

The Catholic University of America

COMPARISON OF THE PERFORMANCE
OF NEGRO AND WHITE HIGH SCHOOL SENIORS ON CULTURAL
AND NON-CULTURAL PSYCHOLOGICAL TEST QUESTIONS

A Dissertation Submitted to the Faculty of the
Graduate School of the Catholic University of
America in Partial Fulfillment of the Require-
ments for the Degree of Doctor of Philosophy

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The Catholic University of America Press
Washington, D. C.

1951

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Chapter I. Introduction

Introduction

That test score differences on commonly used intelligence tests exist between Negroes and whites is a generally-reported finding. When the test scores of carefully matched groups of Negroes and whites are compared, are socio-economic factors sufficient to explain these test score differences?

The purpose of the present study is to investigate these test score differences, first on test questions which were rated either highly cultural or highly non-cultural in content; second in relation to socio-economic background as measured by a revision of the Sims Record Card; and third in relation to the effects of extremes of socio-economic background - again as measured by a revision of the Sims Record Card - on questions rated cultural and non-cultural.

The Sims Record Card has been used previously as a measure of socio-economic status. Bruce (9) used it for classifying Negro and white children in rural Virginia. Canady (10) (11) used it for classifying Negro college freshmen. Sumner, (51) and Wheatley and Sumner (55) accept it as a classification tool in their studies of neurotic tendency and socio-economic status of Negro college students. However, Leahy (36) questioned Sims' statistical methods in the standardization of

when Negroes and whites were matched for chronological and mental ages, the Negroes were superior to the whites on the verbal material in the Stanford Binet. Clarke also notes that all his subjects were from the same poor area of New York City, and that 25% of his Negro group had migrated from the South. Clarke's conclusion is that the migrant Negro has better verbal ability than the white because verbal ability depends very little on formal schooling. Since the Southern Negroes generally obtain less schooling than either Northern Negroes or Northern whites, the verbal ability of the Southern Negro should be superior to either of the other groups. Klineberg (35) finds exactly the opposite. He reports that Negro children who had migrated to the North show greater improvement on the linguistic tests than on the performance tests as their period of residence in New York City increases. Klineberg's view is supported by Brown (9). Machover (38) studied the performance of Negro and white criminals on the Bellevue Adult Intelligence Scale. He finds that Southern Negroes who had migrated North at least five years prior to the examination were more restricted on the performance tests than on the verbal tests. Machover concludes that the lower Negro performance test scores resulted from "...lack of cultural development...". Davidson and others (17) support Machover's findings. Pasamanick (51) shows that Negro infants of low socio-economic status surpass white infants, even a group of white infants of very high so-

does not reduce test score differences. The first group of writers speak often of the "culture hypothesis", by which they mean that all test score differences are the result of differences in social and economic factors in the background of any racial group. The second group of writers regard test score differences as the result of genetic factors which are held in common by members of a racial group.

Klineberg (33)(34)(35) summarizes the position of those who hold that the socio-economic factors are directly responsible for racial differences in test scores. Montagu (41) points out that Negroes in some of the Northern states obtain higher test scores than whites in some of the Southern states, and that the cause of this is the superior socio-economic status of the Negro in the Northern states. Other writers (1)(28)(35) vigorously support this finding. Garrett, analysing the same data used by Montagu, finds that the above conclusion is spurious - the Northern Negroes whom Montagu compared with Southern whites were lower in median score than whites from the same geographic area. In terms of overlapping (the number of Negroes whose scores equalled or exceeded the mean or median score of the whites) the Northern Negroes bore the same relation to Northern whites as Southern Negroes bore to Southern whites. (19)(20)(21)(22) Roberts, in a series of studies (45)(46)(47) notes that the scores of Negro college women from the North are higher than those of Negro college women from the

Chapter II. Procedures and Methods

Rating the Questions

Two hundred and twenty-six questions were rated by 78 judges, of whom 31 were professors of psychology or psychology graduate students, 20 were full-time teachers or education graduate students, 11 were counseling and guidance majors or professional workers, five were sociology professors, and 11 were in allied fields. Each question was rated on a three-category scale as follows:

- Category I - least cultural
- Category II - neutral
- Category III - most cultural

No definition of "culture" was given to the raters. Each rater was permitted to use whatever concept of the word suited him best in describing what was required to answer the questions.

