = 889-2057=1168$ sq'd = 1,364,224 xN = 371,068,928

$-\frac{1}{2}N = 136$ 1168-136=1032 sq'd = 1,065,024 xN = 289,686,528

Uncorrected χ^2 (with 1 d.f.)

$\frac{371,068,928}{109,707,264} = 3.38$ (1 df)

P lies between: .1 and .05

Corrected χ^2 (with 1 d.f.)

$\frac{289,686,528}{109,707,264} = 2.64$ (1 df)

P lies between: .2 and .1

Calc. checked ? Yes.

Calc. serial No: C 89 Source data serial No: D Table XI

EXPERIENCE OF "SLIPPING AWAY".

Data	E.S.P. Group	Non E.S.P. Group.	Totals:
Yes	A 18	B 172	190
No	C 4	D 74	78
Totals:	22	246	268 =N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be $>$ 5. It is: $E_a = 22 \times 78 \div 268 = 6.40$

$(A+B)(C+D)(A+C)(B+D) = 190 \times 78 \times 22 \times 246 = 80,205,840$

$|AD-BC| = 1332-688=644$ sq'd = 414,736 xN = 111,149,248

$-\frac{1}{2}N = 134$ 644-134=510 sq'd = 260,100 xN = 69,706,800

Uncorrected χ^2 (with 1 d.f.)

$\frac{111,149,248}{80,205,840} = 1.39$

P lies between: .3 and .2

Corrected χ^2 (with 1 d.f.)

$\frac{69,706,800}{80,205,840} = .87$ (1 df)

P lies between: .5 and .3

Calc. checked ? Yes.

Calc. Serial No: C 90 Source data serial No: D Table XI

SLEEPWALKING AS A CHILD.

Data:	E.S.P. Group	Non E.S.P. Group.	Totals:
Yes:	A = 8	B = 63	71
No:	C =15	D = 180	195
Totals:	23	243	266 =N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5 It is:

(A+B)(C+D)(A+C)(B+D) = 71 x 195 x 23 x 243 = 77,379,705

|AD-BC| = 1440-945= 495 sq'd = 245,025 xN = 65,176,650

$-\frac{1}{2}N$ = 133 495-133=362 sq'd = 131,044 xN = 34,857,704

Uncorrected χ^2 (with 1 d.f.)

$\frac{65,176,650}{77,379,705}$ = .84 (1 df)

P lies between: .5 and .3

Corrected χ^2 (with 1 d.f.)

$\frac{34,857,704}{77,379,705}$ = ,45 (1 df)

P lies between: .7 and .5

Calc. checked ? Yes.

Calc. serial No: C 91 Source data serial No: D Table XI

SLEEPTALKING AS A CHILD.

Data	E.S.P. GROUP	Non E.S.P. Group.	Totals:
Yes:	A 21	B 180	201
No:	C 1	D 59	60
Totals:	22	239	261 =N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5. It is: Although the observed frequency is only 1, in cell C, the theoretical expectancy is 5.06, hence it is permissible to use χ^2.

(A+B)(C+D)(A+C)(B+D) = 22 x 239 x 60 x 201 = 63,411,480

|AD-BC| = 1239 - 180 =1059 sq'd = 1,121,481 xN = 292,706,541

$-\frac{1}{2}N$ = 130.5 1059-130.5=928.5 sq'd = 862,112.25 xN = 225,011,297.25

Uncorrected χ^2 (with 1 d.f.)

$\frac{292,706,541}{63,411,480}$ = 4.61 (1 df)

P lies between: .05 and .02

Corrected χ^2 (with 1 d.f.)

$\frac{225,011,297.25}{63,411,480}$ = 3.55 (1 df)

P lies between: .1 and .05

Calc. checked ? Yes.

Calc. Serial No: C 92 Source data serial No: D Table XI

SLEEPTALKING AS AN ADULT.

Data:

	E.S.P. GROUP	No E.S.P.Group	Totals:
Yes:	A 20	B 166	186
No:	C 3	D 75	78
Totals:	23	241	264 =N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5 It is: * $E_c = 23 \times 78 \div 264 = 6.80$

$(A+B)(C+D)(A+C)(B+D) = 23 \times 241 \times 78 \times 186 = 80,417,844$

$|AD-BC| = 1500-498 = 1002$ sq'd = 1,004,004 xN = 265,057,056

$-\frac{1}{2}N = 132$ 1002-132=870 sq'd = 756,900 xN = 199,821,600

Uncorrected χ^2 (with 1 d.f.)

$\frac{265,057,056}{80,417,844} = 3.30$ (1 df)

P lies between: .1 and .05

Corrected χ^2 (with 1 d.f.)

$\frac{199,821,600}{80,417,844} = 2.48$ (1 df)

P lies between: .2 and .1

Calc. checked ? Yes.

Calc. serial No: C 93 Source data serial No: D Table XI

EXPERIENCE OF DEPERSONALISATION.

Data

	E.S.P. Group	No E.S.P.Group	Totals:
Yes:	A 7	B 114	121
No:	C 16	D 131	147
Totals:	23	245	268 =N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5. It is:

$(A+B)(C+D)(A+C)(B+D) = 121 \times 147 \times 23 \times 245 = 100,229,745$

$|AD-BC| = 917-1824 = 907$ sq'd = 822,649 xN = 220,469,932

$-\frac{1}{2}N = 134$ 907-134= 773 sq'd = 597,529 xN = 160,137,772

Uncorrected χ^2 (with 1 d.f.)

$\frac{220,469,932}{100,229,745} = 2.20$

P lies between: .2 and .1

1 df.

Corrected χ^2 (with 1 d.f.)

$\frac{160,137,772}{100,229,745} = 1.60$

P lies between: .3 and .2

Calc. checked ? Yes.

Calc. Serial No: C 94 Source data serial No: D Table XI

CHURCH ATTENDANCE

Data:	E.S.P. Group.		Non E.S.P. Group		Totals:
Weekly:	A	6	B	99	105
Less frequenctly:	C	17	D	136	153
Totals:		23		235	258 =N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5 It is: $E_a = 23 \times 105 \div 235 = > 5$

$(A+B)(C+D)(A+C)(B+D) = 105 \times 153 \times 23 \times 235 = 86,831,325$

$|AD-BC| = 816 - 1683 = 867$ sq'd = 751,689 xN = 193,935,762

$-\frac{1}{2}N = 129$ 867-129 = 738 sq'd = 544,644 xN = 140,518,152

Uncorrected χ^2 (with 1 d.f.)

$\frac{193,935,762}{86,831,325} = 2.23$

P lies between: .2 and .1

Corrected χ^2 (with 1 d.f.)

$\frac{140,518,152}{86,831,325} = 1.62$

P lies between: .3 and .2

Calc. checked ? Yes.

Calc. serial No: C 95 Source data serial No: D Table XI

Deja Vu Experienced

Data	E.S.P. Group		Non E.S.P. Group		Totals:
Yes:	A	18	B	163	181
No:	C	5	D	79	84
Totals:		23		242	265 =N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5. It is:

$(A+B)(C+D)(A+C)(B+D) = 181 \times 84 \times 23 \times 242 = 84,625,464$

$|AD-BC| = 1422 - 815 = 607$ sq'd = 368,449 xN = 97,638,985

$-\frac{1}{2}N = 132.5$ 607-132.5=474.5 sq'd = 225,150.25 xN = 59,664,816.25

Uncorrected χ^2 (with 1 d.f.)

$\frac{97,638,985}{84,625,464} = 1.15$

P lies between: .3 and .2

Corrected χ^2 (with 1 d.f.)

$\frac{59,664,816.25}{84,625,464} = .71$

P lies between: .5 and .3

Calc. checked ? Yes.

Calc. Serial No: C 96 Source data serial No: D Table XI

HALLUCINATIONS EXPERIENCED.

Data:

	E.S.P. Group		NON E.S.P.Group		Totals:
Yes:	A	8	B	50	58
No:	C	15	D	187	202
Totals:		23		237	260 =N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5 It is: $E_a = 5.2$

$(A+B)(C+D)(A+C)(B+D)$ = 58 x 202 x 23 x 237 = 63,863,916

$|AD-BC|$ = 1496 - 750 = 746 sq'd = 556,516 xN = 144,694,160

$-\frac{1}{2}N$ = 130 746 - 130 = 616 sq'd = 379,456 xN = 98,658,560

Uncorrected χ^2 (with 1 d.f.)

$\frac{144,694,160}{63,863,916} = 2.27$

P lies between: .2 and .1

Corrected χ^2 (with 1 d.f.)

$\frac{98,658,560}{63,863,916} = 1.54$

P lies between: .3 and .2

Calc. checked ? Yes.

Calc. serial No: C Source data serial No: D Table XI

Data

			Totals:
	A	B	
	C	D	
Totals:			=N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5. It is:

$(A+B)(C+D)(A+C)(B+D)$ = =

$|AD-BC|$ = sq'd = xN =

$-\frac{1}{2}N$ = sq'd = xN =

Uncorrected χ^2 (with 1 d.f.)

_____ =

P lies between:

Corrected χ^2 (with 1 d.f.)

_____ =

P lies between:

Calc. checked ?

Calc. Serial No: C 97 Source data serial No: D Table XII.

DREAM FREQUENCIES (Only Ss returning 50 drawings).

Data:	2 or more A Hits.		No A Hits.		Totals:
a + b + c	A	7	B	93	100
a + e	C	14	D	104	118
Totals:		21		197	218 =N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5 It is: $A_e = 21 \times 100 \div 218 > 5$

$(A+B)(C+D)(A+C)(B+D) = 21 \times 197 \times 118 \times 100 = 48,816,600$

$|AD-BC| = 728 - 1,302 = 574$ sq'd = 329,476 xN = 71,825,768

$-\frac{1}{2}N = 109$ 574-109 = 465 sq'd = 216,225 xN = 47,137,050

Uncorrected χ^2 (with 1 d.f.)

$\frac{71,825,768}{48,816,600} = 1.47$

P lies between: .3 and .2

Corrected χ^2 (with 1 d.f.)

$\frac{47,137,050}{48,816,600} = .97$

P lies between: .5 and .3

Calc. checked ? Yes.

Calc. serial No: C 98 Source data serial No: D Table XII.

"SLIPPING AWAY" (Only Subjects returning 50 drawings).

Data	2 or more A Hits		No A Hits		Totals:
Yes	A	16	B	137	153
No	C	3	D	59	62
Totals:		19		196	215 =N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5. It is: $C_e = 19 \times 62 \div 215 = > 5$

$(A+B)(C+D)(A+C)(B+D) = 153 \times 62 \times 19 \times 196 = 35,325,864$

$|AD-BC| = 944 - 411 = 533$ sq'd = 284,089 xN = 61,079,135

$-\frac{1}{2}N = 107.5$ 425.5 sq'd = 181,050.25 xN = 38,925,803.75

Uncorrected χ^2 (with 1 d.f.)

$\frac{61,079,135}{35,325,864} = 1.73$

P lies between: .2 and .1

Corrected χ^2 (with 1 d.f.)

$\frac{38,925,803.75}{35,325,864} = 1.10$

P lies between: .3 and .2

Calc. checked ? Yes.

Calc. Serial No: C 99 Source data serial No: D Table XII

SLEEPWALKING AS A CHILD.

Data:		"2 or more A Hits."		No A Hits		Totals:
(Only subjects returning 50 drawings).	F +O	A	7	B	49	56
	N	C	13	D	144	157
	Totals:		20		193	213 =N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5 It is: $A_e = 20 \times 56 \div 213 > 5$

$(A+B)(C+D)(A+C)(B+D) = 56 \times 157 \times 20 \times 193 = 33,937,120$

$|AD-BC| = 1,008-637 = 371$ sq'd = 137,641 xN = 29,317,533

$-\frac{1}{2}N = 106.5$ 371-106.5=264.5 sq'd = 69,960.25 xN = 14,901,533.25

Uncorrected χ^2 (with 1 d.f.)

$\frac{29,317,533}{33,937,120} = .86$

P lies between:

.5 and .3

Corrected χ^2 (with 1 d.f.)

$\frac{14,901,533.25}{33,937,120} = .44$

P lies between:

.7 and .5

Calc. checked ? Yes.

Calc. serial No: C 100 Source data serial No: D Table XII.

SLEEPTALKING AS AN ADULT.

(Only Subjects returning 50 drawings).

Data		2 or more A Hits.		No A Hits.		Totals:
	F and O	A	17	B	132	149
	N	C	3	D	61	64
	Totals:		20		193	213 =N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5. It is: $C_e = 20 \times 64 \div 213 > 5$

$(A+B)(C+D)(A+C)(B+D) = 149 \times 64 \times 20 \times 193 = 36,808,960$

$|AD-BC| = 1037-396 = 641$ sq'd = 410,881 xN = 87,517,653

$-\frac{1}{2}N = 106.5$ 641-106.5=534.5 sq'd = 285,690.25 xN = 60,852,023.25

Uncorrected χ^2 (with 1 d.f.)

$\frac{87,517,653}{36,808,960} = 2.38$

P lies between:

.2 and .1

Corrected χ^2 (with 1 d.f.)

$\frac{60,852,023.25}{36,808,960} = 1.65$

P lies between:

.2 and .1

Calc. checked ? Yes.

Calc. Serial No: C 101 Source data serial No: D Table XII.

EXPERIENCE OF DEPERSONALISATION.

Data:		2 or more A Hits	No A Hits.	Totals:
(Only Subjects returning 50 drawings)	Yes	A 7	B 97	104
	No	C 13	D 98	111
	Totals:	20	195	215 =N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5 It is: $A_e = 20 \times 104 \div 215 = > 5$

$(A+B)(C+D)(A+C)(B+D) = 104 \times 111 \times 20 \times 195 = 45,021,600$

$|AD-BC| = 686-1261 = 575$ sq'd = 330,625 xN = 71,084,375

$-\frac{1}{2}N = 107.5$ 575+107.5=467.5 sq'd = 218,556.25 xN = 46,989,593.75

Uncorrected χ^2 (with 1 d.f.)

$\frac{71,084,375}{45,021,600} = 1.58$

P lies between: .3 and .2

Corrected χ^2 (with 1 d.f.)

$\frac{46,989,593.75}{45,021,600.} = 1.04$

P lies between: .5 and .3

Calc. checked ? Yes.

Calc. serial No: C 102 Source data serial No: D Table XII.

(CHURCH ATTENDANCE.

(Only Subjects returning 50 drawings).

Data		2 or more A Hits	No A Hits.	Totals:
Weekly:		A 5	B 86	91
Less frequently:		C 15	D 104	119
	Totals:	20	190	210 =N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5. It is: $A_e = 20 \times 91 \div 210 = > 5$

$(A+B)(C+D)(A+C)(B+D) = 91 \times 119 \times 20 \times 190 = 41,150,200$

$|AD-BC| = 520 - 1290 = 770$ sq'd = 592,900 xN = 124,509,000

$-\frac{1}{2}N = 105$ 770-105 = 665 sq'd = 442,225 xN = 92,867,250

Uncorrected χ^2 (with 1 d.f.)

$\frac{124,509,000}{41,150,200} = 3.03$

P lies between: .1 and .05

Corrected χ^2 (with 1 d.f.)

$\frac{92,867,250}{41,150,200} = 2.26$

P lies between: .2 and .1

Calc. checked ? Yes.

Calc. Serial No: C 103 DEJA VU Source data serial No: D Table XII.

(Only Subjects returning 50 drawings).

Data:

	2 or more A Hits.		No A Hits		Totals:
Yes	A	17	B	131	148
No	C	3	D	62	65
Totals:		20		193	213 =N

Formula: $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5 It is: $C_e = 20 \times 65 \div 213 = \not> 5$

$(A+B)(C+D)(A+C)(B+D) = 148 \times 65 \times 20 \times 193 = 37,133,200$

$|AD-BC| = 1054-393 = 661$ sq'd = 436,921 xN = 93,064,173

$-\frac{1}{2}N = 106.5$ 661-106.5=554.5 sq'd = 307,470.25 xN = 65,491,163.25

Uncorrected χ^2 (with 1 d.f.)

$\frac{93,064,173}{37,133,200} = 2.51$

P lies between: .2 and .1

Corrected χ^2 (with 1 d.f.)

$\frac{65,491,163.25}{37,133,200} = 1.76$

P lies between: .2 and .1

Calc. checked ? Yes.

Calc. serial No: C..... Source data serial No: D Table XII.

Data

			Totals:
	A	B	
	C	D	
Totals:			=N

Formula $\chi^2 = \frac{N(|AD - BC| - \frac{1}{2}N)^2}{(A+B)(C+D)(A+C)(B+D)}$ (The $-\frac{1}{2}N$ in the top line is a correction for continuity)

Smallest expected freq. should be > 5. It is:

$(A+B)(C+D)(A+C)(B+D) =$ =

$|AD-BC| =$ sq'd = xN =

$-\frac{1}{2}N =$ sq'd = xN =

Uncorrected χ^2 (with 1 d.f.)

_____ =

P lies between:

Corrected χ^2 (with 1 d.f.)

_____ =

P lies between:

✓ Calc. checked ?

Linkage Effects: Score Fluctuations for Experimental Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 104 | Source data Ser. Nos: D 1 & 16.

Hit types: A (Raw) | Total trials: 8,583.00

On Series E Originals. | Total hits: 70

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	14.20	14.35	13.88	13.88	13.69
Hits scored	9	10	18	12	21
D	5.20	4.35	4.12	1.88	7.31
D^2	27.04	18.9225	16.9744	3.5344	53.4361
$\frac{D^2}{E.\text{hits}}$	1.90	1.32	1.22	.25	3.90
Misses expected	1726.8	1745.65	1688.12	1688.12	1664.31
$\frac{D^2}{E.\text{misses}}$	.02	.01	.01	.00	.03

χ^2 totals: Hits: 8.59 + Misses: .07 = 8.66 (for 4 d.f.)

P two tail lies between .10 and .05 Calc. checked ? Yes.

Calc. Ser. No: C 105 | Source data Ser. Nos: D 1 & 16.

Hit types: ABCDE (Raw) | Total trials: 8,583.00

On Series E Originals. | Total hits: 314

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	63.69	64.39	62.27	62.27	61.39
Hits scored	46	43	50	82	93
D	17.69	21.39	12.27	19.73	31.61
D^2	312.9361	457.5321	150.5529	389.2729	999.1921
$\frac{D^2}{E.\text{Hits}}$	4.91	7.11	2.42	6.25	16.28
Misses expected	1677.31	1695.61	1639.73	1639.73	1616.61
$\frac{D^2}{E.\text{Misses}}$	.19	.27	.09	.24	.62

χ^2 totals: Hits: 36.97 + Misses: 1.41 = 38.38 (for 4 d.f.)

P two tail ~~lies between~~ is less than .001 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Experimental Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 106 | Source data Ser. Nos: D 1 & 16.

Hit types: All F, all G, and H3(raw) | Total trials: 8,583.00

On Series E Originals. | Total hits: 605

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	122.72	124.06	119.97	119.97	118.28
Hits scored	108.	86	143	127	141
D	14.72	38.06	23.03	7.03	22.72
D^2	216.6784	1448.5636	530.3809	49.4209	516.1984
$\frac{D^2}{E.\text{hits}}$	1.76	11.68	4.42	.41	4.36
Misses expected	1618.28	1635.94	1582.03	1582.03	1559.72
$\frac{D^2}{E.\text{misses}}$	.13	.89	.33	.03	.33

χ^2 totals: Hits: 22.63 + Misses: 1.71 = 24.34 (for 4 d.f.)

P two tail ~~lies between~~ ~~is less than~~ .001 Calc. checked ? Yes.

Calc. Ser. No: C 107 | Source data Ser. Nos: D 1 & 16.

Hit types: All F, G, H (raw) | Total trials: 8,583.00

On Series E Originals. | Total hits: 885

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	179.51	181.48	175.50	175.50	173.02
Hits scored	153	153	192	187	200
D	26.51	28.48	16.50	11.50	26.98
D^2	702.7801	811.1104	272.25	132.25	727.9204
$\frac{D^2}{E.\text{Hits}}$	3.91	4.47	1.55	.75	4.21
Misses expected	1561.49	1578.52	1526.5	1526.5	1504.98
$\frac{D^2}{E.\text{Misses}}$	.45	.51	.18	.09	.48

χ^2 totals: Hits: 14.89 + Misses: 1.71 = 16.60 (for 4 d.f.)

P two tail lies between ~~is less than~~ .01 and .001 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Experimental Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 108 | Source data Ser. Nos: D 1 & 16.

Hit types: I and K (raw). | Total trials: 8,583.00

On Series E Originals. | Total hits: 386

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	78.30	79.15	76.54	76.54	75.46
Hits scored	65	53	58	121	89
D	13.30	26.15	18.54	44.46	13.54
D^2	176.89	683.8225	343.7316	1976.6916	183.3316
$\frac{D^2}{E.\text{hits}}$	2.26	8.64	4.49	25.83	2.43
Misses expected	1662.70	1680.85	1625.46	1625.46	1602.54
$\frac{D^2}{E.\text{misses}}$	.11	.41	.21	1.22	.11

χ^2 totals: Hits: 43.65 + Misses: 2.06 = 45.71 (for 4 d.f.)

P two tail ~~lies between~~ is less than .001 Calc. checked ? Yes.

Calc. Ser. No: C 109 | Source data Ser. Nos: D 1 & 16.

Hit types: I J and K (raw) | Total trials: 8,583.00

On Series E Originals. | Total hits: 465

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	94.32	95.35	92.21	92.21	90.91
Hits scored	75	90	67	130	103
D	19.32	5.35	25.21	37.79	12.09
D^2	373.2624	28.6225	635.5441	1428.0841	146.1681
$\frac{D^2}{E.\text{Hits}}$	3.96	.30	6.89	15.49	1.61
Misses expected	1646.68	1664.65	1609.79	1609.79	1587.09
$\frac{D^2}{E.\text{Misses}}$	.23	.02	.39	.89	.09

χ^2 totals: Hits: 28.25 + Misses: 1.62 = 29.87 (for 4 d.f.)

P two tail lies between is less than .001 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Experimental Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 110 | Source data Ser. Nos: D 1 & 16.

Hit types: All combined (raw) | Total trials: 8,583.00

On Series E Originals. | Total hits: 1,404

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	284.79	287.90	278.41	278.41	274.48
Hits scored	244	243	262	332	323
D	40.79	44.9	16.41	53.59	48.52
D^2	1663.8241	2016.01	269.2881	2871.8881	2354.1904
$\frac{D^2}{E.\text{hits}}$	5.84	7.00	.97	10.31	8.58
Misses expected	1456.21	1472.10	1423.59	1423.59	1403.52
$\frac{D^2}{E.\text{misses}}$	1.14	1.37	.19	2.02	1.68

χ^2 totals: Hits: 32.70 + Misses: 6.40 = 39.10 (for 4 d.f.)

P two tail ~~lies between~~ is less than .001 Calc. checked ? Yes.

Calc. Ser. No: C 111 | Source data Ser. Nos: D 2 & 16.

Hit types: A (raw) | Total trials: 8,583.00

On Series C Originals. | Total hits: 19

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	Too small for χ^2 test to be valid.				
Hits scored	3	2	3	6	5
D					
D^2					
$\frac{D^2}{E.\text{Hits}}$					
Misses expected					
$\frac{D^2}{E.\text{Misses}}$					

χ^2 totals: Hits: + Misses: = (for 4 d.f.)

P two tail lies between is less than Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Experimental Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 112 | Source data Ser. Nos: D 2 & 16

Hit types: ABCDE (raw) | Total trials: 8,583.00

On Series C Originals. | Total hits: 328

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	66.53	67.26	65.04	65.04	64.12
Hits scored	79	33	83	69	64
D	12.47	34.26	17.96	3.96	.12
D^2	155.5009	1173.7476	322.5616	15.6816	.0144
$\frac{D^2}{E. hits}$	2.34	17.45	4.96	.24	.00
Misses expected	1674.47	1692.74	1636.96	1636.96	1613.88
$\frac{D^2}{E. misses}$	.09	.69	.20	.01	.00

χ^2 totals: Hits: 24.99 + Misses: .99 = 25.98 (for 4 d.f.)

P two tail ~~lies between~~ is less than .001 Calc. checked ? Yes.

Calc. Ser. No: C 113 | Source data Ser. Nos: D 2 & 16.

Hit types: All F, all G and H3 (raw) | Total trials: 8,583.00

On Series C Originals. | Total hits: 302

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	61.26	61.93	59.89	59.89	59.04
Hits scored	60	40	64	63	75
D	1.26	21.93	4.11	3.11	15.96
D^2	1.5876	480.9249	16.8921	9.6721	254.7216
$\frac{D^2}{E. Hits}$	.03	7.77	.28	.16	4.31
Misses expected	1679.74	1698.07	1642.11	1642.11	1618.96
$\frac{D^2}{E. Misses}$	.00	.28	.01	.01	.16

χ^2 totals: Hits: 12.55 + Misses: .46 = 13.01 (for 4 d.f.)

P two tail lies between .02 and .01 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Experimental Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 114 | Source data Ser. Nos: D 2 & 16.

Hit types: All F, G, H. (raw) | Total trials: 8,583.00

On Series C Originals. | Total hits: 675

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	136.92	138.41	133.85	133.85	131.96
Hits scored	137	124	138	138	138
D	.08	14.41	4.15	4.15	6.04
D^2	.0064	207.6481	17.2225	17.2225	36.4816
$\frac{D^2}{E.\text{hits}}$	.00	1.50	.13	.13	.28
Misses expected	1604.08	1621.59	1568.15	1568.15	1546.04
$\frac{D^2}{E.\text{misses}}$	.00	.13	.01	.01	.02

χ^2 totals: Hits: 2.04 + Misses: .17 = 2.21 (for 4 d.f.)

P two tail ~~is less than~~ lies between .70 and .50 Calc. checked ? Yes.

Calc. Ser. No: C 115 | Source data Ser. Nos: D 2 & 16.

Hit types: I and K (raw) | Total trials: 8,583.00

On Series C Originals. | Total hits: 295

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	59.83	60.49	58.50	58.50	57.67
Hits scored	60	39	70	64	62
D	.17	21.49	11.5	5.5	4.33
D^2	.0289	461.8201	132.25	30.25	18.7489
$\frac{D^2}{E.\text{ Hits}}$	.00	7.63	2.26	.52	.33
Misses expected	1681.17	1699.51	1643.50	1643.50	1620.33
$\frac{D^2}{E.\text{Misses}}$	.00	.27	.08	.02	.01

χ^2 totals: Hits: 10.74 + Misses: .38 = 11.12 (for 4 d.f.)

P two tail ~~is less than~~ lies between .05 and .02 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Experimental Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 116 | Source data Ser. Nos: D 2 & 16.

Hit types: I, J and K | Total trials: 8,583.00

On Series C Originals. | Total hits: 411

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	83.37	84.28	81.50	81.50	80.35
Hits scored	89	44	97	91	90
D	5.63	40.28	15.5	9.5	9.65
D^2	31.6969	1622.4784	240.25	90.25	93.1225
$\frac{D^2}{E.\text{hits}}$	.38	19.25	2.95	1.11	1.16
Misses expected	1657.63	1675.72	1620.5	1620.5	1597.65
$\frac{D^2}{E.\text{misses}}$	.02	.97	.15	.05	.06

χ^2 totals: Hits: 24.85 + Misses: 1.25 = 26.10 (for 4 d.f.)

P two tail ~~lies between~~ is less than .001 Calc. checked ? Yes.

Calc. Ser. No: C 117 | Source data Ser. Nos: D 2 & 16.

Hit types: All combined (raw) | Total trials: 8,583.00

On Series C Originals. | Total hits: 1,159

Factor:	Week A .20284	Week B .20506	Week C .19830	Week D .19830	Week E .19550
Trials:	1741.0000	1760.0000	1702.0000	1702.0000	1678.0000
Hits expected	235.09	237.66	229.83	229.83	226.58
Hits scored	250	181	250	240	238
D	14.91	56.66	20.17	10.17	11.42
D^2	222.3081	3210.3556	406.8289	103.4289	130.4164
$\frac{D^2}{E.\text{ Hits}}$	.95	13.51	1.77	.45	.57
Misses expected	1505.91	1522.34	1472.17	1472.17	1451.42
$\frac{D^2}{E.\text{Misses}}$	.15	2.11	.28	.07	.09

χ^2 totals: Hits: 17.25+ Misses: 2.70 = 19.95 (for 4 d.f.)

P two tail ~~lies between~~ is less than .001 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 118 Source data Ser. Nos: D 1 & 16.

Hit types: A (raw). Total Trials: 8,857.00

On Series E Originals. Total Hits: 63

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials:	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	12.81	12.52	12.51	12.57	12.59
Hits scored	14	9	15	11	14
D	1.19	3.52	2.49	1.57	1.41
D^2	1.4161	12.3904	6.2001	2.4649	1.9881
$\frac{D^2}{E.\ hits}$	.11	.99	.49	.20	.16
Misses expected	1788.19	1747.48	1746.49	1745.43	1757.41
$\frac{D^2}{E.Misses}$	.00	.01	.00	.00	.00

χ^2 totals: Hits: 1.95 + Misses: .01 = 1.96 (for 4 d.f.)

P two tail lies between ~~is less than~~ .80 and .70 Calc. checked ? Yes.

Calc. Ser. No: C 119 Source data Ser. Nos: D 1 & 16.

Hit types: A B C D E (raw). Total trials: 8,857.00

On Series E Originals. Total hits: 302

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	61.41	60.01	59.98	60.25	60.35
Hits scored	54	46	68	69	65
D	7.41	14.01	8.02	8.75	4.65
D^2	54.9081	196.2801	64.3204	76.5625	21.6225
$\frac{D^2}{E.\ hits}$	.89	3.27	1.07	1.27	.36
Misses expected	1739.59	1699.99	1699.02	1706.75	1709.65
$\frac{D^2}{E.Misses}$	.03	.11	.04	.04	.01

χ^2 totals: Hits: 6.86 + Misses: .23 = 7.09 (for 4 d.f.)

P two tail lies between ~~is less than~~ .20 and .10 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 120 | Source data Ser. Nos: D 1 & 16

Hit types: All F, G and H3 (raw). | Total Trials: 8,857.00

On Series E Originals. | Total Hits: 639

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials:	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	129.93	126.98	126.91	127.48	127.70
Hits scored	132	90	127	142	148
D	2.07	36.98	.09	14.52	20.30
D^2	4.2849	1367.5204	.0081	210.8304	412.09
$\frac{D^2}{E.\ hits}$	.03	10.77	.00	1.65	3.23
Misses expected	1671.07	1633.02	1632.09	1639.52	1642.30
$\frac{D^2}{E.Misses}$	.00	.84	.00	.13	.25

χ^2 totals: Hits: 15.68 + Misses: 1.22 = 16.90 (for 4 d.f.)

P two tail lies between ~~is less than~~ .01 and .001 Calc. checked ? Yes.

Calc. Ser. No: C 121 | Source data Ser. Nos: D 1 & 16.

Hit types: All F, G, H (raw). | Total trials: 8,857.00

On Series E Originals. | Total hits: 935

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	190.12	185.80	185.69	186.53	186.85
Hits scored	183	155	178	205	214
D	7.12	30.80	7.69	18.47	27.15
D^2	50.6944	948.64	59.1361	341.1409	737.1225
$\frac{D^2}{E.\ hits}$	.27	5.11	.32	1.83	3.94
Misses expected	1610.88	1574.2	1573.31	1580.47	1583.15
$\frac{D^2}{E.Misses}$	.03	.60	.04	.21	.47

χ^2 totals: Hits: 11.47 + Misses: 1.35 = 12.82 (for 4 d.f.)

P two tail lies between ~~is less than~~ .02 and .01 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 122 | Source data Ser. Nos: D 1 & 16.

Hit types: I and K (raw) | Total Trials: 8,857.00

On Series E Originals. | Total Hits: 360

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials:	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	73.20	71.54	71.50	71.82	71.94
Hits scored	63	83	76	60	78
D	10.20	11.46	4.50	11.82	6.06
D^2	104.04	131.3316	20.25	139.7124	36.7236
$\frac{D^2}{E.\ hits}$	1.42	1.83	.28	1.95	.51
Misses expected	1727.80	1688.46	1687.5	1695.18	1698.06
$\frac{D^2}{E.Misses}$	.06	.08	.01	.08	.02

χ^2 totals: Hits: 5.99 + Misses: .25 = 6.24 (for 4 d.f.)

P two tail lies between .20 and1.10 Calc. checked ? Yes.

Calc. Ser. No: C 123 | Source data Ser. Nos: D 1 & 16.

Hit types: I, J and K (raw). | Total trials: 8,857.00

On Series E Originals. | Total hits: 414

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	84.18	82.27	82.22	82.59	82.73
Hits scored	75	89	91	76	83
D	9.18	6.73	8.78	6.59	.27
D^2	84.2724	45.2929	77.0884	43.4281	.0729
$\frac{D^2}{E.\ hits}$	1.00	.55	.94	.53	.00
Misses expected	1716.82	1677.73	1676.78	1684.41	1687.27
$\frac{D^2}{E.Misses}$	.05	.03	.05	.03	.00

χ^2 totals: Hits: 3.02 + Misses: .16 = 3.18 (for 4 d.f.)

P two tail lies between .70 and .50 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 124 | Source data Ser. Nos: D 1 & 16.

Hit types: All combined (raw). | Total Trials: 8,857.00

On Series E Originals. | Total Hits: 1,366

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials:	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	277.77	271.44	271.29	272.52	272.98
Hits scored	254	234	282	286	310
D	23.77	37.44	10.71	13.48	37.02
D^2	565.0129	1401.7536	114.7041	181.7104	1370.4804
$\frac{D^2}{E.\ hits}$	2.03	5.16	.42	.67	5.02
Misses expected	1523.23	1488.56	1487.71	1494.48	1497.02
$\frac{D^2}{E.Misses}$	.37	.94	.08	.12	.91

χ^2 totals: Hits: 13.30 + Misses: 2.42 = 15.72 (for 4 d.f.)

P two tail lies between .01 and .001 Calc. checked ? Yes.

Calc. Ser. No: C 125 | Source data Ser. Nos: D 2 & 16.

Hit types: A | Total trials: 8,857.00

On Series C Originals. | Total hits: 18

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	Too small for χ^2 test to be valid.				
Hits scored	5	2	2	6	3
D					
D^2					
$\frac{D^2}{E.\ hits}$					
Misses expected					
$\frac{D^2}{E.Misses}$					

χ^2 totals: Hits: + Misses: = (for 4 d.f.)

P two tail lies between is less than Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 126 Source data Ser. Nos: D 2 & 16.

Hit types: A B C D E (raw). Total Trials: 8,857.00

On Series C Originals. Total Hits: 365

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials:	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	74.22	72.53	72.49	72.82	72.94
Hits scored	84.	56	77	80	68
D	9.78	16.53	4.51	7.18	4.94
D^2	95.6484	273.2409	20.3401	51.5524	24.4036
$\frac{D^2}{E.\ hits}$	1.29	3.77	.28	.71	.33
Misses expected	1726.78	1687.47	1686.51	1694.18	1697.06
$\frac{D^2}{E.Misses}$	.05	.16	.01	.03	.01

χ^2 totals: Hits: 6.38 + Misses: .26 = 6.64 (for 4 d.f.)

P two tail lies between .20 and.10 Calc. checked ? Yes.

Calc. Ser. No: C 127 Source data Ser. Nos: D 2 & 16.

Hit types: All F, all G and H3 (raw). Total trials: 8,857.00

On Series C Originals. Total hits: 331

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	67.31	65.77	65.74	66.03	66.15
Hits scored	67	51	70	70	73
D	.31	14.77	4.26	3.97	6.85
D^2	.0961	218.1529	18.1476	15.7609	46.9225
$\frac{D^2}{E.\ hits}$	.00	3.32	.28	.24	.71
Misses expected	1733.69	1694.23	1693.26	1700.97	1703.85
$\frac{D^2}{E.Misses}$	.00	.13	.01	.01	.03

χ^2 totals: Hits: 4.55 + Misses: .18 = 4.73 (for 4 d.f.)

P two tail lies between .50 and .30 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 128 | Source data Ser. Nos: D 2 & 16.

Hit types: All F G H (raw) | Total Trials: 8,857.00

On Series C Originals. | Total Hits: 722

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials:	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	146.81	143.47	143.39	144.04	144.29
Hits scored	127	127	155	157	156
D	19.81	16.47	11.61	12.96	11.71
D^2	392.4361	271.2609	134.7921	167.9616	137.1241
$\frac{D^2}{E.\ hits}$	2.67	1.89	.94	1.17	.95
Misses expected	1654.19	1616.53	1615.61	1622.96	1625.71
$\frac{D^2}{E.Misses}$	.24	.17	.08	.10	.08

χ^2 totals: Hits: 7.62 + Misses: .67 = 8.29 (for 4 d.f.)

P two tail lies between .10 and .05 Calc. checked ? Yes.

Calc. Ser. No: C 129 | Source data Ser. Nos: D 2 & 16.

Hit types: I and K (raw). | Total trials: 8,857.00

On Series C Originals. | Total hits: 314

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	63.85	62.39	62.36	62.64	62.75
Hits scored	60	63	66	50	65
D	3.85	.61	3. 64	2.64	2.25
D^2	14.8225	.3721	13.2496	6.9696	5.0625
$\frac{D^2}{E.\ hits}$	.23	.01	.21	.11	.08
Misses expected	1737.15	1697.61	1696.64	1704.36	1707.25
$\frac{D^2}{E.Misses}$	.01	.00	.01	.00	.00

χ^2 totals: Hits: .64 + Misses: .02 = .66 (for 4 d.f.)

P two tail lies between .98 and .95 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for all weeks pooled tested for significance.

Calc. Ser. No: C 130 | Source data Ser. Nos: D 2 & 16.

Hit types: I, J and K (raw). | Total Trials: 8,857.00

On Series C Originals. | Total Hits: 456

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials:	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	92.72	90.61	90.56	90.97	91.13
Hits scored	84	72	104	102	94
D	8.72	18.61	13.44	11.03	2.87
D^2	76.0384	346.3321	180.6336	121.6609	8.2369
$\frac{D^2}{E.\ hits}$	.82	3.82	1.99	1.34	.09
Misses expected	1708.28	1669.39	1668.44	1676.03	1678.87
$\frac{D^2}{E.Misses}$	.04	.21	.11	.07	.00

χ^2 totals: Hits: 8.06 + Misses: .43 = 8.49 (for 4 d.f.)

P two tail lies between .10 and .05 Calc. checked ? Yes.

Calc. Ser. No: C 131 | Source data Ser. Nos: D 2 & 16.

Hit types: All combined (raw). | Total trials: 8,857.00

On Series C Originals. | Total hits: 1,260

Factors:	Week A .203342	Week B .198713	Week C .198600	Week D .199503	Week E .199842
Trials	1801.0000	1760.0000	1759.0000	1767.0000	1770.0000
Hits expected	256.21	250.38	250.24	251.37	251.80
Hits scored	237	233	259	271	260
D	19.21	17.38	8.76	19.63	8.20
D^2	369.0241	302.0644	76.7376	385.3369	67.24
$\frac{D^2}{E.\ hits}$	1.44	1.21	.31	1.53	.27
Misses expected	1544.79	1509.62	1508.76	1515.63	1518.20
$\frac{D^2}{E.Misses}$	.24	.20	.05	.25	.04

χ^2 totals: Hits: 4.76 + Misses: .78 = 5.54 (for 4 d.f.)

P two tail lies between .30 and .20 Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 132 | Source data Ser. Nos: D 1 & 16.

Hit types: A (raw). | Total trials: 6,828

On Series E Originals. | Total hits: 60

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	15.31	14.97	14.97	14.75
Hits scored	9	18	12	21
D	6.31	3.03	2.97	6.25
D^2	39.8161	9.1809	8.8209	39.0625
$\frac{D^2}{E.\ Hits}$	2.60	.61	.59	2.65
Misses expected	1725.69	1687.03	1687.03	1663.25
$\frac{D^2}{E.\ Misses}$	.02	.01	.01	.02

χ^2 totals: Hits: 6.45 + Misses .06 = 6.51 (for 3 d.f.)

P two tail lies between .10 and .05 Calc. checked ? Yes

Calc. Ser. No: C 133 | Source data Ser. Nos: D 1 & 16.

Hit types: A B C D E (raw) | Total trials: 6,828

On Series E Originals. | Total hits: 271

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	69.15	67.60	67.60	66.65
Hits scored	46	50	82	93
D	23.15	17.6	14.4	26.35
D^2	535.9225	309.76	207.36	694.3225
$\frac{D^2}{E.\ Hits}$	7.75	4.58	3.07	10.42
Misses expected	1671.85	1634.4	1634.4	1611.35
$\frac{D^2}{E.\ Misses}$	.32	.19	.13	.43

χ^2 totals: Hits: 25.82 + Misses: 1.07 = 26.89 (for 3 d.f.)

P two tail lies between .001 is less than Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 134 | Source data Ser. Nos: D 1 & 16.

Hit types: All F, all G and H3 (raw) | Total trials: 6,833

On Series E Originals. | Total hits: 519

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	132.43	129.46	129.46	127.64
Hits scored	108	143	127	141
D	24.43	13.54	2.46	13.36
D^2	596.8249	183.3316	6.0516	178.4896
$\frac{D^2}{E.\ Hits}$	4.51	1.42	.05	1.40
Misses expected	1608.57	1572.54	1572.54	1550.36
$\frac{D^2}{E.\ Misses}$	.37	.12	.00	.11

χ^2 totals: Hits: 7.38 + Misses .60 = 7.98 (for 3 d.f.)

P two tail lies between .05 and .02 is less than | Calc. checked ? Yes.

Calc. Ser. No: C 135 | Source data Ser. Nos: D 1 & 16.

Hit types: All F, G, H (raw) | Total trials: 6,833

On Series E Originals. | Total hits: 732

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	186.78	182.60	182.60	180.02
Hits scored	153	192	187	200
D	33.78	9.4	4.4	19.98
D^2	1141.0884	88.36	19.36	399.2004
$\frac{D^2}{E.\ Hits}$	6.11	.48	.11	2.22
Misses expected	1554.22	1519.4	1519.4	1497.98
$\frac{D^2}{E.\ Misses}$	.73	.06	.01	.27

χ^2 totals: Hits: 8.92 + Misses: 1.07 = 9.99 (for 3 d.f.)

P two tail lies between .02 and .01 | Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 136 | Source data Ser. Nos: D 1 & 16.

Hit types: I and K | Total trials: 6,822

On Series E Originals. | Total hits: 333

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	84.97	83.07	83.07	81.89
Hits scored	65	58	121	89
D	19.97	25.07	37.93	7.11
D^2	398.8009	628.5049	1438.6849	50.5521
$\frac{D^2}{E.\ Hits}$	4.69	7.57	17.32	.62
Misses expected	1656.03	1618.93	1618.93	1596.11
$\frac{D^2}{E.\ Misses}$	.24	.39	.89	.03

χ^2 totals: Hits: 30.20+ Misses 1.55 = 31.75 (for 3 d.f.)

P two tail is less than .001 Calc. checked ? Yes.

Calc. Ser. No: C 137 | Source data Ser. Nos: D 1 & 16.

Hit types: I, J and K (raw) | Total trials: 6,822

On Series E Originals. | Total hits: 375

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	95.69	93.54	93.54	92.22
Hits scored	75	67	130	103
D	20.69	26.54	36.46	10.78
D^2	428.0761	704.3716	1329.3316	116.2084
$\frac{D^2}{E.\ Hits}$	4.47	7.53	14.21	1.26
Misses expected	1645.31	1608.46	1608.46	1585.78
$\frac{D^2}{E.\ Misses}$	.26	.44	.83	.07

χ^2 totals: Hits: 27.47 + Misses: 1.60 = 29.07 (for 3 d.f.)

P two tail is less than .001 Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 138 | Source data Ser. Nos: D 1 & 16.

Hit types: All combined (raw) | Total trials: 6,833

On Series E Originals. | Total hits: 1,161

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	296.25	289.61	289.61	285.52
Hits scored	244	262	332	323
D	52.25	27.61	42.39	37.48
D^2	2730.0625	762.3121	1796.9121	1404.7504
$\frac{D^2}{E. Hits}$	9.21	2.63	6.20	4.92
Misses expected	1444.75	1412.39	1412.39	1392.48
$\frac{D^2}{E. Misses}$	1.89	.54	1.27	1.01

χ^2 totals: Hits: 22.96 + Misses 4.71 = 27.67 (for 3 d.f.)

P two tail ~~lies between~~ is less than .001 Calc. checked ? Yes.

Calc. Ser. No: C 139 | Source data Ser. Nos: D 2 & 16.

Hit types: A (raw). | Total trials: 6,833

On Series C Originals. | Total hits: 17

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	Too small for χ^2 test to be valid.			
Hits scored	3	3	6	5
D				
D^2				
$\frac{D^2}{E. Hits}$				
Misses expected				
$\frac{D^2}{E. Misses}$				

χ^2 totals: Hits: + Misses: = (for 3 d.f.)

P two tail lies between is less than Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 140 | Source data Ser. Nos: D 2 & 16.

Hit types: A B C D E (raw). | Total trials: 6,833

On Series C Originals. | Total hits: 295

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	75.27	73.59	73.59	72.55
Hits scored	79	83	69	64
D	3.73	9.41	4.59	8.55
D^2	13.9129	88.5481	21.0681	73.1025
$\frac{D^2}{E.\ Hits}$	.18	1.20	.29	1.01
Misses expected	1665.73	1628.41	1628.41	1605.45
$\frac{D^2}{E.\ Misses}$	.01	.05	.01	.05

χ^2 totals: Hits: 2.68 + Misses .12 = 2.80 (for 3 d.f.)

P two tail lies between .50 and .30 Calc. checked ? Yes.

Calc. Ser. No: C 141 | Source data Ser. Nos: D 2 & 16.

Hit types: All F, all G and H3 (raw) | Total trials: 6,833

On Series C Originals. | Total hits: 262

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	66.85	65.35	65.35	64.43
Hits scored	60	64	63	75
D	6.85	1.35	2.35	10.57
D^2	46.9225	1.8225	5.5225	111.7249
$\frac{D^2}{E.\ Hits}$	.70	.03	.08	1.73
Misses expected	1674.15	1636.65	1636.65	1613.57
$\frac{D^2}{E.\ Misses}$	.03	.00	.00	.07

χ^2 totals: Hits: 2.54 + Misses: .10 = 2.64 (for 3 d.f.)

P two tail lies between .50 and .30 Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 142 | Source data Ser. Nos: D 2 & 16.

Hit types: All F, G, and H (raw) | Total trials: 6,833

On Series C Originals. | Total hits: 551

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	140.60	137.45	137.45	135.51
Hits scored	137	138	138	138
D	3.6	.55	.55	2.49
D^2	12.96	.3025	.3025	6.2001
$\frac{D^2}{E.\ Hits}$	.09	.00	.00	.05
Misses expected	1600.4	1564.55	1564.55	1542.49
$\frac{D^2}{E.\ Misses}$	.01	.00	.00	.00

χ^2 totals: Hits: .14 + Misses .01 = .15 (for 3 d.f.)

P two tail lies between .99 and .98 Calc. checked ? Yes.

Calc. Ser. No: C 143 | Source data Ser. Nos: D 2 & 16.

Hit types: I and K (raw). | Total trials: 6,833

On Series C Originals. | Total hits: 256

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	65.32	63.86	63.86	62.96
Hits scored	60	70	64	62
D	5.32	6.14	.14	.96
D^2	28.3024	37.6996	.0196	.9216
$\frac{D^2}{E.\ Hits}$	.43	.59	.00	.01
Misses expected	1675.68	1638.14	1638.14	1615.04
$\frac{D^2}{E.\ Misses}$	.02	.02	.00	.00

χ^2 totals: Hits: 1.03 + Misses: .04 = 1.07 (for 3 d.f.)

P two tail lies between .80 and .70 Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 144 | Source data Ser. Nos: D 2 & 16.

Hit types: I, J and K | Total trials: 6,833

On Series C Originals. | Total hits: 367

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	93.65	91.55	91.55	90.26
Hits scored	89	97	91	90
D	4.65	5.45	.55	.26
D^2	21.6225	29.7025	.3025	.0676
$\frac{D^2}{E. Hits}$	.23	.32	.00	.00
Misses expected	1647.35	1610.45	1610.45	1587.74
$\frac{D^2}{E. Misses}$	.01	.02	.00	.00

χ^2 totals: Hits: .55 + Misses .03 = .58 (for 3 d.f.)

P two tail ~~xxxxxxxxxxxx~~ lies between ~~xxx is less than~~ .90 Calc. checked ? Yes

Calc. Ser. No: C 145 | Source data Ser. Nos: D 2 & 16.

Hit types: All combined (raw). | Total trials: 6,833

On Series C Originals. | Total hits: 978

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	249.56	243.96	243.96	240.52
Hits scored	250	250	240	238
D	.44	6.04	3.96	2.52
D^2	.1936	36.4816	15.6816	6.3504
$\frac{D^2}{E. Hits}$	.00	.15	.06	.03
Misses expected	1491.44	1458.04	1458.04	1437.48
$\frac{D^2}{E. Misses}$	.00	.03	.01	.00

χ^2 totals: Hits: .24 + Misses: .04 = .28 (for 3 d.f.)

P two tail lies between .98 and .95 ~~is less than~~ Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 146 | Source data Ser. Nos: D 1 & 16.

Hit types: A (raw) | Total trials: 7,097.000

On Series E Originals. | Total hits: 54

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	13.70	13.38	13.44	13.47
Hits scored	14	15	11	14
D	.30	1.62	2.44	.53
D^2	.09	2.6244	5.9536	.2809
$\frac{D^2}{E.\ Hits}$	.01	.20	.44	.02
Misses expected	1787.3	1745.62	1753.56	1756.53
$\frac{D^2}{E.\ Misses}$	.00	.00	.00	.00

χ^2 totals: Hits: .67 + Misses: .00 = .67 (for 3 d.f.)