A question was accepted as belonging in any one of the three categories whenever 50% or more of the raters agreed in their judgments. If less than 50% of the raters agreed on one category, chi square was calculated between the ratings given by the judges and chance expectancy. When the value for chi square was below that value equal to a probability of 10%, the question was rejected. The criterion of 10% was suggested by Guttman. (24) The one question which gave a U-shaped distri-

rural. Except in three schools, all members of the senior class who were present at school on the day of the examination were tested. The three exceptions were large schools where the principals felt that too much school time would be consumed in testing all the seniors. In these latter schools, only the academic and commercial pupils were tested.

The test questions were administered in the order that they appear in Appendix A. A time limit of 45 minutes was adopted to conform to the length of class periods in the schools.

Item Analysis of the Sims Record Card

The Sims Record Card was administered to each subject when the test questions were administered. A sample of 400 Sims Cards was selected from the total of 2863. Each school contributed to the sample in the same ratio that it contributed to the total sample. Sampling within the school was random, and included Negroes and whites indiscriminately.

Point biserial correlation was calculated for each Sims item. For those items where more than a simple yes or no answer was required, point biserial correlation was calculated for every possible dichotomous combination of answers. (Table 1)

A point biserial correlation of .40 was adopted as the standard for accepting an item. Eleven of the 23 Sims items

Table 1. (cont.)

Item Number	Question regarding:	Percent YES Equivalents	Correlations	
			First Scoring	Second Scoring
15	Family's attendance at concerts:			
	a. Occasionally and often vs. never	60	.44	.47
	b. Often vs. occa- sionally and never	9	.28	
16	Summer vacations away from home	75	.25	
17	Dental care:			
	a. When needed, yearly, or oftener vs. never	99	.10	
	b. Yearly and oftener vs. when needed and never	60	.40	.55
	c. Oftener vs. when needed, yearly, and never	41	.39	
18	Servants in the home:			
	a. One part-time or more vs. none	10	.37	
	b. One or more always vs. one part-time and none	2	.10	
19	Cars in the family:			
	a. One or more vs. none	74	.32	
	b. More than one vs. one or none	21	.15	
20	Magazines in the home:			
	a. One or more vs. none	87	.32	
	b. Two or more vs. less than two	74	.36	
	c. Three or more vs. less than three	51	.41	.51

met this standard. (Table 1) The 400 Sims Cards were rescored on the basis of the 11 questions, allowing one point for each appropriate answer, and point biserial correlation between each of these 11 questions and total score. For the 11 questions was calculated. With the exception of items 11 and 21(b), all items showed an increase in correlation on recalculation. (Table 1)

Sims' five occupational classes were reduced to two in the revision of the Sims Card. This is in substantial agreement with Canady (11) and Robinson and Meenes. (48) Canady presents data to show that the children of his professional, commercial, and artisan parental groups obtained mean scores on the ACE of 98, 95, and 94 respectively, while the children of the skilled labor and unskilled labor groups obtained means of 88 and 75 respectively. Robinson and Meenes used 11 occupational classes in their 1945-6 study, and reported no gradual and consistent decrease in test scores of the children as their fathers' occupations decreased in the occupational scale. Instead, they report a dichotomy between the test scores of children of professional, clerical, and government workers on the one hand, and the test scores of children of craftsmen, domestics and other service workers, and laborers on the other. Both of these studies coincide with the present combination of Sims occupational classes I, II, and III in one large group, and Sims occupational classes IV and V in another group.

Table 2
Revised Sims Scores of Matched
Negroes and Whites

Negro Scores	White Scores											Negro	Total			
	0	1	2	3	4	5	6	7	8	9	10			11		
11																0
10											1					1
9									1							1
8					1		1	4	7							13
7				1	1	4	9	1								16
6				3	3	27										33
5				1	7	30										38
4			2	7	33											42
3		1	4	29												34
2		2	18													20
1	2	9														11
0	4															4
White																
Total	6	12	24	37	45	34	32	13	9	0	1	0				213