P two tail lies between / ~~is less than~~ .90 and .80 Calc. checked ? Yes.

Calc. Ser. No: C 147 | Source data Ser. Nos: D 1 & 16.

Hit types: A B C D E (raw) | Total trials: 7,097.000

On Series E Originals. | Total hits: 256

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	64.97	63.45	63.74	63.85
Hits scored	54	68	69	65
D	10.97	4.55	5.26	1.15
D^2	120.3409	20.7025	27.6676	1.3225
$\frac{D^2}{E.\ Hits}$	1.85	.33	.43	.02
Misses expected	1736.03	1695.55	1703.26	1706.15
$\frac{D^2}{E.\ Misses}$	.07	.01	.02	.00

χ^2 totals: Hits: 2.63 + Misses: .10 = 2.73 (for 3 d.f.)

P two tail lies between / ~~is less than~~ .50 and .30 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 148 | Source data Ser. Nos: D 1 & 16.

Hit types: All F, all G, and H3(raw) | Total trials: 7,097.000

On Series E Originals. | Total hits: 549

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	139.32	136.07	136.69	136.92
Hits scored	132	127	142	148
D	7.32	9.07	5.31	11.08
D^2	53.5824	82.2649	28.1961	122.7664
$\frac{D^2}{E.\ Hits}$	.38	.60	.21	.90
Misses expected	1661.68	1622.93	1630.31	1633.08
$\frac{D^2}{E.\ Misses}$	.03	.05	.02	.07

χ^2 totals: Hits: 2.09 + Misses: .17 = 2.26 (for 3 d.f.)

P two tail lies between .70 and .50 Calc. checked ? Yes.

Calc. Ser. No: C 149 | Source data Ser. Nos: D1 & 16.

Hit types: All F, G, and H,(raw). | Total trials: 7,097.000

On Series E Originals. | Total hits: 780

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	197.94	193.32	194.20	194.53
Hits scored	183	178	205	214
D	14.94	15.32	10.80	19.47
D^2	223.2036	234.7024	116.64	379.0809
$\frac{D^2}{E.\ Hits}$	1.13	1.21	.60	1.95
Misses expected	1603.06	1565.68	1572.80	1575.47
$\frac{D^2}{E.\ Misses}$	.14	.15	.07	.24

χ^2 totals: Hits: 4.89 + Misses: .60 = 5.49 (for 3 d.f.)

P two tail lies between .20 and .10 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 150 | Source data Ser. Nos: D 1 & 16.

Hit types: I and K (raw). | Total trials: 7,097.000

On Series E Originals. | Total hits: 277

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	70.29	68.65	68.97	69.08
Hits scored	63	76	60	78
D	7.29	7.35	8.97	8.92
D^2	53.1441	54.0225	80.4609	79.5664
$\frac{D^2}{E.\ Hits}$	176	.79	1.17	1.15
Misses expected	1730.71	1690.35	1698.03	1700.92
$\frac{D^2}{E.\ Misses}$	.03	.03	.05	.05

χ^2 totals: Hits: 3.87 + Misses: .16 = 4.03 (for 3 d.f.)

P two tail lies between .30 and .20 Calc. checked ? Yes.

Calc. Ser. No: C 151 | Source data Ser. Nos: D 1 & 16.

Hit types: I J and K (raw). | Total trials: 7,097.000

On Series E Originals. | Total hits: 325

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	82.47	80.55	80.92	81.05
Hits scored	75	91	76	83
D	7.47	10.45	4.92	1.95
D^2	55.8009	109.2025	24.2064	3.8025
$\frac{D^2}{E.\ Hits}$	.68	1.35	.30	.05
Misses expected	1718.53	1678.45	1686.08	1688.95
$\frac{D^2}{E.\ Misses}$	.03	.07	.01	.00

χ^2 totals: Hits: 2.38 + Misses: .11 = 2.49 (for 3 d.f.)

P two tail lies between is less than .50 and .30 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 152 | Source data Ser. Nos: D 1 & 16.

Hit types: All combined (raw). | Total trials: 7,097.000

On Series E Originals. | Total hits: 1,132

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	287.27	280.57	281.85	282.32
Hits scored	254	282	286	310
D	33.27	1.43	4.15	27.68
D^2	1106.8929	2.0449	17.2225	766.1824
$\frac{D^2}{E.\ Hits}$	3.85	.01	.06	2.71
Misses expected	1513.73	1478.43	1485.15	1487.68
$\frac{D^2}{E.\ Misses}$	.73	.00	.01	.51

χ^2 totals: Hits: 6.63 + Misses: 1.25 = 7.88 (for 3 d.f.)

P two tail lies between .05 and .02 Calc. checked ? Yes

Calc. Ser. No: C 153 | Source data Ser. Nos: D 2 & 16.

Hit types: A (raw). | Total trials: 7,097.000

On Series C Originals. | Total hits: 16

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	Too small for χ^2 test to be valid.			
Hits scored	5	2	6	3
D				
D^2				
$\frac{D^2}{E.\ Hits}$				
Misses expected				
$\frac{D^2}{E.\ Misses}$				

χ^2 totals: Hits: + Misses: = (for 3 d.f.)

P two tail lies between / is less than Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 154 | Source data Ser. Nos: D 2 & 16

Hit types: A B C D E (raw). | Total trials: 7,097.000

On Series COriginals. | Total hits: 309

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	78.41	76.59	76.93	77.06
Hits scored	84	77	80	68
D	5.59	.41	3.07	9.06
D^2	31.2481	.1681	9.4249	82.0836
$\frac{D^2}{E.\ Hits}$	.40	.00	.12	1.07
Misses expected	1722.59	1682.41	1690.07	1692.94
$\frac{D^2}{E.\ Misses}$	.02	.00	.01	.05

χ^2 totals: Hits: 1.59 + Misses: .08 = 1.67 (for 3 d.f.)

P two tail lies between .70 and .50 Calc. checked ? Yes.

Calc. Ser. No: C 155 | Source data Ser. Nos: D 2 & 16.

Hit types: All F, G and H3 (raw). | Total trials: 7,097.000

On Series C Originals. | Total hits: 280

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	71.05	69.40	69.71	69.83
Hits scored	67	70	70	73
D	4.05	.60	.29	3.17
D^2	16.4025	.3600	.0841	10.0489
$\frac{D^2}{E.\ Hits}$	.23	.01	.00	.14
Misses expected	1729.95	1689.60	1697.29	1700.17
$\frac{D^2}{E.\ Misses}$	.01	.00	.00	.01

χ^2 totals: Hits: .38 + Misses: .02 = .40 (for 3 d.f.)

P two tail lies between .95 and .90 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 156 | Source data Ser. Nos: D 2 & 16.

Hit types: All F G H (raw). | Total trials: 7,097.000

On Series C Originals. | Total hits: 595

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	150.99	147.47	148.14	148.39
Hits scored	127	155	157	156
D	23.99	7.53	8.86	7.61
D^2	575.5201	56.7009	78.4996	57.9121
$\frac{D^2}{E.\ Hits}$	3.81	.38	.53	.39
Misses expected	1650.01	1611.53	1618.86	1621.61
$\frac{D^2}{E.\ Misses}$	.35	.03	.05	.03

χ^2 totals: Hits: 5.11 + Misses: .46 = 5.57 (for 3 d.f.)

P two tail lies between .20 and .10 ~~is less than xxxxxxxxxxxx~~ Calc. checked ? Yes.

Calc. Ser. No: C 157 | Source data Ser. Nos: D 2 & 16.

Hit types: I and K (raw). | Total trials: 7,097.000

On Series C Originals. | Total hits: 251

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	63.70	62.21	63.49	62.60
Hits scored	60	66	60	65
D	3.70	3.79	2.49	2.40
D^2	13.69	14.3641	6.2001	5.76
$\frac{D^2}{E.\ Hits}$	.21	.23	.10	.09
Misses expected	1737.30	1696.79	1704.51	1707.40
$\frac{D^2}{E.\ Misses}$	.01	.01	.00	.00

χ^2 totals: Hits: .63 + Misses: .02 = .65 (for 3 d.f.)

P two tail lies between .90 and .80 ~~is less than xxxxxxxxxxxx~~ Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 158 | Source data Ser. Nos: D 2 & 16.

Hit types: I, J and K (raw). | Total trials: 7,097.000

On Series C Originals. | Total hits: 384

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	97.45	95.17	95.61	95.77
Hits scored	84	104	102	94
D	13.45	8.83	6.39	1.77
D^2	180.9025	77.9689	40.8321	3.1329
$\frac{D^2}{E.\ Hits}$	1.86	.82	.43	.03
Misses expected	1703.55	1663.83	1671.39	1674.23
$\frac{D^2}{E.\ Misses}$	.11	.05	.02	.00

χ^2 totals: Hits: 3.14 + Misses: .18 = 3.32 (for 3 d.f.)

P two tail lies between .50 and .30 Calc. checked ? Yes.

Calc. Ser. No: C 159 | Source data Ser. Nos: D 2 & 16.

Hit types: All combined (raw). | Total trials: 7,097.000

On Series C Originals. | Total hits: 1.027

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	260.62	254.54	255.70	256.13
Hits scored	237	259	271	260
D	23.62	4.46	15.30	3.87
D^2	557.9044	19.8916	234.09	14.9769
$\frac{D^2}{E.\ Hits}$	2.14	.08	.91	.06
Misses expected	1540.38	1504.46	1511.30	1513.87
$\frac{D^2}{E.\ Misses}$	.36	.01	.15	.01

χ^2 totals: Hits: 3.19 + Misses: .53 = 3.72 (for 3 d.f.)

P two tail lies between .30 and .20 Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 160 | Source data Ser. Nos: D 3 & 16.

Hit types: A (corrected for bunching) | Total trials: 6,823

On Series E Originals. | Total hits: 56

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	14.29	13.97	13.97	13.77
Hits scored	5	18	12	21
D	9.29	4.03	1.97	7.23
D^2	86.3041	16.2409	3.8809	52.2729
$\frac{D^2}{E. Hits}$	6.04	1.16	.28	3.80
Misses expected	1726.71	1688.03	1688.03	1664.23
$\frac{D^2}{E. Misses}$	.05	.01	.00	.03

χ^2 totals: Hits: 11.28 + Misses .09 = 11.37 (for 3 d.f.)

P two tail ~~is less than~~ lies between .01 and .001 Calc. checked ? Yes.

Calc. Ser. No: C 161 | Source data Ser. Nos: D 3 & 16.

Hit types: A B C D E (corrected for bunching). | Total trials: 6,823

On Series E Originals. | Total hits: 238

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	60.73	59.37	59.37	58.53
Hits scored	42	50	66	80
D	18.73	9.37	6.63	21.47
D^2	350.8129	87.7969	43.9569	460.9609
$\frac{D^2}{E. Hits}$	5.78	1.48	.74	7.87
Misses expected	1680.27	1642.63	1642.63	1619.47
$\frac{D^2}{E. Misses}$	.21	.05	.03	.28

χ^2 totals: Hits: 15.87+ Misses: .57 = 16.44 (for 3 d.f.)

P two tail lies between ~~is less than~~ .001 Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 162 | Source data Ser. Nos: D 3 & 16.

Hit types: All F, G and H3 (corrected for bunching). | Total trials: 6,823

On Series E Originals. | Total hits: 503

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	128.35	125.47	125.47	123.70
Hits scored	108	143	116	136
D	20.35	17.53	9.47	12.30
D^2	414.1225	307.3009	89.6809	151.29
$\frac{D^2}{E. Hits}$	3.23	2.45	.71	1.22
Misses expected	1612.65	1576.53	1576.53	1554.30
$\frac{D^2}{E. Misses}$	.26	.19	.06	.10

χ^2 totals: Hits: 7.61 + Misses .61 = 8.22 (for 3 d.f.)

P two tail lies between .05 and .02 Calc. checked ? Yes.

Calc. Ser. No: C 163 | Source data Ser. Nos: D 3 & 16.

Hit types: All F, G, H (corrected for bunching). | Total trials: 6,823

On Series E Originals. | Total hits: 716

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	182.70	178.61	178.61	176.09
Hits scored	153	192	176	195
D	29.70	13.39	2.61	18.91
D^2	882.09	179 .2921	6.8121	357.5881
$\frac{D^2}{E. Hits}$	4.83	1.00	.04	2.03
Misses expected	1558.30	1523.39	1523.39	1501.91
$\frac{D^2}{E. Misses}$	.57	.12	.00	.24

χ^2 totals: Hits: 7.90 + Misses: .93 = 8.83 (for 3 d.f.)

P two tail lies between .05 and .02 Calc. checked ? Yes.

Linkage Effects: Score fluctuations for Experimental Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 164 | Source data Ser. Nos: D 3 & 16.

Hit types: I and K (corrected for bunching). | Total trials: 6,823

On Series B Originals. | Total hits: 273

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	69.66	68.10	68.10	67.14
Hits scored	74	58	71	70
D	4.34	10.10	2.90	2.86
D^2	18.8356	102.01	8.41	8.1796
$\frac{D^2}{E. Hits}$	.27	1.50	.12	.12
Misses expected	1671.34	1633.90	1633.90	1610.86
$\frac{D^2}{E. Misses}$	.01	.06	.01	.01

χ^2 totals: Hits: 2.01 + Misses .09 = 2.10 (for 3 d.f.)

P two tail lies between .70 and .50 Calc. checked ? Yes.

Calc. Ser. No: C 165 | Source data Ser. Nos: D 3 & 16.

Hit types: I J and K (corrected for bunching). | Total trials: 6,823

On Series B Originals. | Total hits: 315

Factors:	Week A .25517	Week C .24945	Week D .24945	Week E .24593
Trials:	1741.0000	1702.0000	1702.0000	1678.0000
Hits expected	80.38	78.58	78.58	77.47
Hits scored	84	67	80	84
D	3.62	11.58	1.42	6.53
D^2	13.1044	134.0964	2.0164	42.6409
$\frac{D^2}{E. Hits}$	.16	1.71	.03	.55
Misses expected	1660.62	1623.42	1623.42	1600.53
$\frac{D^2}{E. Misses}$	.01	.08	.00	.03

χ^2 totals: Hits: 2.45 + Misses: .12 = 2.57 (for 3 d.f.)

P two tail lies between .50 and .30 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 166 | Source data Ser. Nos: D 3 & 16.

Hit types: A (corrected for bunching) | Total trials: 7,097.000

On Series E Originals. | Total hits: 50

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	12.69	12.39	12.45	12.47
Hits scored	10	15	11	14
D	2.69	2.61	1.45	1.53
D^2	7.2361	6.8121	2.1025	2.3409
$\frac{D^2}{E.\ Hits}$	.57	.55	.17	.19
Misses expected	1788.31	1746.61	1754.55	1757.53
$\frac{D^2}{E.\ Misses}$	.00	.00	.00	.00

χ^2 totals: Hits: 1.48 + Misses: .00 = 1.48 (for 3 d.f.)

P two tail lies between ~~is less than~~ .70 and .50 Calc. checked ? Yes.

Calc. Ser. No: C 167 | Source data Ser. Nos: D 3 & 16.

Hit types: A B C D E (corrected for bunching). | Total trials: 7,097.000

On Series E Originals. | Total hits: 232

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	58.87	57.50	57.76	57.86
Hits scored	50	68	55	59
D	8.87	10.50	2.76	1.14
D^2	78.6769	110.25	7.6176	1.2996
$\frac{D^2}{E.\ Hits}$	1.34	1.92	.13	.02
Misses expected	1742.13	1701.50	1709.24	1712.14
$\frac{D^2}{E.\ Misses}$	.05	.06	.00	.00

χ^2 totals: Hits: 3.41 + Misses: .11 = 3.52 (for 3 d.f.)

P two tail lies between ~~is less than~~ .50 and .30 Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 168 | Source data Ser. Nos: D 3 & 16.

Hit types: All F, G and H3 (corrected for bunching). On Series E Originals. | Total trials: 7,097.000 | Total hits: 536

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	136.02	132.85	133.45	133.68
Hits scored	132	127	130	147
D	4.02	5.85	3.45	13.32
D^2	16.1604	34.2225	11.9025	177.4224
$\frac{D^2}{E.\ Hits}$	.12	.26	.09	1.33
Misses expected	1664.98	1626.15	1633.55	1636.32
$\frac{D^2}{E.\ Misses}$	.01	.02	.01	.11

χ^2 totals: Hits: 1.80 + Misses: .15 = 1.95 (for 3 d.f.)

P two tail lies between .70 and .50 ✓ Calc. checked ? Yes.

Calc. Ser. No: C 169 | Source data Ser. Nos: D 3 & 16.

Hit types: All F G H (corrected for bunching). On Series E Originals. | Total trials: 7,097.000 | Total hits: 762

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	193.37	188.86	189.72	190.04
Hits scored	183	178	188	213
D	10.37	10.86	1.72	22.96
D^2	107.5369	117.9396	2.9584	527.1616
$\frac{D^2}{E.\ Hits}$	.56	.62	.01	2.77
Misses expected	1607.63	1570.14	1577.28	1579.96
$\frac{D^2}{E.\ Misses}$	.07	.07	.00	.33

χ^2 totals: Hits: 3.96 + Misses: .47 = 4.43 (for 3 d.f.)

P two tail lies between .30 and .20 ✓ Calc. checked ? Yes.

Linkage Effects: Score Fluctuations for Control Group Subjects for weeks A C D & E pooled tested for significance.

Calc. Ser. No: C 170 | Source data Ser. Nos: D 3 & 16.

Hit types: I and K (corrected for bunching). | Total trials: 7,097.000

On Series E Originals. | Total hits: 275

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	69.79	68.16	68.47	68.59
Hits scored	71	76	54	74
D	1.21	7.84	14.47	5.41
D^2	1.4641	61.4656	209.3809	29.2681
$\frac{D^2}{E.\ Hits}$	.02	.90	3.06	.43
Misses expected	1731.21	1690.84	1698.53	1701.41
$\frac{D^2}{E.\ Misses}$	.00	.04	.12	.02

χ^2 totals: Hits: 4.41 + Misses: .18 = 4.59 (for 3 d.f.)

P two tail lies between .30 and .20 Calc. checked ? Yes.

Calc. Ser. No: C 171 | Source data Ser. Nos: D 3 & 16.

Hit types: I, J and K (corrected for bunching). | Total trials: 7,097.000

On Series E Originals. | Total hits: 323

Factors:	Week A .25377	Week C .24785	Week D .24898	Week E .24940
Trials:	1801.0000	1759.0000	1767.0000	1770.0000
Hits expected	81.97	80.05	80.42	80.56
Hits scored	83	91	70	79
D	1.03	10.05	10.42	1.56
D^2	1.0609	101.0025	108.5764	2.4336
$\frac{D^2}{E.\ Hits}$	.01	1.26	1.35	.03
Misses expected	1719.03	1678.95	1686.58	1689 .44
$\frac{D^2}{E.\ Misses}$	.00	.06	.06	.00

χ^2 totals: Hits: 2.65+ Misses: .12 = 2.77 (for 3 d.f.)

P two tail lies between .50 and .30 Calc. checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 172 | Source data Ser. Nos: D 1 & 16.

For hit types: Raw A. (Applying Yates' correction for discontinuity).

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	9.45	9.55		13.65	13.35	
OH	9.5	9.5	19.0	9.5	17.5	27.0
D	.05	.05		4.15		
D^2	.0025			17.2225		
$\frac{D^2}{EH}$	.00026	.00026		1.26	1.29	
EM	1731.55	1750.45		1727.35	1688.65	
$\frac{D^2}{EM}$	.00000	.00000		.01	.01	
χ^2 (for 1 d.f.) =			.00052			2.57
P two tail / lies between			.99 and .98	P two tail / lies between		.20 and .10

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	10.62	10.38		15.28	14.72	
OH	9.5	11.5	21.0	9.5	20.5	30
D	1.12			5.78	5.78	
D^2	1.2544			33.4084		
$\frac{D^2}{EH}$	.1181	.1208		2.19	2.27	
EM	1730.38	1691.62		1725.72	1663.28	3389
$\frac{D^2}{EM}$	.0007	.0007		.02	.02	
χ^2 (for 1 d.f.) =			.2403			4.50
P two tail / lies between			.70 and .50	P two tail / lies between		.05 and .02

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 173 | Source data Ser. Nos: D 1 & 16.

For hit types: Raw A B C D E

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	44.26	44.74		48.54	47,46	
OH	46	43	89	46	50	96
D	1.74	1.74		2.54		
D^2	3.0276			6.4516		
$\frac{D^2}{EH}$	.0684	.0677		.1329	.1359	
EM	1696.74	1715.26		1692.46	1654.54	
$\frac{D^2}{EM}$	.0018	.0018		.0038	.0039	
χ^2 (for 1 d.f.) =			.1397			.2765
P two tail / ~~is less than~~	.80 and .70			P two tail / ~~lies between~~	.70 and .50	

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	64.72	63.28		70.78	68.22	
OH	46	82	128	46	93	139
D	18.72	18.72		24.78		
D^2	350.4384			614.0484		
$\frac{D^2}{EH}$	5.41	5.54		8.67	9.00	
EM	1676.28	1638 .72		1670.22	1609.78	
$\frac{D^2}{EM}$	.21	.21		.37	.38	
χ^2 (for 1 d.f.) =			11.37			18.42
P two tail / ~~lies between~~ is less than	.001			P two tail / ~~lies between~~ is less than	.001	

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 174 | Source data Ser. Nos: D 1 & 16.

For hit types: Raw All F, all G and H3.

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	96.47	97.53		126.92	124.08	
OH	108	86	194	108	143	251
D		11.53		18.92		
D^2		132.9409		357.9664		
$\frac{D^2}{EH}$	1.38	1.36		2.82	2.88	
EM	1644.53	1662.47		1614.08	1577.92	
$\frac{D^2}{EM}$	.08	.08		.22	.23	
χ^2 (for 1 d.f.) =			2.90			6.15
P two tail / lies between			.10 and .05	P two tail / lies between		.02 and .01

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	118.83	116.17		126.79	122.21	
OH	108	127	235	108	141	249
D	10.83			18.79		
D^2	117.2889				353.0641	
$\frac{D^2}{EH}$	.9870	1.0096		2.78	2.89	
EM	1622.17	1585.83		1614 .21	1555.79	
$\frac{D^2}{EM}$	.0723	.0740		.22	.23	
χ^2 (for 1 d.f.) =			2.1429			6.12
P two tail / lies between			.20 and .10	P two tail / lies between		.02 and .01

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 175 | Source data Ser. Nos: D 1 & 16.

For hit types: Raw. All F G H.

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	152.17	153.83		174.45	170.55	
OH	153	153	306	153	192	345
D	.83	.83		21.45		
D^2	.6889			460.1025		
$\frac{D^2}{EH}$	.0045	.0045		2.64	2.70	
EM	1588.83	1606.17		1566.55	1531.45	
$\frac{D^2}{EM}$	.0004	.0004		.29	.30	
χ^2 (for 1 d.f.) =			.0098			5.93
P two tail / lies between is less than			.95 and .90			.02 and .01

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	171.92	168.08	340	179.75	173.25	
OH	153	187	340	153	200	353
D	18.92			26.75		
D^2	357.9664			715.5625		
$\frac{D^2}{EH}$	2.08	2.13		3.98	4.13	
EM	1569.08	1533.92	3104	1561.25	1504.75	
$\frac{D^2}{EM}$	.23	.23		.46	.47	
χ^2 (for 1 d.f.) =			4.67			9.04
P two tail / lies between is less than			.05 and .02			.01 and .00

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 176 Source data Ser. Nos: D 1 & 16.

For hit types: Raw I and K.

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	58.68	59.32		62.20	60.80	
OH	65	53	118	65	58	123
D	6.32			2.80		
D^2	39.9424			7.84		
$\frac{D^2}{EH}$	.6807	.6733		.1260	.1289	
EM	1682.32	1700.68		1678,80	1641.20	
$\frac{D^2}{EM}$	.0237	.0235		.0047	.0048	
χ^2 (for 1 d.f.) =			1.4012			.2644
P two tail / lies between ~~is less than~~	.30 and .20			P two tail / lies between ~~is less than~~	.70 and .50	

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	94.05	91.95		78.42	75.58	
OH	65	121	186	65	89	154
D	29.05	29.05		13.42	13.42	
D^2	843.9025			180.0964		
$\frac{D^2}{EH}$	8.97	9.18		2.30	2.38	
EM	1646.95	1610 .05		1662.58	1602.42	
$\frac{D^2}{EM}$	.51	.52		.11	.11	
χ^2 (for 1 d.f.) =			19.18			4.90
P two tail / ~~is less between~~ is less than	.001			P two tail / lies between ~~is less than~~	.05 and.02	

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 177 | Source data Ser. Nos: D 1 & 16.

For hit types: Raw I J K.

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	82.05	82.95		71.80	70.20	
OH	75	90	165	75	67	142
D	7.05			3.20		
D^2	49.7025			10.24		
$\frac{D^2}{EH}$	.6057	.5992		.1426	.1459	
EM	1658.95	1677.05		1669.2	1631.80	
$\frac{D^2}{EM}$	.0300	.0296		.0061	.0063	
χ^2 (for 1 d.f.) =			1.2645			.3009
P two tail / ~~is less than~~			.30 and .20	P two tail / ~~is less than~~		.70 and .50

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	103.66	101.34		90.54	87.36	
OH	75	130	205	75	103	178
D	28.66	28.66		15.54	15.54	
D^2	821.3956			244.6096		
$\frac{D^2}{EH}$	7.92	8.12		2.70	2.80	
EM	1637.34	1600.66		1650.36	1590.64	
$\frac{D^2}{EM}$	.50	.51		.15	.15	
χ^2 (for 1 d.f.) =			17.04			5.30
P two tail / ~~is less than~~ is less than			.001	P two tail / ~~is less than~~		.02 and .01

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 178 | Source data Ser. Nos: D 1 & 16.

For hit types: Raw. All combined.

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1.	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	242.18	244.82		255.86	250.14	
OH	244	243	487	244	262	506
D	1.82	1.82		11.86	11.86	
D^2	3.3124			140.6596		
$\frac{D^2}{EH}$	.0137	.0135		.5497	.5623	
EM	1498.82	1515.18		1485.14	1451.86	2937
$\frac{D^2}{EM}$	.0022	.0022		.0947	.0969	
χ^2 (for 1 d.f.) =			.0316			1.3036
P two tail / lies between / is less than			.90 and .80			.30 and .20

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	291.26	284.74		288.72	278.28	
OH	244	332	576	244	323	576
D	47.26			44.72	44.72	
D^2	2233.5076			1999.8784		
$\frac{D^2}{EH}$	7.67	7.84		6.93	7.19	
EM	1449.74	1417.26		1452.28	1399.72	2852
$\frac{D^2}{EM}$	1.54	1.57		1.38	1.43	
χ^2 (for 1 d.f.) =			18.62			16.93
P two tail / lies between / is less than			.001			.001

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 179 Source data Ser. Nos: D 1 & 16.

For hit types: Raw A.

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	11.63	11.37		14.67	14.33	
OH	13.5	9.5	23	14	15	29
D	1.87			.67		
D^2	3.4969			.4489		
$\frac{D^2}{EH}$	.3007	.3075		.0306	.0313	
EM	1789.37	1748.63		1786.33	1744.67	
$\frac{D^2}{EM}$	.0019	.0020		.0003	.0003	
χ^2 (for 1.d.f.) =			.6121			.0625
P two tail / ~~is less than~~ lies between			.50 and .30	P two tail / ~~is less than~~ lies between		.90 and .80

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	12.62	12.38		14.12	13.88	
OH	14	11	25	14	14	28
D	1.38			.12		
D^2	1.9044			.0144		
$\frac{D^2}{EH}$	.1509	.1538		.0010	.0010	
EM	1788.38	1754.62		1786.88	1756.12	
$\frac{D^2}{EM}$	.0011	.0011		.0000	.0000	
χ^2 (for 1 d.f.) =			.3069			.0020
P two tail / ~~is less than~~ lies between			.70 and .50	P two tail / ~~is less than~~ lies between		.98 and .95

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 180 Source data Ser. Nos: D 1 & 16.

For hit types: Raw A B C D E.

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	50.58	49.42		61.72	60.28	
OH	54	46	100	54	68	122
D	3.42			7.72		
D^2	11.6964			59.5984		
$\frac{D^2}{EH}$	.2312	.2367		.9656	.9887	
EM	1750.42	1710.58		1739.28	1698,72	
$\frac{D^2}{EM}$	.0067	.0068		.0343	.0351	
χ^2 (for 1.d.f.) =			.4814			2.0237
P two tail / lies between			.50 and .30			.20 and .10

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	62.09	60.91		60.02	58.98	
OH	54	69	123	54	65	119
D	8.09			6.02		
D^2	65.4481			36.2404		
$\frac{D^2}{EH}$	1.05	1.07		.6038	.6145	
EM	1738.91	1706.09		1740.98	1711.02	
$\frac{D^2}{EM}$	.04	.04		.0208	.0212	
χ^2 (for 1 d.f.) =			2.20			1.2603
P two tail / lies between			.20 and .10			.30 and .20

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 181 Source data Ser. Nos: D 1 & 16.

For hit types: Raw. All F, all G and H3.

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	112.28	109.72		131.03	127.97	
OH	132	90	222	132	127	259
D	19.72			.97		
D^2	388.8784			.9409		
$\frac{D^2}{EH}$	3.46	3,54		.0072	..0073	
EM	1688.72	1650.28		1669.97	1631.03	
$\frac{D^2}{EM}$	.23	.23		.0006	.0006	
χ^2 (for 1.d.f.) =			7.46			.0157
P two tail / ~~is less than~~ lies between			.01 and.001	P two tail / ~~is less than~~ lies between		.95 and .90

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	138.30	135.70		141.22	138.78	
OH	132	142	274	132	148	280
D	6.30			9.22		
D^2	39.69			85.0084		
$\frac{D^2}{EH}$	.2870	.2925		.6019	.6125	
EM	1662.70	1631.30		1659.78	1631.22	
$\frac{D^2}{EM}$	.0239	.0243		.0512	.0521	
χ^2 (for 1 d.f.) =			.6277			1.3177
P two tail / ~~is less than~~ lies between			.50 and .30	P two tail / ~~is less than~~ lies between		.30 and .20

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 182 Source data Ser. Nos: D1 & 16.

For hit types: Raw. All F, G, H.

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	170.95	167.05		182.63	178.37	
OH	183	155	338	183	178	361
D	12.05			.37		
D^2	145.2025			.1369		
$\frac{D^2}{EH}$	.8494	.8692		.00075	.00077	
EM	1630.05	1592.95		1618.37	1580.63	
$\frac{D^2}{EM}$	.0891	.0911		.00008	.00010	
χ^2 (for 1.d.f.) =			1.8988			.0017
P two tail / ~~is less than~~	lies between .20 and .10			lies between .98 and .95		

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	195.85	192.15		200.22	196.78	
OH	183	205	388	183	214	397
D	12.85			17.22		
D^2	165.1225			296.5284		
$\frac{D^2}{EH}$	.8431	.8593		1.48	1.51	
EM	1605.15	1574.85		1600.78	1573.22	
$\frac{D^2}{EM}$	.1029	.1048		.19	.19	
χ^2 (for 1 d.f.) =			1.9101			3.37
P two tail / ~~is less than~~	lies between .20 and .10			lies between .10 and .05		

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 183 Source data Ser. Nos: D 1 & 16.

For hit types: I and K (raw).

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	73.84	72.16		70.32	68.68	
OH	63	83	146	63	76	139
D	10.84			7.32		
D^2	117.5056			53.5824		
$\frac{D^2}{EH}$	1.59	1.63		.7620	.7802	
EM	1727.16	1687.84		1 730.68	1690.32	
$\frac{D^2}{EM}$	.07	.07		.0310	.0317	
χ^2 (for 1.d.f.) =			3.36			1.6049
P two / tail / lies between / is less than	.10 and .05			.30 and .20		

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	62.09	60.91		71.11	69.89	
OH	63	60	123	63	78	141
D	.91			8.11		
D^2	.8281			65.7721		
$\frac{D^2}{EH}$	.0133	.0136		.9249	.9411	
EM	1738.91	1706.09		1729.89	1700.11	
$\frac{D^2}{EM}$	.0005	.0005		.0380	.0387	
χ^2 (for 1 d.f.) =			.0279			1.9427
P two / tail / lies between / is less than	.90 and .80			.20 and .10		

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 184 Source data Ser. Nos: D 1 & 16.

For hit types: I, J and K (raw).

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	82.94	81.06		83.98	82.02	
OH	75	89	164	75	91	166
D	7.94			8.98		
D^2	63.0436			80.6404		
$\frac{D^2}{EH}$	.7601	.7777		.9602	.9832	
EM	1718.06	1678.94		1717.02	1676.98	
$\frac{D^2}{EM}$	.0367	.0375		.0470	.0481	
χ^2 (for 1.d.f.) =			1.6120			2.0385
P two tail / lies between ~~is less than~~	.30 and .20			P two tail / lies between ~~is less than~~	.20 and .10	

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	76.22	74.78		79.69	78.31	
OH	75	76	151	75	83	158
D	1.22			4.69		
D^2	1.4884			21.9961		
$\frac{D^2}{EH}$	.0195	.0199		.2760	.2809	
EM	1724.78	1692.22		1721.31	1691.69	
$\frac{D^2}{EM}$	.0009	.0009		.0128	.0130	
χ^2 (for 1 d.f.) =			.0412			.5827
P two tail / lies between ~~is less than~~	.90 and .80			P two tail / lies between ~~is less than~~	.50 and .30	

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 185 Source data Ser. Nos: D1 & 16.

For hit types: (Raw). All combined.

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	246.81	241.19		271.16	264.84	
OH	254	234	488	254	282	536
D	7.19			17.16		
D^2	51.6961			294.4656		
$\frac{D^2}{EH}$	.2095	.2143		1.09	1.11	
EM	1554.19	1518.81		1529.84	1494.16	
$\frac{D^2}{EM}$	.0333	.0340		.19	.20	
χ^2 (for 1.d.f.) =			.4911			2.59
P two tail / lies between			.50 and .30			.20 and .10

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	272.57	267.43		284.45	279.55	
OH	254	286	540	254	310	564
D	18.57			30.45		
D^2	344.8449			927.2025		
$\frac{D^2}{EH}$	1.27	1.29		3.26	3.32	
EM	1528.43	1499.57		1516.55	1490.45	
$\frac{D^2}{EM}$	.23	.23		.61	.62	
χ^2 (for 1 d.f.) =			3.02			7.81
P two tail / lies between			.10 and .05			.01 and .001

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

✓ Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 186 | Source data Ser. Nos: D 2 & 16.

For hit types: Raw A

On Series C Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH						
OH	3	2	5	3	3	6
D						
D^2						
$\frac{D^2}{EH}$						
EM						
$\frac{D^2}{EM}$						
χ^2 (for 1 d.f.) =						
P two / tail / is less than				P two / tail / is less than		

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH						
OH	3	6	9	3	5	8
D						
D^2						
$\frac{D^2}{EH}$						
EM						
$\frac{D^2}{EM}$						
χ^2 (for 1 d.f.) =						
P two / tail / is less than				P two / tail / is less than		

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 187 Source data Ser. Nos: D 2 & 16.

For hit types: Raw A B C D E .

On Series C Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	55.70	56.30		81.92	80.08	
OH	79	33	112	79	83	162
D	23.30			2.92		
D^2	542.89			8.5264		
$\frac{D^2}{EH}$	9.75	9.64		.1041	.1065	
EM	1685.30	1703.70		1659.08	1621.92	
$\frac{D^2}{EM}$	.32	.32		.0051	.0053	
χ^2 (for 1 d.f.) =			20.03			.2210
P two tail / ~~lies between~~ is less than			.001	P two tail / lies between		.70 and .50

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	74.84	73.16		72.82	70.18	
OH	79	69	148	79	64	143
D	4.16			6.18		
D^2	17.3056			38.1924		
$\frac{D^2}{EH}$	.2312	.2365		.5245	.5442	
EM	1666.16	1628.84		1668.18	1607.82	
$\frac{D^2}{EM}$	.0104	.0106		.0229	.0237	
χ^2 (for 1 d.f.) =			.4887			1.1153
P two tail / lies between			.50 and .30	P two tail / ~~is less than~~		.30 and .20

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 188 | Source data Ser. Nos: D 2 & 16

For hit types: Raw all F, all G and H3.

On Series C Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	49.73	50.27		62.70	61.30	
OH	60.	40	100	60	64	124
D	10.27			2.70		
D^2	105.4729			7.290		
$\frac{D^2}{EH}$	2.12	2.10		.1163	.1189	
EM	1691.27	1709.73		1678.30	1640.70	
$\frac{D^2}{EM}$	.06	.06		.0043	.0044	
χ^2 (for 1 d.f.) =			4.34			.2439
P two tail / lies between			.05 and .02	P two tail / lies between		.70 and .50

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	62.20	60.80		68.74	66.26	
OH	60	63	123	60	75	135
D	2.20			8.74		
D^2	4.84			76.3876		
$\frac{D^2}{EH}$	.0778	.0796		1.11	1.15	
EM	1678.80	1641.20		1672.26	1611.74	
$\frac{D^2}{EM}$	.0029	.0029		.05	.05	
χ^2 (for 1 d.f.) =			.1632			2.36
P two tail / lies between			.70 and .50	P two tail / lies between		.20 and .10

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 189 Source data Ser. Nos: D 2 & 16.

For hit types: Raw all F, G, H.

On Series C Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	129.79	131.21		139.06	135.94	
OH	137	124	261	137	138	275
D	7.21			2.06		
D^2	51.9841			4.2436		
$\frac{D^2}{EH}$	.4005	.3962		.0305	.0312	
EM	1611.21	1628.79		1601.94	1566.06	
$\frac{D^2}{EM}$	.0323	.0319		.0026	.0027	
χ^2 (for 1 d.f.) =			.6609			.0670
P two tail / lies between is less than			.50 and .30			.80 and .70

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	139.06	135.94		140.03	134.97	
OH	137	138	275	137	138	275
D	2.06			3.03		
D^2	4.2436			9.1809		
$\frac{D^2}{EH}$	.0305	.0312		.0656	.0680	
EM	1601.94	1566.06		1600.97	1543.03	
$\frac{D^2}{EM}$	.0026	.0027		.0057	.0059	
χ^2 (for 1 d.f.) =			.0670			.1452
P two tail / lies between is less than			.80 and .70			.50 and .30

N.B. + indicates an improvement on week A scores .
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 190 | Source data Ser. Nos: D 2 & 16.

For hit types: I and K

On Series C Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	49.23	49.77		65.74	64.26	
OH	60	39	99	60	70	130
D	10.77			5.74		
D^2	115.9929			32.9476		
$\frac{D^2}{EH}$	2.36	2.33		.5012	.5127	
EM	1691.77	1710.23		1675,26	1637.74	
$\frac{D^2}{EM}$	.07	.07		.0197	.0201	
χ^2 (for 1 d.f.) =			4.83			1.0537
P two tail / lies between			.05 and .02	P two tail / lies between		.50 and .30

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	62.70	61.30		62.12	59.88	
OH	60	64	124	60	62	122
D	2.70			2.12		
D^2	7.29			4.4944		
$\frac{D^2}{EH}$	.1163	.1189		.0723	.0751	
EM	1678.30	1640.70		1678.88	1618.12	
$\frac{D^2}{EM}$	.0043	.0044		.0027	.0028	
χ^2 (for 1 d.f.) =			.2439			.1529
P two tail / lies between			.70 and .50	P two tail / lies between		.70 and .50

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 191 Source data Ser. Nos: D 2 & 16.

For hit types: I J K (raw).

On Series C Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	66.14	66.86		94.05	91.95	
OH	89	44	133	89	97	186
D	22.86			5.05		
D^2	522.5796			25.5025		
$\frac{D^2}{EH}$	7.90	7.82		.2711	.2773	
EM	1674.86	1693.14		1646.95	1610.05	
$\frac{D^2}{EM}$	.31	.31		.0155	.0158	
χ^2 (for 1 d.f.) =			16.34			.5797
P two tail / lies between ~~xxxxxxxxxx~~ is less than			.001	P two tail / ~~lies between~~ ~~xxxxxxxxxx~~ lies between		.50 and .30

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	91.02	88.98		91.15	87.85	
OH	89	91	180	89	90	179
D	2.02			2.15		
D^2	4.0804			4.6225		
$\frac{D^2}{EH}$	.0448	.0459		.0507	.0526	
EM	1649,98	1613.02		1649 .85	1590.15	
$\frac{D^2}{EM}$	.0025	.0025		.0028	.0029	
χ^2 (for 1 d.f.) =			.0957			.1090
P two tail / lies between ~~xxxxxxxxxx~~			.80 and .70	P two tail / lies between ~~xxxxxxxxxx~~		.80 and .70

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 192 | Source data Ser. Nos: D 2 & 16.

For hit types: Raw. All combined.

On Series C Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	214.33	216.67		252.83	247.17	
OH	250	181	431	250	250	500
D	35.67			2.83		
D^2	1272.3489			8.0089		
$\frac{D^2}{EH}$	5.94	5.87		.0317	.0324	
EM	1526.67	1543.33		1488.17	1454.83	
$\frac{D^2}{EM}$	.83	.82		.0054	.0055	
χ^2 (for 1 d.f.) =			13.46			.0750
P two tail / ~~lies between~~ is less than			.001	P two tail / lies between is less than		.80 and .70

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	247.77	242.23		248.49	239.51	
OH	250	240	490	250	238	488
D	2.23			1.51		
D^2	4.9729			2.2801		
$\frac{D^2}{EH}$	.0201	.0205		.0092	.0095	
EM	1493.23	1459.77		1492.51	1438.49	
$\frac{D^2}{EM}$	.0033	.0034		.0015	.0016	
χ^2 (for 1 d.f.) =			.0473			.0218
P two tail / lies between ~~is less than~~			.90 and .80	P two tail / lies between ~~is less than~~		.90 and .80

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 193 Source data Ser. Nos: D 2 & 16.

For hit types: Raw A.

On Series C Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH						
OH	5	2	7	5	2	7
D						
D^2						
$\frac{D^2}{EH}$						
EM						
$\frac{D^2}{EM}$						
χ^2 (for 1.d.f.) =						
P two / tail / lies between is less than				P two / tail / lies between is less than		

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH						
OH	5	6	11	5	3	8
D						
D^2						
$\frac{D^2}{EH}$						
EM						
$\frac{D^2}{EM}$						
χ^2 (for 1 d.f.) =						
P two / tail / lies between is less than				P two / tail / lies between is less than		

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 194 Source data Ser. Nos: D 2 & 16.

For hit types: Raw A B C D E.

On Series C Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	70.81	69.19		81.45	79.55	
OH	84	56	140	84	77	161
D	13.19			2.55		
D^2	173.9761			6.5025		
$\frac{D^2}{EH}$	2.46	2.51		.0798	.0817	
EM	1730.19	1690.81		1719.55	1679.45	
$\frac{D^2}{EM}$	.10	.10		.0038	.0039	
χ^2 (for 1.d.f.) =			5.17			.2692
P two tail / lies between ~~is less than~~			.05 and .02	P two tail / lies between ~~is less than~~		.70 and .50

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	82.78	81.22		76.66	75.34	
OH	84	80	164	84	68	152
D	1.22			7.34		
D^2	1.4884			53.8756		
$\frac{D^2}{EH}$	.0180	.0183		.7028	.7151	
EM	1718.22	1685.78		1724.34	1694.66	
$\frac{D^2}{EM}$	.0009	.0009		.0312	.0318	
χ^2 (for 1 d.f.) =			.0381			1.4809
P two tail / lies between ~~is less than~~			.90 and .80	P two tail / lies between ~~is less than~~		.30 and .20

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 195 Source data Ser. Nos: D 2 & 16.

For hit types: Raw. All F, all G and H3.

On Series C Originals.

F	Week A .50576	Week B .49424	Totals: 1
T	1801	1760	3561
EH	59.68	58.32	
OH	67	51	118
D	7.32		
D^2	53.5824		
$\frac{D^2}{EH}$	.8978	.9188	
EM	1741.32	1701.68	
$\frac{D^2}{EM}$	.0308	.0315	
χ^2 (for 1.d.f.) =			1.8789
P two tail / ~~is less than~~	.20 and .10		

F	Week A .50590	Week C .49410	Totals: 1
T	1801	1759	3560
EH	69.31	67.69	
OH	67	70	137
D	2.31		
D^2	5.3361		
$\frac{D^2}{EH}$	.0770	.0788	
EM	1731.69	1691.31	
$\frac{D^2}{EM}$	.0031	.0031	
			.1620
P two tail / ~~is less than~~	.70 and .50		

F	Week A .50476	Week D .49524	Totals: 1
T	1801	1767	3568
EH	69.15	67.85	
OH	67	70	137
D	2.15		
D^2	4.6225		
$\frac{D^2}{EH}$	.0668	.0681	
EM	1731.85	1699.15	
$\frac{D^2}{EM}$	.0027	.0027	
χ^2 (for 1 d.f.) =			.1403
P two tail / ~~is less than~~	.80 and .70		

F	Week A .50434	Week E .49566	Totals: 1
T	1801	1770	3571
EH	70.61	69.39	
OH	67	73	140
D	3.61		
D^2	13.0321		
$\frac{D^2}{EH}$	.1846	.1878	
EM	1730.39	1700.61	
$\frac{D^2}{EM}$	.0075	.0077	
			.3876
P two tail / ~~is less than~~	.70 and .50		

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 196 Source data Ser. Nos: D 2 & 16.

For hit types: Raw. All F G H .

On Series C Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	128.46	125.54		142.66	139.34	
OH	127	127	254	127	155	282
D	1.46			15.66		
D^2	2.1316			245.2356		
$\frac{D^2}{EH}$	.0166	.0170		1.72	1.76	
EM	1672.54	1634.46		1658.34	1619.66	
$\frac{D^2}{EM}$	.0013	.0013		.15	.15	
χ^2 (for 1.d.f.) =			.0362			3.78
P two tail / lies between			.90 and .80	P two tail / lies between		.10 and .05

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	143.35	140.65		142.73	140.27	
OH	127	157	284	127	156	283
D	16.35			15.73		
D^2	267.3225			247.4329		
$\frac{D^2}{EH}$	1.86	1.90		1.73	1.76	
EM	1657.65	1626.35		1658.27	1629.73	
$\frac{D^2}{EM}$	.16	.16		.15	.15	
χ^2 (for 1 d.f.) =			4.08			3.79
P two tail / lies between			.05 and .02	P two tail / lies between		.10 and .05

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 197 Source data Ser. Nos: D 2 & 16.

For hit types: I and K (Raw).

On Series C Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	62.21	60.79		63.74	62.26	
OH	60	63	123	60	66	126
D	2.21			3.74		
D^2	4.8841			13.9876		
$\frac{D^2}{EH}$	.0785	.0803		.2194	.2247	
EM	1738.79	1699.21		1737.26	1696.74	
$\frac{D^2}{EM}$	.0028	.0029		.0081	.0082	
χ^2 (for 1.d.f.) =			.1645			.4604
P two tail / ~~is less than~~	.70 and .50			P two tail / ~~is less than~~	.50 and .30	

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	60 .57	59.43		63.04	61.96	
OH	60	60	120	60	65	125
D	.57			3.04		
D^2	.3249			9.2416		
$\frac{D^2}{EH}$	.0054	.0055		.1466	.1491	
EM	1740.43	1707.57		1737.96	1708.04	
$\frac{D^2}{EM}$	.0002	.0002		.0053	.0054	
χ^2 (for 1 d.f.) =			.0113			.3064
P two tail / ~~is less than~~	.95 and .90			P two tail / ~~is less than~~	.70 and.50	

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 198 Source data Ser. Nos: D 2 & 16.

For hit types: Raw I J K.

On Series C Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	78.90	77.10		95.11	92.89	
OH	84	72	156	84	104	188
D	5.10			11.11		
D^2	26.01			123.4321		
$\frac{D^2}{EH}$	.3297	.3373		1.30	1.33	
EM	1722.10	1682.90		1705.89	1666.11	
$\frac{D^2}{EM}$	.0151	.0155		.07	.07	
χ^2 (for 1.d.f.) =			.6976			2.77
P two tail / lies between / is less than			.50 and .30			.10 and .05

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	93.89	92.11		89.77	88.23	
OH	84	102	186	84	94	178
D	9.89			5.77		
D^2	97.8121			33.2929		
$\frac{D^2}{EH}$	1.04	1.06		.3709	.3773	
EM	1707.11	1674.89		1711.23	1681.77	
$\frac{D^2}{EM}$	.06	.06		.0195	.0198	
χ^2 (for 1 d.f.) =			2.22			.7875
P two tail / lies between / is less than			.20 and .10			.50 and .30

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 199 Source data Ser. Nos: D 2 & 16.

For hit types: Raw, all combined.

On Series C Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	237.71	232.29		250.93	245.07	
OH	237	233	470	237	259	496
D	.71			13.93		
D^2	.5041			194.0449		
$\frac{D^2}{EH}$	.002121	.002170		.7733	.7918	
EM	1563.29	1527.71		1550.07	1513.93	
$\frac{D^2}{EM}$	.000322	.000330		.1252	.1282	
χ^2 (for 1.d.f.) =			.004943			1.8185
P two tail / ~~is less than~~ lies between			.95 and .90			.20 and .10

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	256.42	251.58		250.66	246.34	
OH	237	271	508	237	260	497
D	19.42			13.66		
D^2	377.1364			186.5956		
$\frac{D^2}{EH}$	1.47	1.50		.7444	.7575	
EM	1544.58	1515.42		1550.34	1523.66	
$\frac{D^2}{EM}$	.24	.25		.1203	.1225	
χ^2 (for 1 d.f.) =			3.46			1.7447
P two tail / ~~is less than~~ lies between			.10 and .05			.20 and .10

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 200 Source data Ser. Nos: D 3 & 16.