Mean revised Sims score	Negro	White
	4.4	4.1
	1.95	1.93

Table 3
 Matching of the Subjects based
 on Selected Sims Questions

<u>Question regarding</u>	Number of Pairs of Subjects		
	<u>Exact Matching</u>	<u>with White exceeding Negro</u>	<u>Negro exceeding White</u>
Possession of personal bank account	128	48	85
Education of father: attended college	196	1	16
Education of father: attended high school	155	20	38
Education of mother: attended high school	138	8	67
Private music lessons	156	19	38
Mother's membership in clubs	141	24	48
Family's attendance at concerts: Occasionally and often vs. never	122	30	61
Dental care: Yearly and oftener vs. when needed and never	102	90	21
Magazines in the home: Three or more vs. less than three	135	43	78
Number of books in the home: Over 125 vs. 125 or less	159	33	54
Wage earner's occupation: Classes I, II, and III vs. classes IV and V	197	10	6

nated as the low white Sims group.

Table 5
Total Scores of Negroes
and Whites

<u>Score</u>	<u>Number of Subjects</u>	
	<u>Negro</u>	<u>White</u>
54-56		1
51-53		4
48-50		4
45-47		4
42-44	1	8
39-41	5	7
36-38	9	10
33-35	12	21
30-32	14	15
27-29	14	21
24-26	23	40
21-23	31	21
18-20	20	16
15-17	35	21
12-14	23	12
9-11	11	8
6-8	5	3
3-5	1	1
0-2		
Total	213	213
Mean	21.6	26.1
σ	8.0	9.8
SE mean	.55	.67
Difference in means		4.5
CR of difference		5.18
P		0.1%

Table 6
Cultural and Non-cultural Scores
for Negro and White Subjects

Score	Number of Subjects			
	Cultural		Non-cultural	
	Negro	White	Negro	White
29				2
28		1		1
27				1
26			2	3
25		1		7
24		2		8
23		2	2	6
22	1		1	5
21		3	5	4
20	2	5	4	4
19	2	6	11	11
18	1	2	12	14
17	7	4	12	14
16	5	7	9	13
15	10	7	8	15
14	13	9	14	17
13	12	17	21	20
12	7	9	19	18
11	15	15	9	9
10	18	19	22	3
9	16	14	17	7
8	18	16	13	10
7	15	19	12	9
6	24	16	13	5
5	11	7	13	4
4	14	9	4	3
3	8	9		4
2	3	9	1	
1	2	6	1	
0	9	3		
Total	213	213	213	213
Mean	9.0	10.5	12.6	15.6
σ	4.6	5.3	4.6	5.7
SE mean	.32	.36	.32	.39
Difference in means		1.5		3.0
CR of difference		3.57		7.30
P		0.1%		0.1%

Table 7
Question Difficulty Based
on Total Percentage of Subjects
Passing each Question

Quest. No.	Percent Passing			Quest. No.	Percent Passing		
	Total	Negro	White		Total	Negro	White
75	0	0	0	19	28	22	35
74	0	0	0	40	28	28	29
65	1	0	1	43	29	24	34
67	1	0	2	32	30	25	34
69	2	0	3	54	33	29	37
73	2	1	3	61	35	31	40
72	2	2	2	56	35	32	39
68	2	0	4	58	36	33	40
71	3	3	3	34	37	35	39
70	3	3	4	53	37	37	38
13	7	7	5	30	38	36	40
23	9	7	10	38	40	39	41
12	10	6	14	20	40	39	42
66	11	8	14	24	41	38	44
64	11	7	16	41	42	38	47
52	14	11	16	39	43	43	43
35	15	17	12	16	43	40	46
6	16	17	16	48	45	46	45
17	17	19	15	49	47	40	54
46	17	16	19	50	49	37	61
36	18	17	19	8	50	47	54
25	18	16	20	9	52	42	62
45	19	16	22	14	53	51	56
51	19	15	24	4	53	49	58
57	22	18	25	15	54	50	59
42	22	20	25	55	58	53	64
21	22	18	26	28	60	56	63
27	23	25	20	7	63	57	68
33	25	22	28	11	63	57	69
31	25	21	28	37	68	66	71
10	25	21	29	3	69	62	75
44	25	24	27	18	70	65	75
60	26	18	34	29	71	69	74
59	27	23	31	47	72	69	76
22	27	25	30	2	73	69	76
5	28	26	31	26	77	68	85
62	28	23	34	1	78	74	83

Total Percent Passing is the percentage of all subjects, Negroes and whites together, who answered the question correctly.