For hit types: A (corrected for bunching).

On Series E Originals. (Applying Yates' correction).

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	7.46	7.54		11.63	11.37	
OH	5.5	9.5	15	5.5	17.5	23
D	1.96			6.13		
D^2	3.8416			37.5769		
$\frac{D^2}{EH}$	.5149	.5095		3.23	3.30	
EM	1733.54	1752.46		1729.37	1690.63	
$\frac{D^2}{EM}$	.0022	.0022		.02	.02	
χ^2 (for 1 d.f.) =			1.0288			6.57
P two tail / ~~is less than~~	lies between .50 and .30			P two tail / ~~is less than~~	lies between .02 and .01	

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	8.60	8.40		13.24	12.76	
OH	5.5	11.5	17	5.5	20.5	26
D	3.1			7.74		
D^2	9.61			59.9076		
$\frac{D^2}{EH}$	1.12	1.14		4.52	4.69	
EM	1732.40	1693.60		1727.76	1665.24	
$\frac{D^2}{EM}$	.01	.01		.03	.03	
χ^2 (for 1 d.f.) =			2.28			9.27
P two tail / ~~is less than~~	lies between .20 and .10			P two tail / ~~is less than~~	lies between .01 and .001	

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 201 | Source data Ser. Nos: D 3 & 16.

For hit types: A B C D E (corrected for bunching).

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	35.80	36.20		46.52	45.48	
OH	42	30	72	42	50	92
D	6.20			4.52		
D^2	38.44			20.4304		
$\frac{D^2}{EH}$	1.07	1.06		.4392	.4492	
EM	1705.20	1723.80		1694.48	1656.52	
$\frac{D^2}{EM}$	.02	.02		.0121	0123	
χ^2 (for 1 d.f.) =			2.17			.9128
P two tail / lies between ~~is less than~~			.20 and .10	P two tail / lies between ~~is less than~~		.50 and .30

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	54.61	53.39		62.12	59.88	
OH	42	66	108	42	80	122
D	12.61			20.12		
D^2	159.0121			404.8144		
$\frac{D^2}{EH}$	2.91	2.98		6.52	6.76	
EM	1686.39	1648.61		1678.88	1618.12	
$\frac{D^2}{EM}$	.09	.10		.24	.25	
χ^2 (for 1 d.f.) =			6.08			13.77
P two tail / lies between ~~is less than~~			.02 and .01	P two tail / ~~lies between~~ ~~is less than~~		.001

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 202 | Source data Ser. Nos: D 3 & 16.

For hit types: All F, all G and H3 (corrected for bunching).

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	96.47	97.53		126.92	124.08	
OH	108	86	194	1 08	143	251
D	11.53			16.92		
D^2	132.9409			357.9664		
$\frac{D^2}{EH}$	1.38	1.36		2.82	2.88	
EM	1644.53	1662.47		1614.08	1577.92	
$\frac{D^2}{EM}$	.0808	.0800		.22	.23	
χ^2 (for 1 d.f.) =			2.90			6.15
P two tail /	lies between .10 and .05			P two tail /	lies between .02 and .01	

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	113.27	110.73		124.25	119.75	
OH	108	116	224	108	136	244
D	5.27			16.25		
D^2	27.7729			264.0625		
$\frac{D^2}{EH}$	.2452	.2508		2.13	2.21	
EM	1627.73	1591.27		1616.75	1558.25	
$\frac{D^2}{EM}$	.0171	.0175		.16	.17	
χ^2 (for 1 d.f.) =			.5306			4.67
P two tail /	lies between .50 and .30			P two tail /	lies between .05 and .02	

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 203 Source data Ser. Nos: D 3 & 16.

For hit types: All F, G, H, (corrected for bunching).

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	141.23	142.77		174.45	170.55	
OH	153	131	284	153	192	345
D	11.77			21.45		
D^2	138.5329			460.1025		
$\frac{D^2}{EH}$	.9809	.9703		2.64	2.70	
EM	1599.77	1617.23		1566.55	1531.45	
$\frac{D^2}{EM}$	.0866	.0857		.29	.30	
χ^2 (for 1 d.f.) =			2.1235			5.93
P two tail / lies between			.20 and .10			.02 and .01

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	166.36	162.64		177.21	170.79	
OH	153	176	329	153	195	348
D	13.36			24.21		
D^2	178.4896			586.1241		
$\frac{D^2}{EH}$	1.07	1.10		3.31	3.43	
EM	1574.64	1539.36		1563.79	1507.21	
$\frac{D^2}{EM}$	.11	.11		.37	.39	
χ^2 (for 1 d.f.) =			2.39			7.50
P two tail / lies between			.20 and .10			.01 and .001

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 204 | Source data Ser. Nos: D 3 & 16.

For hit types: I and K (corrected for bunching).

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	57.69	58.31		66.75	65.25	
OH	74	42	116	74	58	132
D	16.31			7.25		
D^2	266.0161			52.5625		
$\frac{D^2}{EH}$	4.61	4.56		.7875	.8055	
EM	1683.31	1701.69		1674.25	1636.75	
$\frac{D^2}{EM}$	.16	.16		.0314	.0321	
χ^2 (for 1 d.f.) =			9.49			1.6565
P two tail / lies between			.01 and .001	P two tail / lies between		.20 and .10

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	73.32	71.68		73.33	70.67	
OH	74	71	145	74	70	144
D	.68			.67		
D^2	.4624			.4489		
$\frac{D^2}{EH}$	.0063	.0065		.0061	.0063	
EM	1667.68	1630.32		1667.67	1607.33	
$\frac{D^2}{EM}$	.0003	.0003		.0003	.0003	
χ^2 (for 1 d.f.) =			.0134			.0130
P two tail / lies between			.95 and .90	P two tail / lies between		.95 and .90

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine significance of score changes for Experimental Group Subjects.

Calc. Ser. No: C 205 | Source data Ser. Nos: D 3 & 16.

For hit types: I J K (corrected for bunching).

On Series E Originals.

F	Week A .49729	Week B .50271	Totals: 1	Week A .50566	Week C .49434	Totals: 1
T	1741	1760	3501	1741	1702	3443
EH	67.13	67.87		76.35	74.65	
OH	84	51	135	84	67	151
D	16.87			7.65		
D^2	284.5969			58.5225		
$\frac{D^2}{EH}$	4.24	4.19		.7665	.7839	
EM	1673.87	1692.13		1664.65	1627.36	
$\frac{D^2}{EM}$	.17	.17		.0351	.0360	
χ^2 (for 1 d.f.) =			8.77			1.6215
P two tail / lies between .01 and .001				P two tail / lies between .30 and .20		

F	Week A .50566	Week D .49434	Totals: 1	Week A .50921	Week E .49079	Totals: 1
T	1741	1702	3443	1741	1678	3419
EH	82.93	81.07		85.55	82.45	
OH	84	80	164	84	84	168
D	1.07			1.55		
D^2	1.1449			2.4025		
$\frac{D^2}{EH}$	.0138	.0141		.0281	.0291	
EM	1658.07	1620.93		1655.45	1595.55	
$\frac{D^2}{EM}$	.0007	.0007		.0015	.0015	
χ^2 (for 1 d.f.) =			.0293			.0602
P two tail / lies between .90 and .80				P two tail / lies between .90 and .80		

N.B. + indicates an improvement on week A scores
- a decrease from week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 206 Source data Ser. Nos: D 3 & 16.

For hit types: **A (Corrected for bunching).**

On Series **E** Originals. **(Applying Yates correction for continuity).**

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	9.61	9.39		12.65	12.35	
OH	9.5	9.5	19	10.5	14.5	25
D	.11			2.15		
D^2	.0121			4.6225		
$\frac{D^2}{EH}$	.0013	.0013		.3654	.3743	
EM	1791.39	1750.61		1788.35	1746.65	
$\frac{D^2}{EM}$	.0000	.0000		.0026	.0026	
χ^2 (for 1.d.f.) =			.0026			.7449
P two tail / lies between		.98 and .95		P two tail / lies between		.50 and .30

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	10.60	10.40		12.10	11.90	
OH	10.5	10.5	21	10.5	13.5	24
D	.10			1.60		
D^2	.01			2.56		
$\frac{D^2}{EH}$	.0009	.0009		.2116	.2151	
EM	1790.40	1756.60		1788.90	1758.10	
$\frac{D^2}{EM}$	.0000	.0000		.0014	.0015	
χ^2 (for 1 d.f.) =			.0018			.4296
P two tail / lies between		.99 and .98		P two tail / lies between		.70 and .50

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 207 Source data Ser. Nos: D 3 & 16.

For hit types: 'A B C D E (corrected for bunching).

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	46.53	45.47		59.70	58.30	
OH	50	42	92	50	68	118
D	3.47			9.7		
D^2	12.0409			94.09		
$\frac{D^2}{EH}$	.2588	.2648		1.58	1.61	
EM	1754.47	1714.53		1741.30	1700.70	
$\frac{D^2}{EM}$	.0069	.0070		.05	.05	
χ^2 (for 1.d.f.) =			.5375			3.29
P two tail / lies between .50 and .30				P two tail / lies between .10 and .05		

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	53.00	52.00		54.97	54.03	
OH	50	55	105	50	59	109
D	3.00			4.97		
D^2	9.00			24.7009		
$\frac{D^2}{EH}$	.1698	.1731		.4493	.4572	
EM	1748.00	1715.00		1746.03	1715.97	
$\frac{D^2}{EM}$	.0051	.0052		.0141	.0144	
χ^2 (for 1 d.f.) =			.3532			.9350
P two tail / lies between .70 and .50				P two tail / lies between .50 and .30		

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 208 Source data Ser. Nos: D 3 & 16.

For hit types: All F, all G, H3 (corrected for bunching).

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	112.28	109.72		131.03	127.97	
OH	132	90	222	132	127	259
D	19.72			.97		
D^2	388.8784			.9409		
$\frac{D^2}{EH}$	3.46	3.54		.0072	.0073	
EM	1688.72	1650.28		1669.97	1631.03	
$\frac{D^2}{EM}$	.23	.23		.0006	.0006	
χ^2 (for 1.d.f.) =			7.46			.0157
P two tail / lies between			.01 and .001	P two tail / lies between		.95 and .90

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	132.25	129.75		140.71	138.29	
OH	132	130	262	132	147	279
D	.25			8.71		
D^2	.0625			75.8641		
$\frac{D^2}{EH}$	.0005	.0005		.5391	.5486	
EM	1668.75	1637.25		1660.29	1631.71	
$\frac{D^2}{EM}$	.0000	.0000		.0457	.0465	
χ^2 (for 1 d.f.) =			.0010			1.1799
P two tail / lies between			.98 and .95	P two tail / lies between		.30 and .20

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 209 Source data Ser. Nos: D 3 & 16.

For hit types: All F G H (corrected for bunching).

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	164.88	161.12		182.63	178.37	
OH	183	143	326	183	178	361
D	18.12			..37		
D^2	328.3344			.1369		
$\frac{D^2}{EH}$	1.99	2.04		.0007	.0008	
EM	1636.12	1598.88		1618.37	1580.63	
$\frac{D^2}{EM}$	.20	.21		.0001	.0001	
χ^2 (for 1.d.f.) =			4.44			.0017
P two tail / lies between	.05 and .02			P two tail / lies between	.98 and .95	
P two tail / is less than				P two tail / is less than		

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	187.27	183.73		199.72	196.28	
OH	183	188	371	183	213	396
D	4.27			16.72		
D^2	18.2329			279.5584		
$\frac{D^2}{EH}$	.0974	.0992		1.40	1.42	
EM	1613.73	1583.27		1601.28	1573.72	
$\frac{D^2}{EM}$	.0113	.0115		.17	.18	
χ^2 (for 1 d.f.) =			.2194			3.17
P two tail / lies between	.70 and .50			P two tail / lies between	.10 and .05	
P two tail / is less than				P two tail / is less than		

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 210 Source data Ser. Nos: D 3 & 16.

For hit types: **I and K (corrected for bunching).**

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	70 .81	69.19		74.37	72.63	
OH	71	69	140	71	76	147
D	.19			3.37		
D^2	.0361			11.3569		
$\frac{D^2}{EH}$	.0005	.0005		.1527	.1564	
EM	1730.19	1690.81		1726.63	1686.37	
$\frac{D^2}{EM}$	.0000	.0000		.0066	.0067	
χ^2 (for 1.d.f.) =			.0010			.3224
P two tail / lies between			.98 and .95			.70 and .50

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	63.10	61.90		73.13	71.87	
OH	71	54	125	71	74	145
D	7.90			2.13		
D^2	62.41			4.5369		
$\frac{D^2}{EH}$	.9891	1.0082		.0620	.0631	
EM	1737.90	1705.10		1727.87	1698.13	
$\frac{D^2}{EM}$	.0359	.0366		.0026	.0027	
χ^2 (for 1 d.f.) =			2.0698			.1304
P two tail / lies between			.20 and .10			.80 and .70

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Linkage Effects: Each week compared with week A to determine the significance of score changes for Control Group Subjects.

Calc. Ser. No: C 211 Source data Ser. Nos: D 3 & 16.

For hit types: I, J and K (corrected for bunching).

On Series E Originals.

F	Week A .50576	Week B .49424	Totals: 1	Week A .50590	Week C .49410	Totals: 1
T	1801	1760	3561	1801	1759	3560
EH	79.91	78.09		82.03	85.97	
OH	83	75	158	83	91	174
D	3.09			5.03		
D^2	9.5481			25.3009		
$\frac{D^2}{EH}$	.1195	.1223		.2874	.2943	
EM	1721.09	1681.91		1712.97	1673.03	
$\frac{D^2}{EM}$	.0055	.0057		.0148	.0151	
χ^2 (for 1.d.f.) =			.2530			.6116
P two tail / lies between			.70 and .50			.50 and .30

F	Week A .50476	Week D .49524	Totals: 1	Week A .50434	Week E .49566	Totals: 1
T	1801	1767	3568	1801	1770	3571
EH	77.23	75.77		81.70	80.30	
OH	83	70	153	83	79	162
D	5.77			1.30		
D^2	33.2929			1.690		
$\frac{D^2}{EH}$	.4311	.4394		.0207	.0210	
EM	1723.77	1691.23		1719.30	1689.70	
$\frac{D^2}{EM}$	.0193	.0197		.0010	.0010	
χ^2 (for 1 d.f.) =			.9095			.0437
P two tail / lies between			.50 and .30			.90 and .80

N.B. + indicates an improvement on week A scores
- a decrease on week A scores.

Calculation checked ? Yes.

Significance of Weekly Scoring Rate Differences between Control and Experimental Group Subjects.

For hit types: Raw A

On Series Originals: E

Calc. Ser. No: C 212 Source data Ser. Nos: D 1 & 16.

Week A	EGS	CGS	Totals
Hits	A 9	B 14	z 23
Misses	C 1732	D 1787	y 3519
Totals	w 1741	x 1801	N 3542

$m = |AD-BC| =$ 8165

$\frac{1}{2}N =$ 1771

$m-\frac{1}{2}N =$ 6394

$\frac{m^2N}{wxyz} =$

$\chi^2 =$ P =

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} = \frac{144,808,421,912}{253,781,281,917}$

$\chi^2 = .5706$ P = .50 and .30

Week B	EGS	CGS	Totals
Hits	A 10	B 9	z 19
Misses	C 1750	D 1751	y 3501
Totals	w 1760	x 1760	N 3520

$m = |AD-BC| =$ 1760

$\frac{1}{2}N =$ 1760

$m-\frac{1}{2}N =$ 0

$\frac{m^2N}{wxyz} =$

$\chi^2 =$ P =

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} = \frac{0}{206,049,254,400}$

$\chi^2 =$ P = 1.00 and .99

Week C	EGS	CGS	Totals
Hits	A 18	B 15	z 33
Misses	C 1684	D 1744	y 3428
Totals	w 1702	x 1759	N 3461

$m = |AD-BC| =$ 6132

$\frac{1}{2}N =$ 1730.5

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{130,138,528,464}{338,672,667,432}$

$\chi^2 = .3843$ P = .70 and .50

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week D	EGS	CGS	Totals
Hits	A 12	B 11	z 23
Misses	C 1690	D 1756	y 3446
Totals	w 1702	x 1767	N 3469

$m = |AD-BC| =$ 2482

$\frac{1}{2}N =$ 1734.5

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{21,370,163,956}{238,363,203,972}$

$\chi^2 = .0897$ P = .80 and .70

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week E	EGS	CGS	Totals
Hits	A 21	B 14	z 35
Misses	C 1657	D 1756	y 3413
Totals	w 1678	x 1770	N 3448

$m = |AD-BC| =$ 13678

$\frac{1}{2}N =$ 1724

$m-\frac{1}{2}N =$ 11954

$\frac{m^2N}{wxyz} = \frac{645,078,334,432}{354,788,517,300}$

$\chi^2 =$ 1.818 P = .20 and .10

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} = \frac{492,753,921,360}{354,788,517,300}$

$\chi^2 = 1.39$ P = .30 and .20

Calculation checked ? Yes.

Significance of Weekly Scoring Rate Differences between Control and Experimental Group Subjects.

For hit types: Raw A B C D E

On Series Originals: E

Calc. Ser. No: C 213 Source data Ser. Nos: D 1 & 16.

Week A	EGS	CGS	Totals
Hits	A 46	B 54	z 100
Misses	C 1695	D 1747	y 3442
Totals	w 1741	x 1801	N 3542

$m = |AD-BC| = 11168$

$\frac{1}{2}N = 1771$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{441,773,201,408}{1,079,253,212,200}$

$\chi^2 = .4093$ P = .70 and .50

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week B	EGS	CGS	Totals
Hits	A 43	B 46	z 89
Misses	C 1717	D 1714	y 3431
Totals	w 1760	x 1760	N 3520

$m = |AD-BC| = 5280$

$\frac{1}{2}N = 1760$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{98,131,968,000}{945,880,038,400}$

$\chi^2 = .1037$ P = .80 and .70

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week C	EGS	CGS	Totals
Hits	A 50	B 68	z 118
Misses	C 1652	D 1691	y 3343
Totals	w 1702	x 1759	N 3461

$m = |AD-BC| = 27786$

$\frac{1}{2}N = 1730.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{2,672,105,875,956}{1,180,983,361,732}$

$\chi^2 = 2.26$ P = .20 and .10

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week D	EGS	CGS	Totals
Hits	A 82	B 69	z 151
Misses	C 1620	D 1698	y 3318
Totals	w 1702	x 1767	N 3469

$m = |AD-BC| = 27,456$

$\frac{1}{2}N = 1734.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{2,615,042,985,984}{1,506,778,567,812}$

$\chi^2 = 1.73$ P = .20 and .10

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week E	EGS	CGS	Totals
Hits	A 93	B 65	z 158
Misses	C 1585	D 1705	y 3290
Totals	w 1678	x 1770	N 3448

$m = |AD-BC| = 55,540$

$\frac{1}{2}N = 1724$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{10,636,016,636,800}{1,543,896,589,200}$

$\chi^2 = 6.89$ P = .01 and .001

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Calculation checked ? Yes.

Significance of Weekly Scoring Rate Differences between Control and Experimental Group Subjects.

For hit types: Raw. All F, all G, and H3. On Series Originals: E

Calc. Ser. No: C 2 14 Source data Ser. Nos: D 1 & 16.

Week A	EGS	CGS	Totals
Hits	A 108	B 132	z 240
Misses	C 1633	D 1669	y 3302
Totals	w 1741	x 1801	N 3542

$m = |AD-BC| = 35,304$

$\frac{1}{2}N = 1771$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{4,414,651,097,472}{2,484,853,531,680}$

$\chi^2 = 1.78$ P = .20 and .10

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week B	EGS	CGS	Totals
Hits	A 86	B 90	z 176
Misses	C 1674	D 1670	y 3344
Totals	w 1760	x 1760	N 3520

$m = |AD-BC| = 7040$

$\frac{1}{2}N = 1760$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{174,456,832,000}{1,823,073,894,400}$

$\chi^2 = .0957$ P = .80 and .70

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week C	EGS	CGS	Totals
Hits	A 143	B 127	z 270
Misses	C 1559	D 1632	y 3191
Totals	w 1702	x 1759	N 3461

$m = |AD-BC| = 35,383$

$\frac{1}{2}N = 1730.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{4,333,022,100,629}{2,579,383,774,260}$

$\chi^2 = 1.68$ P = .20 and .10

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week D	EGS	CGS	Totals
Hits	A 127	B 142	z 269
Misses	C 1575	D 1625	y 3200
Totals	w 1702	x 1767	N 3469

$m = |AD-BC| = 17,275$

$\frac{1}{2}N = 1734.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{1,035,238,493,125}{2,588,799,187,200}$

$\chi^2 = .3999$ P = .70 and .50

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week E	EGS	CGS	Totals
Hits	A 141	B 148	z 289
Misses	C 1537	D 1622	y 3159
Totals	w 1678	x 1770	N 3448

$m = |AD-BC| = 1226$

$\frac{1}{2}N = 1724$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{5,182,606,048}{2,711,519,247,060}$

$\chi^2 = .0019$ P = .98 and .95

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Calculation checked ? Yes

Significance of Weekly Scoring Rate Differences between Control and Experimental Group Subjects.

For hit types: Raw. All F G H. On Series Originals: E

Calc. Ser. No: C 215 Source data Ser. Nos: D 1 & 16.

Week A	EGS	CGS	Totals
Hits	A 153	B 183	z 336
Misses	C 1588	D 1618	y 3206
Totals	w 1741	x 1801	N 3542

$m = |AD-BC| = 43,050$

$\frac{1}{2}N = 1771$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{6,564,397,455,000}{3,377,654,933,856}$

$\chi^2 = 1.94$ P = .20 and .10

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week B	EGS	CGS	Totals
Hits	A 153	B 155	z 308
Misses	C 1607	D 1605	y 3212
Totals	w 1760	x 1760	N 3520

$m = |AD-BC| = 3520$

$\frac{1}{2}N = 1760$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{43,614,208,000}{3,064,443,289,600}$

$\chi^2 = .0142$ P = .95 and .90

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week C	EGS	CGS	Totals
Hits	A 192	B 178	z 370
Misses	C 1510	D 1581	y 3091
Totals	w 1702	x 1759	N 3461

$m = |AD-BC| = 34772$

$\frac{1}{2}N = 1730.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{4,184,667,356,624}{3,423,939,832,060}$

$\chi^2 = 1.22$ P = .30 and .20

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week D	EGS	CGS	Totals
Hits	A 187	B 205	z 392
Misses	C 1515	D 1562	y 3077
Totals	w 1702	x 1767	N 3469

$m = |AD-BC| = 18481$

$\frac{1}{2}N = 1734.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{1,184,827,795,309}{3,627,518,771,856}$

$\chi^2 = .3266$ P = .70 and .50

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week E	EGS	CGS	Totals
Hits	A 200	B 214	z 414
Misses	C 1478	D 1556	y 3034
Totals	w 1678	x 1770	N 3448

$m = |AD-BC| = 5092$

$\frac{1}{2}N = 1724$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{89,401,343,872}{3,730,621,084,560}$

$\chi^2 = .0240$ P = .90 and .80

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Calculation checked ? Yes.

Significance of Weekly Scoring Rate Differences between Control and Experimental Group Subjects.

For hit types: Raw I and K. On Series Originals: E

Calc. Ser. No: C 216 Source data Ser. Nos: D 1 & 16.

Week A	EGS	CGS	Totals
Hits	A 65	B 63	z 128
Misses	C 1676	D 1738	y 3414
Totals	w 1741	x 1801	N 3542

$m = |AD-BC| = 7382$

$\frac{1}{2}N = 1771$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{193,017,478,808}{1,370,206,332,672}$

$\chi^2 = .1409$ P = .80 and .70

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week B	EGS	CGS	Totals
Hits	A 53	B 83	z 136
Misses	C 1707	D 1677	y 3384
Totals	w 1760	x 1760	N 3520

$m = |AD-BC| = 52800$

$\frac{1}{2}N = 1760$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{9,813,196,800,000}{1,425,589,862,400}$

$\chi^2 = 6.88$ P = .01 and .001

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week C	EGS	CGS	Totals
Hits	A 58	B 76	z 134
Misses	C 1644	D 1683	y 3327
Totals	w 1702	x 1759	N 3461

$m = |AD-BC| = 27330$

$\frac{1}{2}N = 1730.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{2,585,120,922,900}{1,334,697,953,124}$

$\chi^2 = 1.94$ P = .20 and .10

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week D	EGS	CGS	Totals
Hits	A 121	B 60	z 181
Misses	C 1581	D 1707	y 3288
Totals	w 1702	x 1767	N 3469

$m = |AD-BC| = 111687$

$\frac{1}{2}N = 1734.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{43,272,257,295,240}{1,789,808,181,552}$

$\chi^2 = 24.18$ P < .001

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week E	EGS	CGS	Totals
Hits	A 89	B 78	z 167
Misses	C 1589	D 1692	y 3281
Totals	w 1678	x 1770	N 3448

$m = |AD-BC| = 26,646$

$\frac{1}{2}N = 1724$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{2,448,112,121,568}{1,627,376,065,620}$

$\chi^2 = 1.50$ P = .30 and .20

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Calculation checked ? Yes.

Significance of Weekly Scoring Rate Differences between Control and Experimental Group Subjects.

For hit types: Raw I J K.

On Series Originals: B

Calc. Ser. No: C 217 Source data Ser. Nos: D 1 & 16.

Week A	EGS	CGS	Totals
Hits	A 75	B 75	z 150
Misses	C 1666	D 1726	y 3392
Totals	w 1741	x 1801	N 3542

$m = |AD-BC| =$ 4500

$\frac{1}{2}N =$ 1771

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} =$ 71,725,500,000 / 1,595,363,260,800

$\chi^2 =$ .0449 P = .90 and .80

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week B	EGS	CGS	Totals
Hits	A 90	B 89	z 179
Misses	C 1670	D 1671	y 3341
Totals	w 1760	x 1760	N 3520

$m = |AD-BC| =$ 1760

$\frac{1}{2}N =$ 1760

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} =$ 10,903,552,000 / 1,852,485,606,400

$\chi^2 =$ .0059 P = .95 and .90

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week C	EGS	CGS	Totals
Hits	A 87	B 91	z 158
Misses	C 1635	D 1668	y 3303
Totals	w 1702	x 1759	N 3461

$m = |AD-BC| =$ 37029

$\frac{1}{2}N =$ 1730.5

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} =$ 4,745,539,216,701 / 1,562,395,774,932

$\chi^2 =$ 3.04 P = .10 and .05

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week D	EGS	CGS	Totals
Hits	A 130	B 76	z 206
Misses	C 1572	D 1691	y 3263
Totals	w 1702	x 1767	N 3469

$m = |AD-BC| =$ 100358

$\frac{1}{2}N =$ 1734.5

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} =$ 34,938,824,987,040 / 2,021,530,971,252

$\chi^2 =$ 17.28 P = < .001

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Week E	EGS	CGS	Totals
Hits	A 103	B 83	z 186
Misses	C 1575	D 1687	y 3262
Totals	w 1678	x 1770	N 3448

$m = |AD-BC| =$ 43036

$\frac{1}{2}N =$ 1724

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} =$ 6,366,031,476,608 / 1,802,030,443,920

$\chi^2 =$ 3.54 P = .10 and .05

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$

$\chi^2 =$ P =

Calculation checked ? Yes.

Significance of Weekly Scoring Rate Differences between Control and Experimental Group Subjects.

For hit types: Raw. All combined. On Series Originals: E

Calc. Ser. No: C 218 Source data Ser. Nos: D 1 & 16.

Week A	EGS	CGS	Totals
Hits	A 244	B 254	z 498
Misses	C 1497	D 1547	y 3044
Totals	w 1741	x 1801	N 3542

$m = |AD-BC| = 2770$

$\frac{1}{2}N = 1771$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{27,177,411,800}{4,753,204,228,392}$

$\chi^2 = .0057$ P = .95 and .90

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$ ____

$\chi^2 =$ P =

Week B	EGS	CGS	Totals
Hits	A 243	B 234	z 477
Misses	C 1517	D 1526	y 3043
Totals	w 1760	x 1760	N 3520

$m = |AD-BC| = 15840$

$\frac{1}{2}N = 1760$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{883,187,712,000}{4,496,200,473,600}$

$\chi^2 = .1964$ P = .70 and .50

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$ ____

$\chi^2 =$ P =

Week C	EGS	CGS	Totals
Hits	A 262	B 282	z 544
Misses	C 1440	D 1477	y 2917
Totals	w 1702	x 1759	N 3461

$m = |AD-BC| = 19106$

$\frac{1}{2}N = 1730.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{1,263,400,795,796}{4,750,734,105,664}$

$\chi^2 = .2659$ P = .70 and .50

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$ ____

$\chi^2 =$ P =

Week D	EGS	CGS	Totals
Hits	A 332	B 286	z 618
Misses	C 1370	D 1481	y 2851
Totals	w 1702	x 1767	N 3469

$m = |AD-BC| = 99872$

$\frac{1}{2}N = 1734.5$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{34,601,250,436,096}{5,298,852,098,412}$

$\chi^2 = 6.53$ P = .02 and .01

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$ ____

$\chi^2 =$ P =

Week E	EGS	CGS	Totals
Hits	A 323	B 310	z 633
Misses	C 1355	D 1460	y2815
Totals	w 1678	x 1770	N 3448

$m = |AD-BC| = 51,530$

$\frac{1}{2}N = 1724$

$m-\frac{1}{2}N =$

$\frac{m^2N}{wxyz} = \frac{9,155,615,423,200}{5,292,335,063,700}$

$\chi^2 = 1.73$ P = .20 and .10

$\frac{(m-\frac{1}{2}N)^2N}{wxyz} =$ ____

$\chi^2 =$ P =

Calculation checked ? Yes.

APPENDIX D.

TABLES EMBODIED IN THE REPORT.

LIST OF TABLES.

Continued overleaf:

LIST OF TABLES

TABLE I.

SHOWING THE SIGNIFICANCE OF THE DIFFERENCES IN RAW SCORES ON THE CONTROL AND EXPERIMENTAL SERIES OF ORIGINALS FOR THE COMBINED SCORES OF EXPERIMENTAL AND CONTROL GROUP SUBJECTS FOR EACH CLASS OF HIT.

(Summary of Calculations Nos: C1 to C20)

Notes: (1) A plus sign in front of a deviation indicates that more hits were scored on the Experimental Series Originals than on the Control Series Originals.

(2) All Chi square totals are for one degree of freedom. Thus $\chi^2 =$ 3.84 gives a P value of .05 approximately.
5.41 .02
6.64 .01
10.83 .001

Type of Hit:	No. of hits on Exp. Originals	No. of hits on Control Originals:	Difference	Chi square totals:
A	133	37	+ 96	54.76
B	335	342	- 7	0.074
B+C	337	350	- 13	0.26
D	114	180	- 66	15.08
E	32	126	- 94	56.42
F3	151	52	+ 99	48.84
F2	390	212	+ 178	54.50
F1	595	329	+ 266	80.86
G1	22	11	+ 11	5.66
G1, G2, and G3	28	11	+ 17	7.44
H3	80	29	+ 51	24.00
H2	220	330	- 110	22.72
H1	356	434	- 78	8.06
I	689	570	+ 119	12.12
J	133	258	- 125	40.88
K	57	39	+ 18	3.40
All hits	2.770	2,419	+ 351	35.80

Transcription checked ? Yes.

TABLE II

SUMMARY OF THE SIGNIFICANCES OF THE DIFFERENCES IN A HITS ON C AND E.S.O. FROM VARIOUS TYPES OF THEORETICALLY EXPECTED FREQUENCIES.

(Calculations C 21A to C 24).

C 21A: Significance of differences in Fully Corrected A hits scored on C. and E.S.O. using Preliminary Frequency Experiment frequencies to establish theoretically expected frequencies. P was less than .001

C 21B: Significance of the difference in number of Fully Corrected A hits scored on two groups of E.S.O. and C.S.O. equated in initial difficulty in terms of the Preliminary Frequency Experiment Frequencies. P was less than .001

C 22A: Significance of the positive deviation of Raw A hits from true chance frequencies established by the Preliminary Frequency Experiment. P was less than 10^{-11}

C 22B: Significance of the negative deviation of the Raw A hits on C.S.O. from the true chance frequencies established by the Preliminary Frequency Experiment. P was less than .02

C 23A: Significance of the positive deviation of the Fully Corrected A hits on E.S.O. from true chance frequencies as established in the Preliminary Frequency Experiment. P was less than .001

C 23B: Significance of the negative deviation of the Fully Corrected A hits on C.S.O. from the true chance frequencies established in the Preliminary Frequency Experiment. P was less than .001

C 24: Calculation of the Mean Raw A hits scored in the Main Experiment on a sample of 200 series of 50 Originals selected from 992 equated titles, including those used for the E.S.O. and the C.S.O.

Mean: 40.375 A hits.

S.D.: 12.95

$\sigma_{S.D.}$ .6475

Assessment of deviations of the Fully Corrected A Hits from these empirically established chance frequencies gave the following results:

E.S.O. Observed hits: 89, expected 40.375, Deviation: +48.625 . P lies between .00032 and .00014

C.S.O. Observed hits: 27 expected: 40.375 Deviation -13.375 . P is approximately equal to .32

Transcription checked ?
Yes.

TABLE III

SUMMARY OF MATERIAL BEARING ON WHETHER SUBJECTS TENDED TO SCORE MORE HITS ON ORIGINALS DURING THE WEEK IN WHICH THEY WERE THE TARGETS, THAN IN OTHER WEEKS.

RAW SCORES ON EXPERIMENTAL ORIGINALS ONLY.

(A) EXPERIMENTAL GROUP SUBJECTS:
(Calculations C25 to C29 only)

Type of hit:	Observed hits	Expected hits	Deviation	$\frac{D}{\sigma}$
A	10	14	-4	1.25
A + B + C + D + E	49	62.8	-13.8	2.04
F2, F3, + G2, G3, + H2, H3	82	82.6	-0.6	0.07
All F, G and H.	176	177	-1.0	0.08
I + J + K	105	93	+12	1.43

(B) CONTROL GROUP SUBJECTS:
(Calculations C30 to C34.)

A	10	12.6	-2.6	0.83
A + B + C + D + E	67	60.4	+6.6	0.96
F2, F3 + G2, G3 + H2, H3.	95	86.8	+8.2	1.00
All F, G and H	196	187	+9.0	0.75
I + J + K	97	82.8	+14.2	1.81

None of the above reach the .01 level of significance.

Transcription checked ? Yes.

TABLE IV:

SUMMARY OF THE MATERIAL BEARING ON WHETHER SUBJECTS TENDED TO SCORE MORE HITS ON ORIGINALS DURING THE WEEK IN WHICH THEY WERE THE TARGETS, THAN IN OTHER WEEKS.

SCORES CORRECTED FOR BUNCHING.
HITS ON EXPERIMENTAL SERIES ORIGINALS ONLY

(A) EXPERIMENTAL GROUP SUBJECTS
(Calculations C35 to C39).

Type of hit:	Observed hits	Expected hits:	Deviation	$\frac{D}{\sigma}$
A	10	13.2	-3.2	1.06
A + B + C + D + E	45	53.6	-8.6	1.36
F2, F3, + G2, G3 + H2, H3	76	79.4	-3.4	0.43
All F, G + and H	170	169.4	+0.6	0.05
I + J + K	80	73.2	+6.8	0.91

(B) CONTROL GROUP SUBJECTS:
(Calculations C40 to C44).

A	10	11.8	-1.8	0.59
A + B + C + D + E	55	54.8	+0.2	0.03
F2, F3 + G2, G3 + H2, H3.	87	84.2	+2.8	0.35
All F, G and H	188	181	+7.0	0.60
I + J + K	90	79.6	+10.4	1.37

None of the above reach the .01 level of significance.

Transcription checked ? Yes.

TABLE V.

CORRELATIONS OBTAINED BETWEEN SUBJECTS' HIT SCORES AND PERSONALITY TEST SCORES.

(Total hits: all types, all judges, uncorrected.)
(Defaulters' hit scores corrected to the expectancy for a full 50 drawings.)

Calculations C45 to C54.

Personality measures:-	Correlation "r"	σ_{r_o}	$\frac{r}{\sigma_{r_o}}$	P* lies between:
Study of Values:				
Theoretical	+.0077	.0533	.14	1.0 and .84
Economic	+.0595	.0533	1.11	.32 .23
Aesthetic	+.0217	.0533	.41	.69 .55
Social	+.0113	.0533	.21	.84 .69
Political	-.0404	.0533	.76	.55 .42
Religious	-.0410	.0533	.77	.55 .42
Pressey X-O Test				
Total words crossed out	-.0254	.053	.48	.69 .55
Washburne Social Adjustment Invent.				
Subtotal	-.036	.053	.68	.55 .42
Bernreuter Personality Inv.				
Confidence F1C.	-.0803	.0536	1.50	.16 .11
Sociability F2S	-.0859	.0536	1.60	exactly .11

*Probabilities have been obtained from Milton Smith: "A simplified Guide to Statistics" Table VIII, but presentation has been slightly changed to conform to the conventional method of presenting P values. Here P = .01 means that there is 1 chance in 100 that a value of t as large as the obtained value, or larger, could occur on the basis of chance variations in sampling. (Large samples from the same population.)

Transcription checked ? Yes.

TABLE VI.

SHOWING PERSONALITY TEST SCORE MEANS FOR VARIOUS SUBJECT GROUPS CLASSIFIED IN TERMS OF UNCORRECTED A HITS SCORED.

(Calculations C55 to C72).

	Numbers of A hits scored by the group:				
	0	0 & 1	1	1,2 or more	2 or more
Personality measure:					
Washburne:					
Subtotal	114.12	-	-	116.41	108.92
Pressey X-O Test:					
Melancholic:	8.95	-	-	9.27	8.38
Total crossed out:	167.08	-	-	168.34	157.96
Bernreuter:					
F1-C	213.16	214.88	220.23	210.83	179.917
F2-S	194.79	-	-	190.51	184.417
B3-I	197.27	-	194.96	188.699	168.08

Transcription checked ? Yes.

TABLE VII.

SUMMARY OF THE SIGNIFICANCE OF THE DIFFERENCES IN PERSONALITY SCORE MEANS FOR THE GROUPS OF SUBJECTS INDICATED BELOW:

(Calculations C55 to C68)

Type A hits: all judges, uncorrected, on Experimental Series Originals only --- made by Control and Experimental Group S's.

	Difference between: (a) Group scoring 1, 2 or more A Hits and (b) Group scoring no A hits.			Difference between: (c) Group scoring 2 or more A hits and (d) Group scoring no A hits.		
Personality measures:	Mean diff:	$\frac{D}{\sigma_{diff}}$	P lies between	Mean diff	$\frac{D}{\sigma_{diff}}$	P lies between
Washburne Social Adjustment Inven. Subtotal:	2.29	.50	.69 .55	5.20	.67	.55 .42
Pressey X-O Test:						
Melancholic Score:	.32	.58	.69 .55	.57	.66	.55 .42
Total words crossed out:	1.26	.22	.84 .69	9.12	.90	.42 .32
Bernreuter:						
F1C Confidence:	2.33	.22	.84 .69	33.24	1.97	.05 .045
F2S Sociability:	4.28	.65	.55 .42	10.37	.84	.42 .32
B3I Introversion:	8.57	1.54	.16 .11	29.19	3.37	.001 .0007

	(e) Group scoring 1 A hit, and (f) Group scoring 0 or 1 A hit.			(e) Group scoring 1 A hit, and (c) Group scoring 2 or more A hits.		
Bernreuter:						
F1C Confidence:	5.35	.45	.69 .55	40.31	2.09	.045 .036

Notes: The above values for P have been obtained from Milton Smith (104, page 59). Here a value of P = .01 means that there is only 1 chance in 100 that a value of t as large as the obtained value, or larger, could occur on the basis of chance variations in sampling. (Large samples from the same population.). (P values are for a two-tailed test of significance).

Transcription checked ? Yes.

TABLE VIII.

SUMMARY OF THE BERNREUTER B3I- INTROVERSION SCORES: SIGNIFICANCE OF MEAN DIFFERENCES FOR VARIOUS GROUPS IN TERMS OF A HITS SCORED.

(A) COMPARISON WITH GROUP SCORING 0 A HITS:
(Calculations C 65, 66, 69)

A hits scored by group:	B3I Mean score:	Mean diff.	$\frac{D}{\sigma_{diff.}}$	P lies between:
0 A hits:	197.27			
1 A hit:	194.96	2.31	.37	.84 .69
1 or more	188.699	8.57	1.54	.16 .11
2 or more	168.08	29.19	3.37	.001 .0007

(B) COMPARISON WITH GROUP SCORING 1 A HIT:
(Calculations C 70, 71).

1 A hit:	194.96			
1 or more	188.699	6.261	.87	.42 .32
2 or more	168.08	26.88	2.75	.007 .005

(C) COMPARISON WITH GROUP SCORING 1 OR MORE A HITS.
(Calculation C 72).

1 or more	188.699			
2 or more	168.08	20.619	2.19	.36 .28

(D) RELATION BETWEEN NUMBER OF A HITS SCORED AND DEGREE OF EXTRAVERSION

Group scoring 0 A hits B3I mean score 197.27 (most introverted)

Group scoring 1 A hit: 194.96

Group scoring 1 or more 188.699

Group scoring 2 or more ..... 168.08 (most extraverted)

Notes: Values for P have been taken from Milton Smith, (104, page 59), and show the probability (chances in 100) that a value of t as large as the obtained value or larger, could occur on the basis of chance variations in sampling. (Large samples from the same population). In table VII above P = .01 means one chance in 100. (P values are for a two-tailed test.)

Transcription checked ? Yes.

TABLE IX.

SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN INTROVERSION SCORES, (B3I + 200), OF GROUPS OF SUBJECTS (a) SUGGESTING TITLES FOR CSO AND ESO ORIGINALS IN THE PRELIMINARY FREQUENCY EXPERIMENT AND (b) SCORING UNCORRECTED A HITS IN THE MAIN EXPERIMENT.

(Calculations C72 to C76)

Groups:	Means:	Mean differences:	$\frac{D}{\sigma_{M_{diff}}}$	Chances in 100 that D is signif*
1 title:	194.96			
1 A hit:	189.42	5.54	.76	77 to 79
1 or more titles:	188.699			
1 or more A hit:	189.94	1.241	.19	56 to 58
2 or more titles:	192.33			
2 or more A hits:	168.08	24.25	1.93	97 to 98
2 or more titles	192.33			
0 A hits:	197.27	4.94	.48	67 to 69

* From Garrett: Statistics in Psychology and Education, Table 34, page 213: showing the number of chances in 100 that the true difference is greater than zero. (103).

Transcription checked ?
Yes.

TABLE X.

ASSESSMENT OF THE SIGNIFICANCE OF THE BERNREUTER F1C & B3I PERSONALITY SCORE DIFFERENCES BETWEEN (a) THE GROUP SCORING 2 OR MORE A HITS, AND (b) THE GROUP SCORING 0 A HITS, USING THE NONPARAMETRIC MEDIAN TEST.

(Calculations C77 to C80).

(A) EXCLUDING ONLY THOSE SUBJECTS RETURNING NO DRAWINGS WHATSOEVER IN THE MAIN EXPERIMENT.

	Uncorrected for continuity:	Corrected for continuity:
F1C: χ^2 (1 df.)	2.93	2.24
P for two-tailed test:	between .1 & .05	between .2 & .1
P for one-tailed test:	between .05 & .025	between .1 & .05
B3I: χ^2 (1 df.)	4.58	3.71
P for two-tailed test:	between .05 & .02	between .1 & .05
P for one-tailed test:	between .025 & .01	between .05 & .025

(B) EXCLUDING ALL SUBJECTS NOT RETURNING THE FULL 50 DRAWINGS IN THE MAIN EXPERIMENT:

	Uncorrected for continuity:	Corrected for continuity:
F1C: χ^2 (1 df.)	2.52	1.84
P for two-tailed test:	between .2 & .1	between .2 & .1
P for one-tailed test:	between .1 and .05	between .1 & .05
B3I: χ^2 (1 df.)	2.59	1.9
P for two-tailed test:	between .2 & .1	between .2 & .1
P for one-tailed test:	between .1 & .05	between .1 & .05

The P values given above have been obtained from Siegel's Table of Critical Values for Chi Square, p249 in "Nonparametric Statistics" (107).

Transcription checked ?
Yes.

TABLE XI:

SUMMARY OF DATA FROM PSYCHIC QUESTIONNAIRE: PAGE I. (INCLUDING SUBJECTS FAILING TO RETURN THE FULL 50 DRAWINGS).

(Calculations C88 to C96)

Question:	Ans. Sym.	Group scoring 2 or more A type hits: Score:		%	Group failing to score A type hits: Score		%	P. (2-tail)
Dream frequencies:	a	4	7	16.67	67	121	27.016	.1-.05
	b	2		8.33	18		7.258	
	c	1		4.17	36		14.516	.2-.1
	d	14	17	58.33	78	127	31.452	
	e	3		12.50	49		15.758	
	T	24			248			
Hypnogogic Imagery experienced	Y	18		78.26	188		77.05	
	N	5		21.74	56		22.95	
	T	23			244			
Aware of friends' moods	Y	22		95.65	226		91.87	
	N	1		4.35	20		8.13	
	T	23			246			
Aware of strangers' moods:	Y	12		52.17	143		58.85	
	N	11		47.83	100		41.15	
	T	23			243			
Aware of conversation undercurrents	Y	21		91.30	224		90.32	
	N	2		8.70	24		9.68	
	T	23			248			
Aware of atmosphere	Y	22		95.65	203		82.52	Too small
	N	1		4.35	43		17.48	
	T	23			246			
Experience of "slipping away":	Y	18		81.82	172		69.92	.3-.2
	N	4		18.18	74		30.08	.5-.3
	T	22			246			
Sleepwalking as a child:	F	1	8	4.35	10	63	4.12	.5-.3
	O	7		30.43	53		21.81	.7-.5
	N	15		65.22	180		74.07	
	T	23			243			
Sleepwalking as an adult:	F	0	7	0	2	27	.83	Too small
	O	7		33.33	25		10.37	
	N	14		66.67	214		88.80	
	T	21			241			
Sleeptalking as a child:	F	6	21	27.27	46	180	19.25	.05-.02
	O	15		68.18	134		56.07	.1 -.05
	N	1		4.55	59		24.68	
	T	22			239			
Sleeptalking as an adult:	F	2	20	8.70	27	166	11.20	.1 -.05
	O	18		78.26	139		57.68	.2 -.1
	N	3		13.04	75		31.12	
	T	23			241			

Continued:

TABLE XI: PAGE 2:

Question:	Ans. Sym.	Group scoring 2 or more A type hits:		Group failing to score A type hits:		P. (2-tail)
Experience of Deperson.	Y	7	30.43	114	46.53	.2 -.1
	N	16	69.57	131	53.47	.3 -.2
	T	23		245		
Religious denomination:	Ang	12	52.17	129	52.44	
	Meth	1	4.35	23	9.35	
	Cath	1	4.35	13	5.28	
	Pres	4	17.39	23	9.35	
	Bapt	0	0	4	1.63	
	C Sc	1	4.35	4	1.63	
	Luth	0	0	2	.81	
	DRC	1	4.35	15	6.10	
	Spir	0	0	1	.41	
	Jew	0	0	21	8.54	
	Nil	3	13.04	11	4.47	
	T	23		246		
Freq. of church attendance	W	6	26.09	99	42.13	.2 -.1
	M	6	26.09	30	12.77	.3 -.2
	Y	8	34.78	84	35.74	
	N	3 } 17	13.04	22 } 136	9.36	
	T	23		235		
Mystical exper.	Y	1 } 5	4.35	21 } 32	8.50	Too small
	?	4	17.39	11	4.45	
	N	18	78.26	215	87.04	
	T	23		247		
Personal psychical exper.	Y	14	60.87	147	60.49	
	N	9	39.13	96	39.51	
	T	23		243		
Phenomena accepted "B" or "E"	Y	22	95.65	204	83.61	Too small
	N	1	4.35	40	16.39	
	T	23		244		
Déjà Vu experience	Y	18	78.26	163	67.35	.3 -.2
	N	5	21.74	79	32.64	.5 -.3
	T	23		242		
Relations cited as psychic:	Y	3	13.04	24	10.26	Too small
	N	20	86.96	210	89.74	
	T	23		234		
Self cited as psychic:	Y	2	8.70	10	4.31	
	N	21	91.30	222	95.69	
	T	23		232		
Hallucinations exper.	M	6 } 8	26.09	41 } 50	17.30	.2 -.1
	O	2	8.70	9	3.80	.3 -.2
	N	15	65.21	187	78.90	
	T	23		237		

P values have been obtained from Siegel, page 249, and are for a two-tailed test of χ^2 with 1df. The first P value given is not corrected for continuity, the second is with the correction for continuity applied.

Transcription checked ?
Yes.

TABLE XII:

SUMMARY OF DATA FROM PSYCHIC QUESTIONNAIRE: PAGE 1. (EXCLUDING SUBJECTS FAILING TO RETURN THE FULL 50 DRAWINGS).

(Calculations C97 to C103).