Table 8
 Percentage of Subjects
 Passing Difficulty-paired Questions

Pair No.	Cultural Questions			Non-cultural Questions				
	Quest. No.	Percent Passing		Quest. No.	Percent Passing			
		Total	Negro	White		Total	Negro	White
1	67	1	0	2	65	1	0	1
2	70	3	3	4	13	7	6	5
3	52	14	11	16	12	10	7	14
4	64	11	7	16	66	11	8	14
5	35	15	17	12	6	16	17	16
6	46	17	16	19	17	17	19	15
7	45	19	16	22	51	19	15	24
8	25	18	16	20	57	22	18	25
9	36	16	17	19	21	22	18	26
10	42	22	20	25	27	23	25	20
11	31	25	21	28	10	25	21	29
12	33	25	22	28	60	26	18	34
13	44	25	24	27	59	27	23	31
14	43	29	24	34	22	27	25	30
15	62	28	23	34	5	28	26	31
16	40	28	28	29	19	28	22	35
17	32	30	25	34	61	35	31	40
18	54	33	29	37	56	35	32	39
19	53	37	37	38	58	36	33	40
20	34	37	35	39	20	40	39	42
21	41	42	38	47	24	41	38	44
22	39	43	43	43	16	43	40	46
23	48	45	46	45	50	49	37	61
24	49	47	40	54	8	50	47	54
25	26	60	56	63	55	58	53	64
26	37	68	66	71	3	69	62	75
27	29	71	69	74	2	73	69	76
28	47	72	69	76	18	70	65	75

Total Percent Passing is the percentage of all subjects, Negroes and whites together, who answered the question correctly.

Table 10
 Comparison of Negro and White Means
 Before and After Matching the Questions
 for Difficulty

	<u>Before matching</u>	<u>After matching</u>	<u>Ratio of After to Before matching</u>
Cultural Questions:			
Negro mean	9.0	8.0	89%
White mean	10.5	9.5	90%
Probability that difference is chance	0.1%	0.1%	
Non-cultural Questions:			
Negro mean	12.6	8.1	64%
White mean	15.6	10.1	65%
Probability that difference is chance	0.1%	0.1%	
Negro Subjects:			
Cultural Questions	9.0	8.0	89%
Non-cultural Questions	12.6	8.1	64%
Probability that difference is chance	0.1%	71.0%	
White Subjects			
Cultural Questions	10.5	9.5	90%
Non-cultural Questions	15.6	10.1	65%
Probability that difference is chance	0.1%	6.0%	

Table 11
 Test Scores of Negro and White Subjects
 by Sims Groups

Score	Cultural Questions				Non-cultural Questions			
	LN (C)	HN (C)	LW (C)	HW (C)	LN (NC)	HN (NC)	LW (NC)	HW (NC)
29							1	1
28				1				1
27								1
26						2	1	
25				1				2
24			1	1				3
23						1		2
22	1						1	2
21				2	1	2		1
20		1		3	1		1	5
19	1			3	3		3	7
18	1			2	1		3	4
17	1	5			1		4	2
16		3		2	2		5	6
15	2	2	2	6	2	2	4	5
14	4	4	3	5	4	5	4	5
13	2	3	2	2	6	4	7	5
12		2	1	6	3	2	4	2
11	4	4	5	3	9	5	1	
10	2	8	5	4	7	3	2	
9	3		2	4	2	4	3	1
8	7	3	7	2	3	4	3	1
7	2	3	7	4	3	4	1	1
6	12	2	2		4	3	2	1
5	5	2	4		2	.	1	
4	1	3	5				2	
3	1	4	2		1			
2	1	1	2	1				
1	1	1	2	1				
0	2	2	1					
Total	53	53	53	53	53	53	53	53
Mean	8.6	9.8	8.0	13.5	11.4	13.6	13.7	17.9
c	4.5	5.2	4.2	5.4	4.2	5.1	5.0	4.9
SE mean	.62	.72	.52	.74	.58	.70	.69	.68

K²

L or H = low or high Sims groups
 N or W = Negro or white subjects
 (C) or (NC) = cultural or non-cultural scores