Question:	Ans. Sym.	Group scoring 2 or more A type hits: Score:		%	Group scoring 0 A type hits: Score:		%	P (2-tail)
Dream frequencies	a	4	7	19	52	93	26	.3 -.2
	b	2		10	14		7	.5 -.3
	c	1		5	27		14	
	d	11	14	52	64	104	32	
	e	3		14	40		20	
	T	21			197			
Hypnogogic Imagery experienced	Y	16		80	151		77	
	N	4		20	44		23	
	T	20			195			
Aware of friends' moods:	Y	19		95	180		92	
	N	1		5	16		8	
	T	20			196			
Aware of strangers' moods:	Y	10		50	113		59	
	N	10		50	79		41	
	T	20			192			
Aware of conversation under-currents:	Y	18		90	180		91	
	N	2		10	17		9	
	T	20			197			
Aware of atmosphere	Y	19		95	166		85	Too small
	N	1		5	29		15	
	T	20			195			
Experience of "slipping away":	Y	16		84	137		70	.2 -.1
	N	3		16	59		30	.3 -.2
	T	19			196			
Sleepwalking as a child:	F	1	7	5	9	49	4	.5 -.3
	O	6		30	40		21	.7 -.5
	N	13		65	144		75	
	T	20			193			
Sleepwalking as an adult:	F	0	6	0	1	19	.5	Too small.
	O	6		32	18		9.5	
	N	13		68	172		90	
	T	19			191			
Sleeptalking as a child:	F	6		32	35		18	Too small.
	O	12	13	63	110	155	58	
	N	1		5	45		24	
	T	19			190			
Sleeptalking as an adult:	F	2	17	10	19	132	10	.2 -.1
	O	15		75	113		58	.2 -.1
	N	3		15	61		32	
	T	20			193			

Continued:

TABLE XII: PAGE 2:

Question:	Ans. Sym.	Group scoring 2 or more A type hits: Score:	%	Group failing to score A type hits: Score:	%	P (2-tail)
Experience of depersonalization:	Y	7	35	97	50	.3 -.2
	N	13	65	98	50	.5 -.3
	T	20		195		
Religious denomination	Ang	9	45	109	55	
	Met	1	5	16	8	
	Cat	1	5	10	5	
	Pre	4	20	16	8	
	Bap	0	0	3	1.5	
	CSc	1	5	3	1.5	
	Lu	0	0	2	1	
	DRC	1	5	11	6	
	Spi	0	0	1	.5	
	Jew	0	0	16	8	
	Nil	3	15	10	5	
	T	20		197		
Church attendance frequency	W	5	25	86	45	.1 -.05
	M	6	30	21	11	.2 -.1
	Y	7 } 15	35	63 } 104	33	
	N	2	10	20	11	
	T	20		190		
Mystical experience	Y	0	0	14	7	
	?	4	20	11	5.5	
	N	16	80	172	87	
	T	20		197		
Personal psychic experience	Y	12	60	120	62	
	N	8	40	74	38	
	T	20		194		
Phenomena accepted "B" or "E"	Y	19	95	158	81	Too small
	N	1	5	37	19	
	T	20		195		
Déjà Vu experience	Y	17	85	131	68	.2 -.1
	N	3	15	62	32	.2 -.1
	T	20		193		
Relations cited as psychic:	Y	2	10	19	10	
	N	18	90	167	90	
	T	20		186		
Self cited as psychic	Y	1	5	10	5	
	N	19	95	174	95	
	T	20		184		
Hallucinations experience	M	5 } 7	25	32 } 40	17	Too small
	O	2	10	8	4	
	N	13	65	149	79	
	T	20		189		

Probability values have been obtained from Siegel, p. 249, and are for a two-tailed test of significance for χ^2 with 1 df. The first P value given is for χ^2 uncorrected for continuity. The second value is the probability when the corredtion for continuity has been applied.

Transcription checked ?
Yes.

TABLE XIII:

COMPARISON OF P VALUES FROM TABLES XI AND XIII TO REVEAL THE EFFECT OF PURGING THE GROUPS OF ALL THE SUBJECTS FAILING TO RETURN THE FULL FIFTY DRAWINGS

Question on:	.Table XI P values All subjects group	Table XII P values: Purged group:
Dream frequencies:	.1 to .05 .2 .1	.3 to .2 .5 .3
Slipping away:	.3 .2 .5 .3	.2 .1 .3 .2
Sleepwalking as child:	.5 .3 .7 .5	.5 .3 .7 .5
Sleeptalking as child:	.05 .02 .1 .05	Too small.
Sleeptalking as adult:	.1 .05 .2 .1	.2 .1 .2 .1
Experience of depersonalization:	.2 .1 .3 .2	.3 .2 .5 .3
Church attendance:	.2 .1 .3 .2	.1 .05 .2 .1
Experience of Déjà Vu	.3 .2 .5 .3	.2 .1 .2 .1
Experience of hallucinations:	.2 .1 .3 .2	Too small.

Transcription checked ?
Yes.

TABLE XIV.

LINKAGE EFFECTS: SIGNIFICANCE OF RAW SCORE FLUCTUATIONS FOR ALL WEEKS POOLED.

Raw Hits made by Experimental Group Subjects on		
Hit type:	(A) E.S.O. (Calculations C 104 to C110). P (two tail) is less than:	(B) C.S.O. (calculations C 111 to C 117). P (two tail is less than:
A	.10	(too small)
A,B,C,D and E	.001	.001
All F, all G, H3	.001	.02
All F, G and H	.01	.70
I and K	.001	.05
I, J and K	.001	.001
All combined	.001	.001

Raw Hits made by Control Group Subjects on:		
Hit type:	(C) E.S.O. (Calculations C 118 to C 124). P (two tail) is less than:	(D) C.S.O. (Calculations C 125 to C 131). P (two tail) is less than:
A	.80	(too small)
A,B,C,D and E	.20	.20
All F, all G, H3	.01	.50
All F, G and H	.02	.10
I and K	.20	.98
I, J and K	.70	.10
All combined	.01	.30

N.B. All differences reaching the .02 level of confidence have been underlined.

Transcription checked ?
Yes.

TABLE XV.

LINKAGE EFFECTS: SIGNIFICANCE OF SCORE FLUCTUATIONS FOR WEEKS A, C, D AND E POOLED, WITH WEEK B ELIMINATED.

Raw hits made by Experimental Group Subjects:		
Hit type:	(A) On E.S.O. (Calculations C 132 to C 138) P (two tail) is less than:	(B) On C.S.O. (Calculations C 139 to C 145) P (two tail) is less than:
A	.10	(too small)
A,B,C,D and E	.001	.50
All F, all G, H3	.05	.50
All F, G and H	.02	.99
I and K	.001	.80
I, J and K	.001	.90
All combined	.001	.98

Raw hits made by Control Group Subjects		
Hit type:	(C) On E.S.O. (Calculations C 146 to C 152). P (two tail) is less than:	(D) On C.S.O. (Calculations C 153 to C 159). P (two tail) is less than:
A	.90	(too small)
A,B,C,D and E	.50	.70
All F, all G, H3	.70	.95
All F, G and H	.20	.20
I and K	.30	.90
I, J and K	.50	.50
All combined	.05	.30

N.B. All differences reaching the .02 level of confidence have been underlined.

Transcription checked ?
Yes.

TABLE XVI.

COMPARISON OF THE SIGNIFICANCE OF RAW SCORE FLUCTUATIONS WITH SCORES CORRECTED FOR BUNCHING CALCULATED ON WEEKS A, C, D and E POOLED, BUT ELIMINATING WEEK B.

(HITS ON EXPERIMENTAL SERIES ORIGINALS ONLY.)

Hits by Experimental Group Subjects on E.S.O.		
Hit type:	(A) Raw Scores: (Calculations C 132 to C 138) P (two tail) is less than:	(B) Scores Corrected for Bunching (Calculations C 160 to C 165) P (two tail) is less than:
A	.10	.01
A,B,C,D and E	.001	.001
All F, all G, H3	.05	.05
All F, G, and H	.02	.05
I and K	.001	.70
I J and K	.001	.50
All combined	.001	(not corrected)

Hits by Control Group Subjects on E.S.O.		
Hit type:	(C) Raw Scores: (Calculations C 146 to C 152) P (two tail) is less than:	(D) Scores Corrected for Bunching (Calculations C. 166 to C 171) P (two tail) is less than:
A	.90	.70
A,B,C,D and E	.50	.50
All F, all G, H3	.70	.70
All F, G and H	.20	.30
I and K	.30	.30
I, J and K	.50	.50
All combined	.05	(not corrected)

N.B. All differences reaching the .02 level of confidence have been underlined.

Transcription checked ?
Yes.

TABLE XVII

SIGNIFICANCE OF THE RAW SCORING RATE DIFFERENCES BETWEEN WEEK A AND EACH OTHER WEEK SEPARATELY.

(Calculations C 172 to C 199).

N.B. (1) An improvement on week A scoring rates is shown by a +
A decrease from week A scoring rate is shown by a -

(2) All significances shown are for P two tail. P is always smaller than the value shown.

(3) P values reaching .02 two tail have been underlined.

(4) In cases marked * the theoretically expected frequencies were too small for accurate calculation.

Experimental Group Subjects' hits on								
	(A) E.S.O.				(B) C.S.O.			
Hit type:	Week A and:				Week A and:			
	B	C	D	E	B	C	D	E
A	+.99	+.20	+.70	+.05	-*	+*	+*	+*
A,B,C,D & E	-.80	+.70	+.001	+.001	-.001	+.70	-.50	-.30
All F,G +H3	-.10	+.02	+.20	+.02	-.05	+.70	+.70	+.20
All F,G & H	-.95	+.02	+.05	+.01	-.50	+.80	+.80	+.80
I & K	-.30	-.70	+.001	+.05	-.05	+.50	+.70	+.70
I, J & K	+.30	-.70	+.001	+.02	-.001	+.50	+.80	+.80
All combined	-.90	+.30	+.001	+.001	-.001	+.80	-.90	-.90

Control Group Subjects' hits on								
	(C) E.S.O.				(D) C.S.O.			
Hit type:	Week A and:				Week A and:			
	B	C	D	E	B	C	D	E
A	-.50	+.90	-.70	+.98	-*	-*	+*	-*
A,B,C,D & E	-.50	+.20	+.20	+.30	-.05	-.70	-.90	-.30
All F,G +H3	-.01	-.95	+.50	+.30	-.20	+.70	+.80	+.70
All F,G & H	-.20	-.98	+.20	+.10	+.90	+.10	+.05	+.10
I & K	+.10	+.30	-.90	+.20	+.70	+.50	+.95	+.70
I, J & K	+.30	+.20	+.90	+.50	-.50	+.10	+.20	+.50
All combined	-.50	+.20	+.10	+.01	+.95	+.20	+.10	+.20

Transcription checked ? Yes.

TABLE XVIII

COMPARISON OF SIGNIFICANCES OBTAINED FROM RAW SCORES & SCORES CORRECTED FOR BUNCHING ON EXPERIMENTAL SERIES ORIGINALS ONLY. DIFFERENCES BETWEEN WEEK A AND EACH OTHER WEEK.

(Calculations C 172 to C 185 and C 200 to C 211)

N.B. (1) An improvement on week A scoring rates is shown by a +
A decrease from week A scoring rates is shown by a -

(2) All significances are for P two tail. P is always smaller than the value shown.

(3) P values reaching .02 two tail have been underlined.

Experimental Group Subjects' hits on E.S.O.								
Hit type:	(A) Raw Scores:				(B) Corrected Scores:			
	Week A and				Week A and			
	B	C	D	E	B	C	D	E
A	+.99	+.20	+.70	+.05	+.50	+.02	+.20	+.01
A,B,C,D & E	-.80	+.70	+.001	+.001	-.20	+.50	+.02	+.001
All F,G +H3	-.10	+.02	+.20	+.02	-.10	+.02	+.50	+.05
All F,G & H	-.95	+.02	+.05	+.01	-.20	+.02	+.20	+.01
I & K	-.30	-.70	+.001	+.05	-.01	-.20	-.95	-.95
I, J & K	+.30	-.70	+.001	+.02	-.01	-.30	-.90	+.90
All combined	-.90	+.30	+.001	+.001	(not corrected).			

Control Group Subjects' hits on E.S.O.								
Hit type:	(C) Raw Scores				(D) Corrected Scores			
	Week A and				Week A and			
	B	C	D	E	B	C	D	E
A	-.50	+.90	-.70	+.98	-.98	+.50	+.99	+.70
A,B,C,D & E	-.50	+.20	+.20	+.30	-.50	+.10	+.70	+.50
All F,G +H3	-.01	-.95	+.50	+.30	-.01	-.95	+.98	+.30
All F,G & H	-.20	-.98	+.20	+.10	-.05	-.98	+.70	+.10
I & K	+.10	+.30	-.90	+.20	-.98	+.70	-.20	+.80
I, J & K	+.30	+.20	+.90	+.50	-.70	+.50	-.50	-.90
All combined	-.50	+.20	+.10	+.01	(not corrected).			

Transcription checked ?
Yes.

TABLE XIX

SIGNIFICANCE OF WEEKLY SCORING RATE DIFFERENCES BETWEEN CONTROL AND EXPERIMENTAL GROUP SUBJECTS RAW HITS ON EXPERIMENTAL SERIES ORIGINALS.

(Calculations C 212 to C 218)

N.B. (1) A + indicates that the E.G.S. returned the better score
A - indicates that the C.G.S. returned the better score

(2) An * indicates cases where a significant increase in E.G.S. hits on E.S.O. was found in previous assessments

(3) Significances reaching the .02 level (two tail) have been underlined.

(4) P is always smaller than the value shown.

Hit Type	Week A	Week B	Week C	Week D	Week E
A	-.50	-1.00	-.70	+.80	+.20
A,B,C,D & E	-.70	-.80	+.20	-.20*	+.01*
All F, G +H3	-.20	-.80	+.20*	-.70	-.98*
All F, G & H	-.20	-.95	+.30*	-.70	-.90*
I & K	+.80	-.01	-.20	+.001*	+.30
I, J & K	+.90	+.95	-.10	+.001*	+.10*
All combined	-.95	+.70	-.70	+.02*	+.20*

Transcription checked ?
Yes.

TABLE XX

CLASSIFICATION OF HITS ON E.S.O. INTO IDEA AND SHAPE RESEMBLANCES.

(a) Idea correct, but shape different:

Anvil: Target squat, with small projecting tongue. Reproductions have long tongues, conventional shape.(335)
Hourglass: Target elongated and cylindrical, reproductions either bulbous or semi-bulbous figure 8 shape.(334)
Fire-extinguisher: Target cylindrical, reproductions all conical (336).
Bus stop: Target with round notice, reproduction with square.(337)
Ace of Hearts: Target omits lines for edge of card, and small hearts under A's. Reproductions supply both these items. (338).
Saint: Postures of reproductions entirely different. (339).
Flat iron: Target non-electric. Reproduction with connector and cord. (340).
Dumb-bell: Target shows thin weights, cigar-shaped in end section; reproductions show spherical weights. (341).
Beacon: Target is light beacon, reproduction survey beacon.(344).
Penguin: Shapes and postures of reproductions differ from that of target.(345).
T-square: Target horizontal and narrowing towards end. Reproduction vertical and four-square.(345).
Trident: Target shows no points to prongs, and gives them rounded bottoms. Reproductions do not reproduce both these items.(349).
Tin opener: Very different shapes from that of target. (351).
Rosette: Target shows three swallow-tail ribbons, the reproductions two pointed ribbons.(353).
Knobkerrie: Target spoon-shaped, reproductions with spherical ends.(353).
Violin bow: Position and detailed shape of bow are not shown.(357)
Petrol Pump: Target shows no hose, all the reproductions do.(358).
Saturn: Perhaps the most interesting examples of all. No reproductions succeed in producing the original completely, but 15716, 6196 and 15645 succeed in reproducing the double ring in various distorted forms. (360).
Weathercock: Direction arms N.E.S.W. omitted from all reproductions. (361).

Total Originals: 19.

(b) Cases where the shape has been reproduced, but the idea mistaken:

Vice: 14179 Spanner 14702 Saw. (337).
Saint: 92 Rugby game; 3503 Telegraph poles; 2112 Braaivleis.(339)
Penguin 10966 Pliers.(345)
See-Saw: 3570 Open book; 11040 Balance; (347).
Trident: 6333 Aloe; 12333 & 12135 Toasting fork; 7645 Gardening fork; 10031 Fork; 19344 Pronged fork. (349)
Bishop's Mitre: 4481 Church window; 7537 Church - lent.(355).
Artist's Palette: 18131 Pattern.(356).
Boomerang: 18606 Figure Seven. (359).

Total Originals: 8.

N.B. The reproductions referred to will be found at the page reference given in brackets.

TABLE XX
(continued, page 2)

(c) Idea and shape both good:

Snail: Some fairly close correspondences in shape, titles correct. (338).
Flit gun: Close correspondence in shape, except for conical nose. Title shows flit gun when true title is flit spray. (340).
Wish-bone: Close correspondences in shape, but not in position drawn. Titles differ only in word division.(341).
Spiffy: Good resemblance in title and shape. (342).
Volcano: Titles all correct. 14698 and 4713 very close correspondences in shape.(346).
See-Saw: Titles good: slight minor differences in shape and position of arm.(347).
Rolling Pin: Two good titles, 9721 and 3338 good shapes.(348).
Fez: Fairly close correspondences in title and shape, but very many elaborations in both. (350).
Whale: 8692 and 4048 very good shapes, remainder poor. Titles good. (354).
(Artist's) Palette: 14665 very good shape. No title includes (Artist's), otherwise good. (356).
Bottle Opener: Fair resemblances in shape, title good. (336).
Boomerang: Close resemblances in shape and title. (359).

Total Orginals: 12.

(d) Cases difficult to classify: or idea & shape both bad:

Vice (337).
Hoe (340).
Candlestick (342).
Mr. Chad (353).
Bishop's Mitre: (355).
Barbed Wire Barb (352).

Total Originals: 6

N.B. Some originals appear under more than one heading. The reproductions referred to will be found at the page references given in brackets.

TABLE XXI

CLASSIFICATION OF HITS ON C.S.O. INTO IDEA AND SHAPE RESEMBLANCES.

(a) Idea good, shape poor:

Accordeon: Different perspective shown. (363).
Arc de Triomphe: Idea translated into English correctly, but shape poor: rounded instead of square top. (363).
Billiard Table: Idea correct, but different perspective shown.
Bellows: Titles correct, shapes poor. (364). (364).
Decanter: Totally wrong shapes, titles correct. (366).
Dust-pan: Correct title, but perspective different. (366).
Earphones: Ditto. (367).
Eiffel Tower: Ditto (367).
Father Christmas: Ditto (367).
Laurel Crown: Especially 14418: thistle & laurel wreath. (370).
Leopard: Idea fair, totally wrong shapes. (371).
Prickly Pear: Compare components of 17561 with target: all there but gestalt very different. (372).
Roller skates: Idea correct, but shape distorted. (374).
Shoe horn: Idea correct, but shape only fair. (374).

Total Originals: 14.

(b) Shape good, idea poor:

Ricksha: Note 3258 and especially 3550. (373)
Scout Badge: See 197 and 1370. (374).

Total Originals: 2.

(c) Shape and idea good:

Aladdin's Lamp: Spelling errors in title, but shapes rather good, particularly 13647, 3166 and 9823. (363).
Car jack: Shape very good when considered from point of view of components (base, angle of arm, etc.) (365).
Cupid: Shape good in curls, position of arms, bow etc, quiver omitted, idea correct. (365).
Discus Thrower (Model): Both shape & title close. (366).
Gollywog: Good shapes & titles. (368).
Hedgehog: ditto. (370).
Laurel Crown: 15413 good. (370).
Peacock: Especially 4318. (371).
Ricksha: Especially 1461, 3347. (373).
Rocking Horse: Title correct, shape good. (374).

Total Originals: 10

(d) Shape and idea poor, or difficult to classify:

Crutches: Singular instead of plural given: shape square tip instead of round, arm-rest concave instead of convex.
Gas mask: Different mask represented. (369). (365).
Harrow: Ditto. (369).
Hasp and Staple: Only depicted as minor details. (369).
Punch bag: The punch ball depicted is a different concept. (372)

Total Originals: 5.

N.B. Some originals appear under more than one heading.
The reproductions referred to will be found at the page references given in brackets.

APPENDIX E.

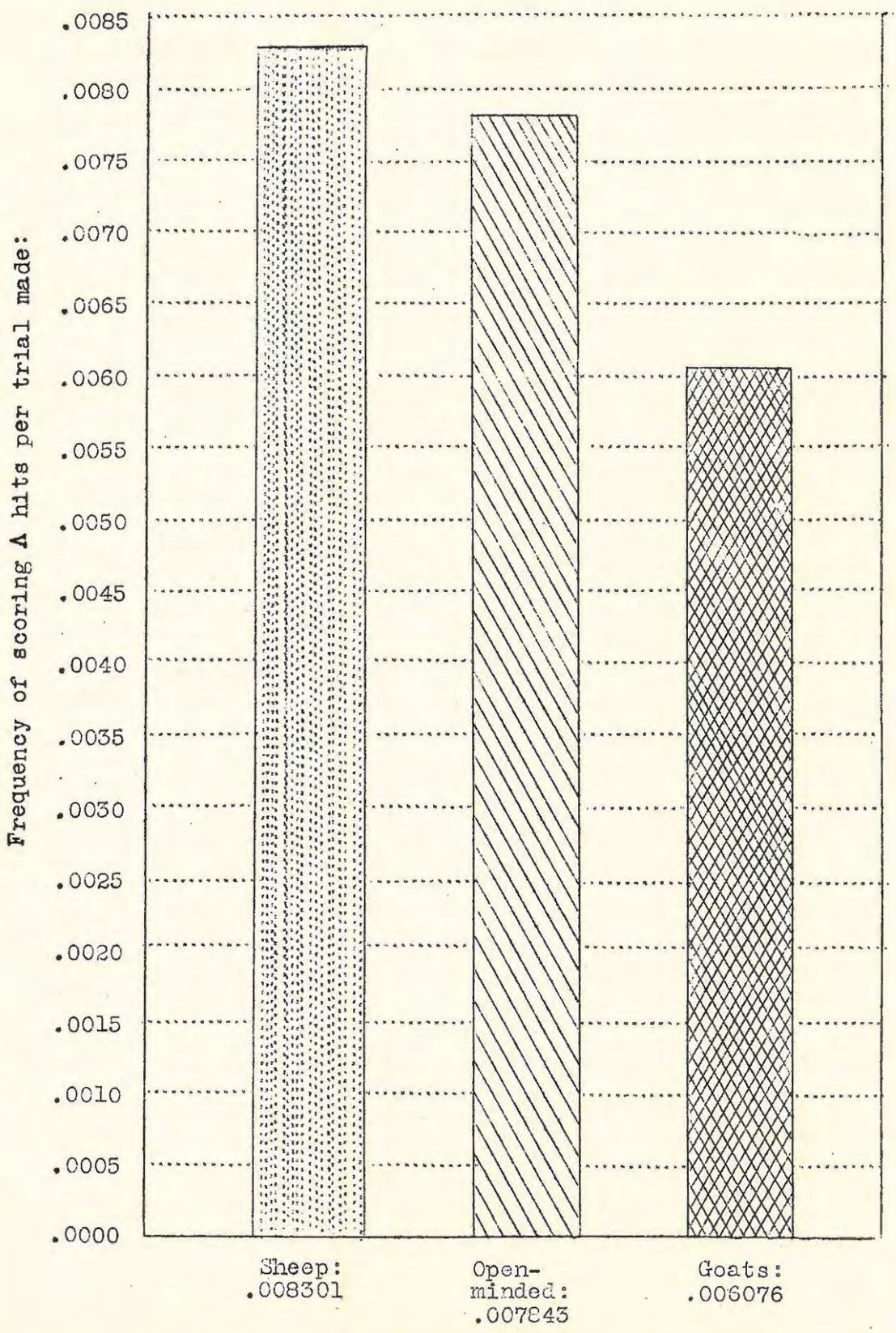
GRAPHS Nos. 1 to 16.

LIST OF GRAPHS.