Table 12
Differences in Means

<u>Comparison Groups</u> ^{oo}	<u>Differences in Means</u> ^o	<u>CR of differences</u>	<u>P</u>
HW(C) vs. HN(C)	3.7	3.59	0.1%
LW(C) vs. LN(C)	-0.6	.87	41.0%
HW(NC) vs. HN(NC)	4.3	5.44	0.1%
LW(NC) vs. LN(NC)	2.3	3.59	0.1%
HW(C) vs. LW(C)	5.5	5.85	0.1%
HN(C) vs. LN(C)	1.2	1.25	23.0%
HW(NC) vs. LW(NC)	4.2	4.33	0.1%
HN(NC) vs. LN(NC)	2.2	2.42	3.0%
HW(C) vs. HW(NC)	4.4	6.38	0.1%
LW(C) vs. LW(NC)	5.7	9.35	0.1%
HN(C) vs. HN(NC)	3.8	5.42	0.1%
LN(C) vs. LN(NC)	2.8	5.00	0.1%
HW(C) vs. LN(C)	4.9	5.06	0.1%
LW(C) vs. HN(C)	-1.8	1.94	6.0%
HW(NC) vs. LN(NC)	6.5	7.30	0.1%
LW(NC) vs. HN(NC)	0.1	.10	93.0%

^oNegative difference indicates that the mean of the first of the pair is the smaller value.

^{oo}Underlining indicates the variable factor in the comparison.

Key

H = the high Sims groups
 L = the low Sims groups
 N = Negro subjects
 W = white subjects
 (C) = cultural scores
 (NC) = non-cultural scores

test questions is valid, it could be expected that the scores obtained on the cultural questions would be more affected by changes in the revised Sims score than scores obtained on the non-cultural questions. The cultural questions are assumed to possess a greater relationship with the items contained in the revised Sims Card than do the non-cultural questions.

If the items contained in the revised Sims Card were measuring the same cultural factors as the ratings given by the judges to the test questions, the difference in test score between the low and high Sims groups should be greater for the cultural questions than for the non-cultural questions. This is not found consistently in this study.

The difference between the cultural means of Negro subjects of the low Sims group and Negro subjects of the high Sims group is 1.2. The difference between the non-cultural means for the same Negro groups is 2.2. The difference between the cultural means is not significant ($P = 23\%$). The difference between the non-cultural means of these groups is significant at the 3% level. (Tables 11 and 12) This is not the expected change. As the Sims group changes from low to high, mean cultural scores change from 8.6 to 9.8, but mean non-cultural scores change from 11.4 to 13.6. The absolute change is larger for the non-cultural questions.

The difference between the cultural means of white sub-

score of the subjects in the low Sims group on the cultural, rather than the non-cultural, questions. This is not shown in the findings for either the Negroes or whites. It could also be expected that a greater percentage of subjects in the low Sims group would overlap the mean score of subjects in the high Sims group on the non-cultural questions rather than on the cultural questions. The reverse is found for the two Negro comparisons, although the white comparisons fulfill this expectation. Concerning the overlapping by the High Sims group at the upper score of the low Sims group, it could be expected that greater overlapping would occur on the cultural questions than on the non-cultural questions. This holds only for the white comparisons; the reverse obtains for the Negro comparisons.

age (9 to 17) and at no grade (4 to 11) did the Negro mean score equal the white mean score. Rhoads and others (44) find that, at the age of three, the mean IQ of Negroes is lower than the mean IQ of whites. All subjects are described as of low socio-economic status, and had been on a partially controlled diet for at least two year. Shuey (49) concludes that, after matching Negro and white college freshmen for various aspects of socio-economic background, the Negro scores on the ACE are lower than the white scores. Tanser (52) compared Canadian Negroes and whites living under identical socio-economic conditions. He reports that Canadian Negroes are lower, in test score, than Canadian whites. Willis, (56) working in Southern junior high schools, reports that the mean IQs of seventh grade Negroes are lower than the mean IQs of seventh grade whites.