GRAPH No: 1

SHEEP-GOAT ATTITUDE ANALYSIS:

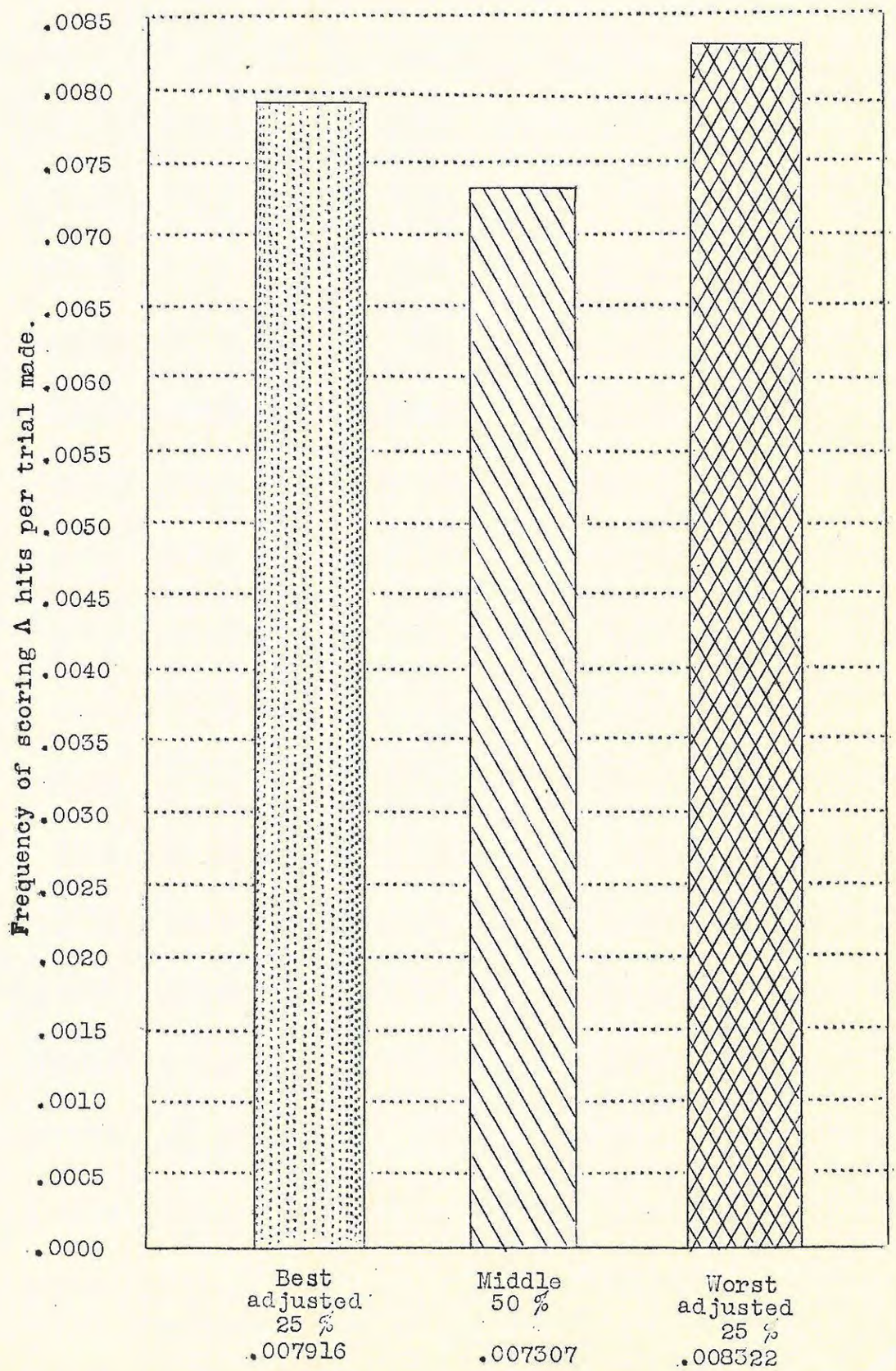
GRAPH SHOWING THE INFLUENCE OF THE SUBJECTS' ATTITUDES ON THE FREQUENCY OF SCORING A HITS.
(All judges, uncorrected.)



GRAPH No: 2

SHOWING THE A HIT SCORING RATE PER TRIAL (ALL JUDGES, UNCORRECTED) FOR THREE GROUPS OF SUBJECTS RATED WELL-ADJUSTED, AVERAGELY ADJUSTED AND POORLY ADJUSTED ON THE WASHBURNE SUBTOTAL SCORES.

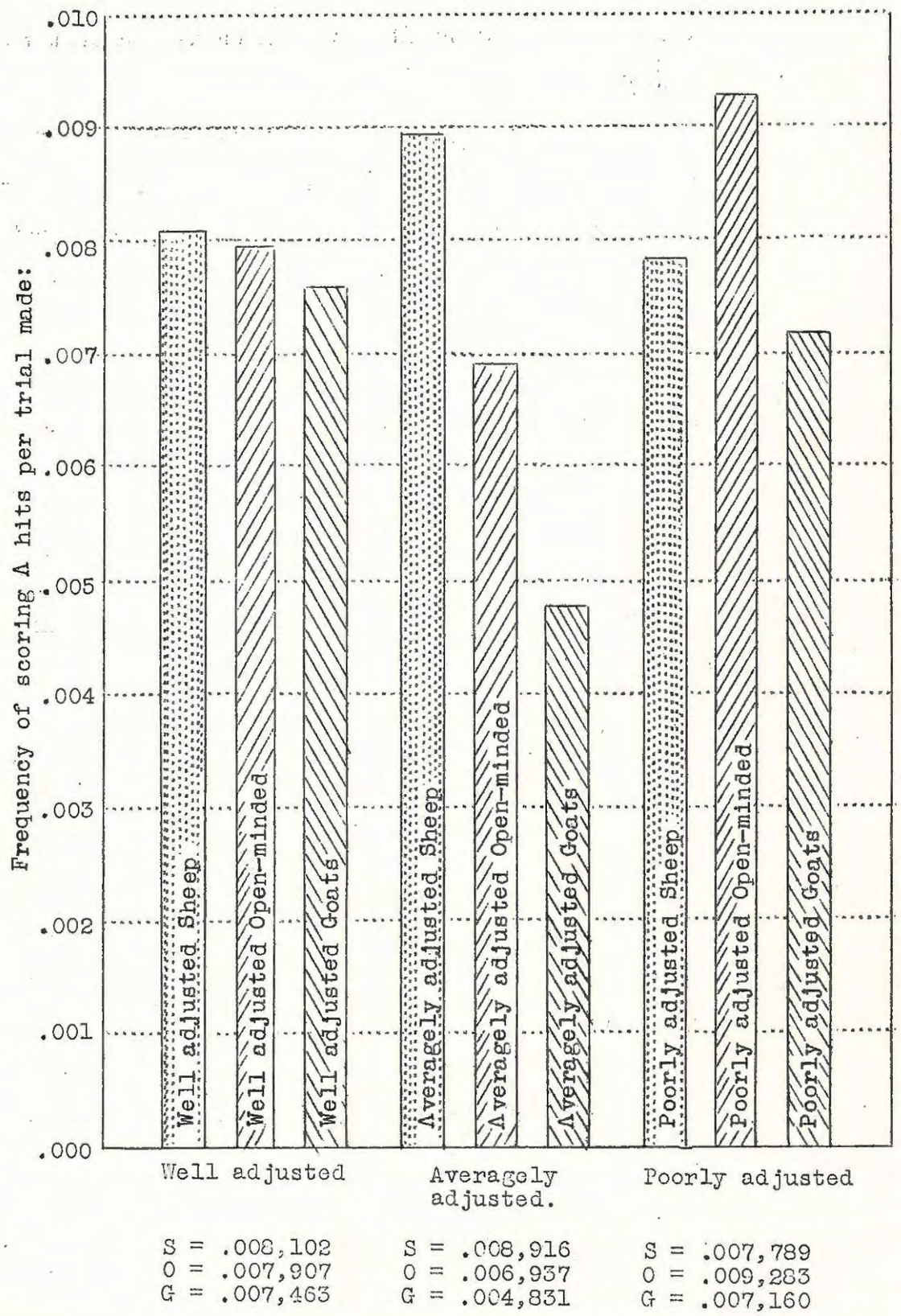
Well-adjusted: .007,916 hits.
Averagely-adjusted: .007,307 hits.
Poorly-adjusted: .008,322 hits



GRAPH No: 3

COMBINATION OF SHEEP-GOAT RATINGS WITH WASHBURNE SUBTOTAL ADJUSTMENT RATINGS.

SHOWING NUMBER OF A HITS (ALL JUDGES: UNCORRECTED) SCORED PER TRIAL FOR EACH SUBJECT CATEGORY.



Well adjusted	Averagely adjusted.	Poorly adjusted
S = .008,102	S = .008,916	S = .007,789
O = .007,907	O = .006,937	O = .009,283
G = .007,463	G = .004,831	G = .007,160

GRAPH No: 4

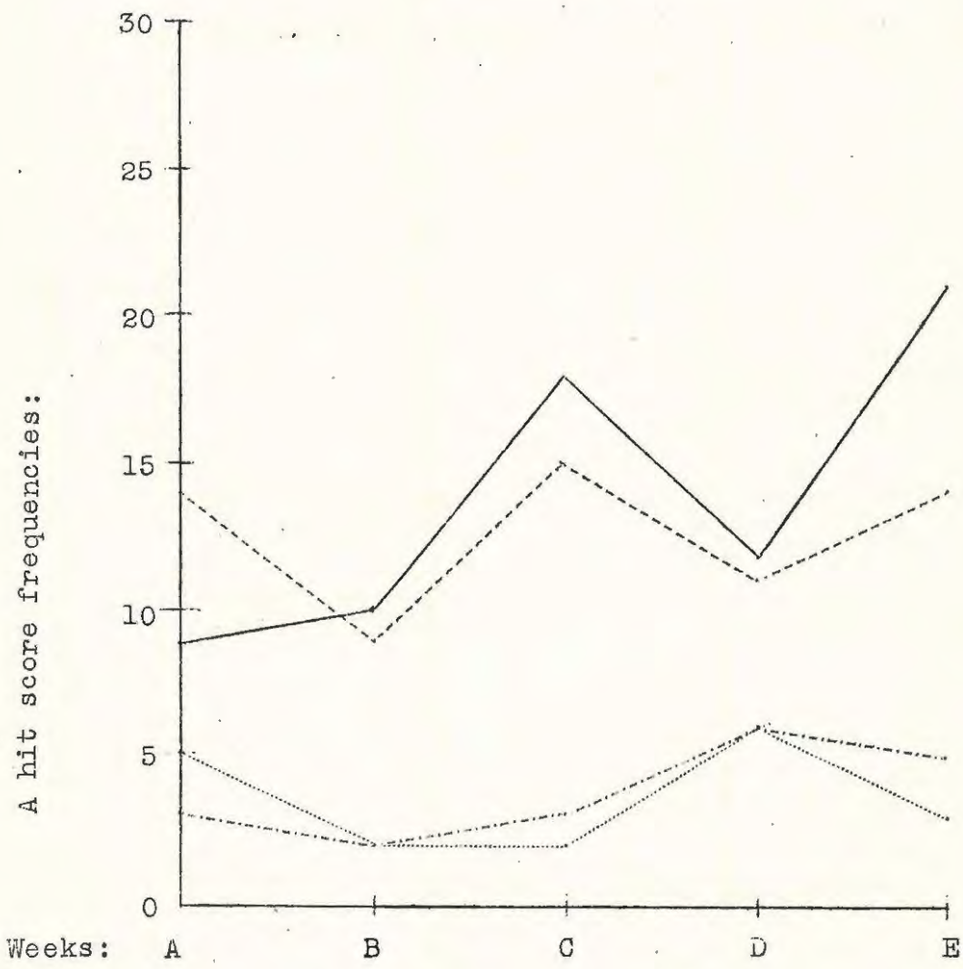
EFFECT OF LINKAGE ON THE RAW SCORING RATES:

EXPECTED SCORES PER 2,000 TRIALS

PER SUBJECT GROUP PER WEEK.
(Data Sheet No.: 17)

Legend:	
Hits on Experimental Series Originals:	Hits on Control Series Originals:
By Experimental Group Subjects: ———	By Experimental Group Subjects: ·-·-·-·
By Control Group Subjects: - - - - - - -	By Control Group Subjects: ·····

UNCORRECTED A HITS:

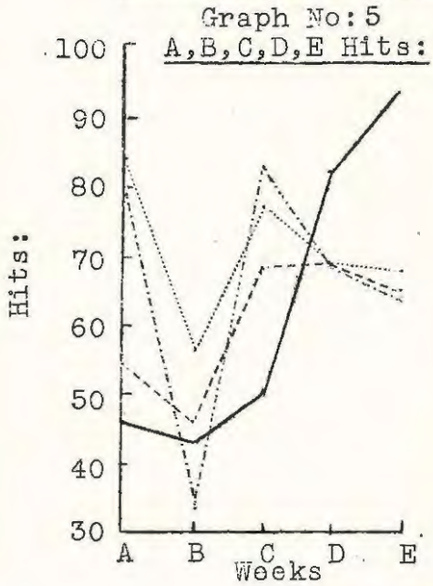


EFFECT OF LINKAGE ON THE RAW SCORING RATES: EXPECTED SCORES PER 2,000 TRIALS PER SUBJECT GROUP PER WEEK.

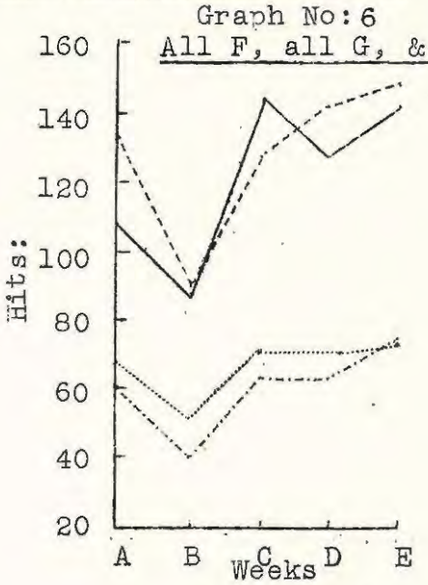
(Data Sheet No.: 17).

Legend:	
Hits on Experimental Series Originals: By Experimental Group Subjects: ——— By Control Group Subjects: - - - - - - -	Hits on Control Series Originals: By Experimental Group Subjects: ·-·-·-·-·-·-· By Control Group Subjects: ·····

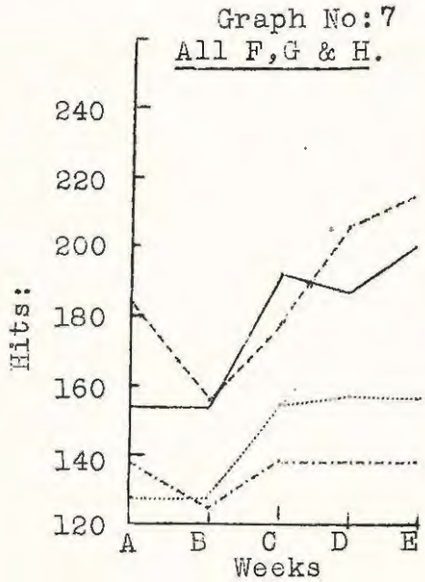
Graph No: 5
A,B,C,D,E Hits:



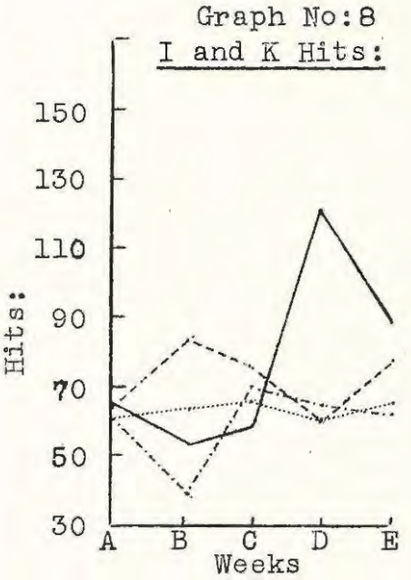
Graph No: 6
All F, all G, & H3



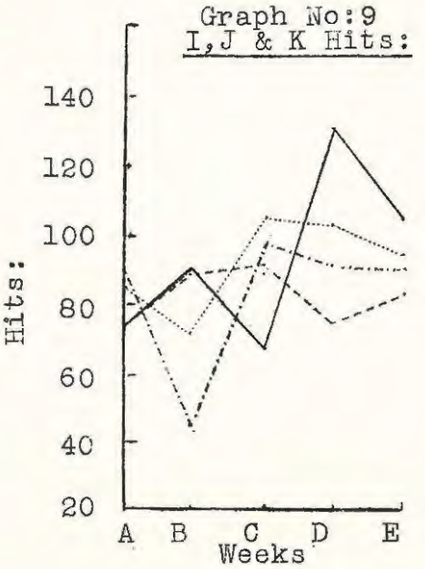
Graph No: 7
All F,G & H.



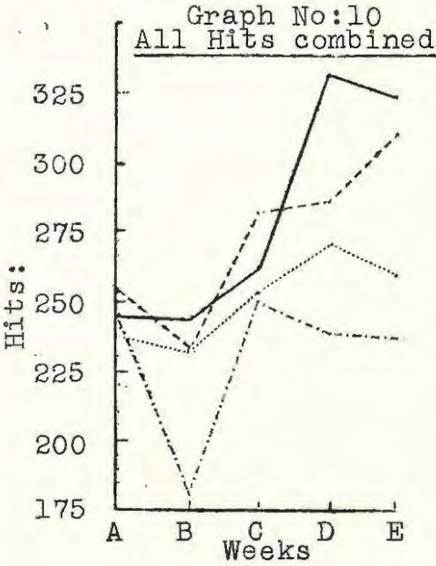
Graph No: 8
I and K Hits:



Graph No: 9
I,J & K Hits:



Graph No: 10
All Hits combined:



GRAPH No: 11

EFFECT OF LINKAGE ON SCORING RATES CORRECTED FOR BUNCHING ERRORS.
EXPECTED SCORES PER 2,000 TRIALS PER SUBJECT GROUP PER WEEK.
(HITS ON EXPERIMENTAL SERIES ORIGINALS ONLY)

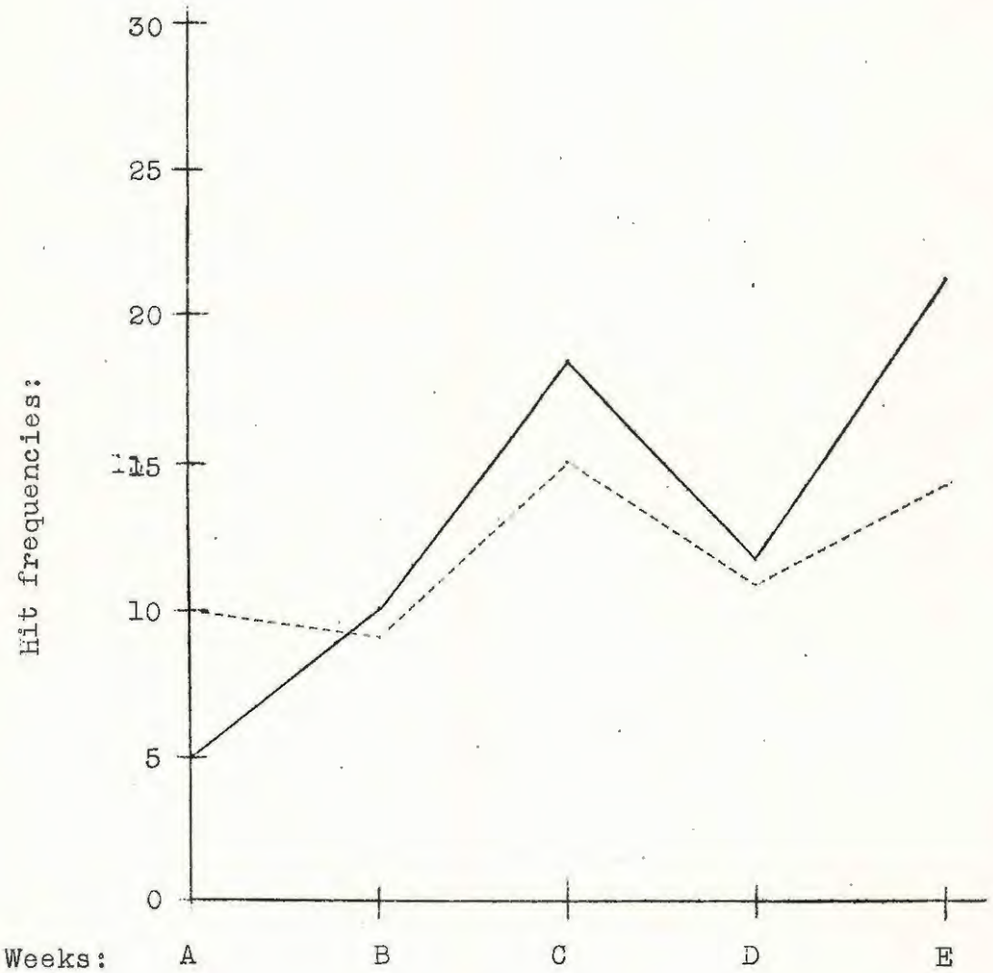
Legend:

Experimental Group Subjects: ———

Control Group Subjects: - - - - - - - - - - -

A HITS CORRECTED FOR BUNCHING

(From Data Sheet No.; 18)



Linkage:	Nil	Colour squares	Handkerchief squares	Photo & personal description.	Photo & personal description, and agent's colour squares

Checked? Yes.

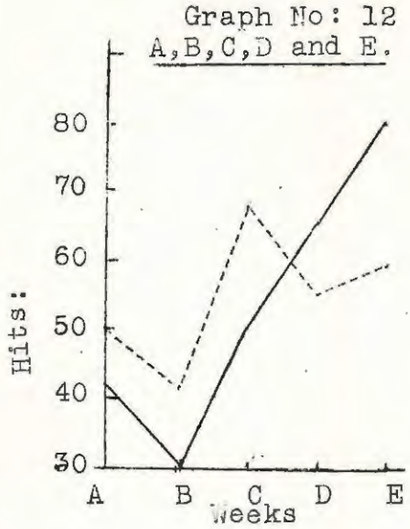
GRAPHS Nos:12 to 16

EFFECT OF LINKAGE ON SCORING RATES CORRECTED FOR BUNCHING ERRORS
EXPECTED SCORES PER 2,000 TRIALS PER SUBJECT GROUP PER WEEK
(HITS ON EXPERIMENTAL SERIES ORIGINALS ONLY)

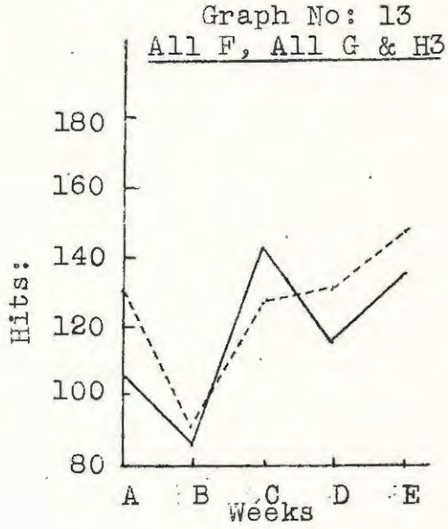
Legend:

Experimental Group Subjects: ———
Control Group Subjects: - - - - - - - - - - -

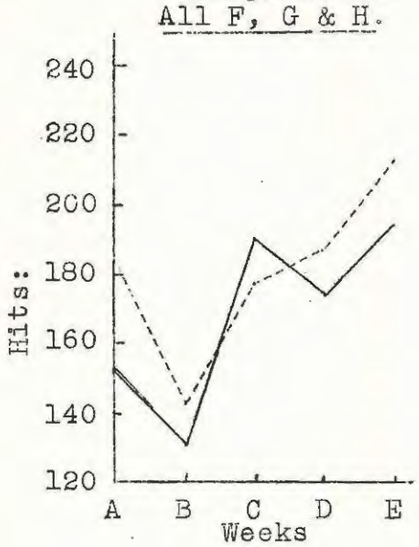
Graph No: 12
A,B,C,D and E.



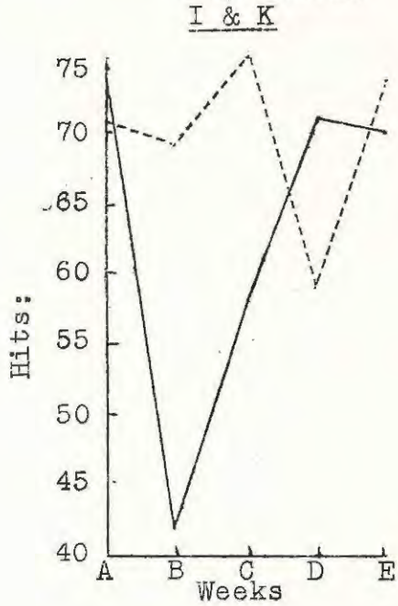
Graph No: 13
All F, All G & H3



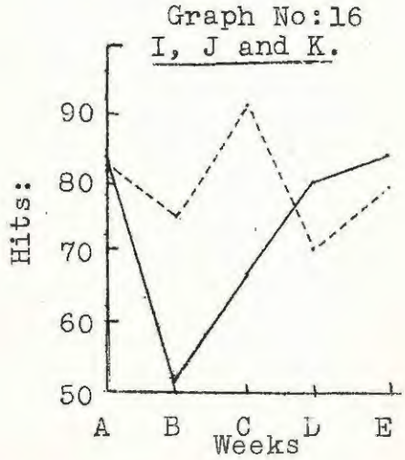
Graph No:14
All F, G & H.



Graph No:15
I & K



Graph No:16
I, J and K.



Data Taken from
Source Data Sheet 18.

N.B. "All hits
Combined" showed
no marked bunching
and so were not
corrected.

Checked ? Yes.