Up to the present, little has been reported on Negro-white differences in World War II. However, the World War I testing data (59) have received such thorough treatment that they form a separate body of data. Except for those writers who used extreme selection methods, (6)(35)(41) all findings show that Negro performance on the Alpha, Beta, and the Combined Scale were significantly lower than white performance. Thus, Alpers and Boring (1) conclude that on the Combined Scale, which included the Alpha, Beta, and individual test scores, skin color has more effect on test score than geography. Montagu (41) reports that the test score differences appeared,

Mean differences are not accepted as the proper method for studying racial differences by all writers in the field. Jenkins (29)(30)(31) concludes that average test scores favor the whites, but he emphasizes that too much concern with mean differences has hidden the truth of the identical abilities of the two racial groups. Instead of studying mean scores, Jenkins would study the percent of superior deviants (IQ 130 or above) in each racial group. In this way, Jenkins purports to have shown that the proportion of superior deviants among Negro children was equal to, or greater than the proportion of such children within a white population. (28) That each racial group has an equal proportion of superior members is supported by Brown, (8) Canady, (10)(11)(12)(13)(14) Herskovitz, (25) Jenkins and Randall, (32) Klineberg, (33)(34)(35) and Lowie. (37) Jenkins, however, later modifies his conclusions to show that the proportion of bright Negro children is less than the proportion of bright white children. (31)

Shuey (49) reports that none of the Negro college freshmen equalled that test score which was at the seventy-fifth percentile for whites. Garrett (22) notes that under very favorable conditions for the Negro, about one-eighth as many bright Negro children can be expected in the schools as bright white children.

In the present study, the superior deviant is represented by a score 2.5 sigmas or more above the mean. No Negro sub-

material. Although verbal and non-verbal material may not be synonymous with the cultural and non-cultural classification used in the present study, it might be well to summarize the findings of these verbal and non-verbal studies in relation to the findings of the present study.

In the present study, when the total scores of the Negroes and whites were divided into scores on the questions rated as cultural and scores on the questions rated as non-cultural, the white mean scores were significantly higher than the Negro mean scores for both types of question. Insofar as the cultural questions are equivalent to Bruce's information questions, and insofar as the non-cultural questions are equivalent to Bruce's new-situation questions, this finding confirms Bruce's conclusion; (9) low Negro test score does not result from special difficulty with either type of question. If verbal and non-verbal material can be identified with cultural and non-cultural questions, this finding confirms the finding of Bean (5) who concludes that Negroes are not lower in verbal ability - as demonstrated by the Binet IQ - than they are in non-verbal ability - as demonstrated by the Minnesota Paper Formboard. Also, if the cultural questions used in the present study can be identified with the material contained in the Army Alpha, and if the presently used non-cultural questions can be identified with the material contained in the Army Beta, the present finding confirms the conclusions of Alpers and

questions were matched for difficulty or not. On the basis of these findings, it might be said that Negro performance is more approximate to white performance when cultural questions are administered. Again, this might be concluded whether the matched questions are used, or whether the unmatched questions are used.

Comparison of Negro and White High and Low Sims Groups on Cultural and Non-cultural Questions

Many writers on race differences conclude that as socio-economic conditions for the Negro improve, test score differences between Negroes and whites decrease. Much of the World War I data are interpreted in this fashion. Thus, Montagu (41) states that some Northern Negroes obtained higher Alpha scores than some Southern whites because the socio-economic status of these Northern Negroes was superior to the socio-economic status of the Southern whites with whom they were compared. It should be pointed out that this conclusion did not result from an experimental study, but was based on Montagu's knowledge of the conditions of the Negroes and whites in the North and the South. His position has received support from other writers. (1)(28)(35)

Garrett also showed that, in those sections of the country where socio-economic factors were higher, there were generally higher Alpha and Beta scores, but that the effects of improved social status affected the whites as well as the

pothesis that, as socio-economic position rises (from the lowest 25% of the revised Sims scores to the highest 25% of the revised Sims scores) test scores become more alike. As far as the present revision of the Sims Card is a measure of socio-economic status, the Negro and white subjects in the high Sims groups obtain significantly different test scores for both types of question. (Tables 11 and 12) In each case, the white subjects obtain higher mean scores than the Negro subjects. This finding is not as clear when comparisons are made between the Negroes and whites of the low Sims groups. When the latter comparison is made with the non-cultural questions, white subjects obtain a significantly higher mean score. However, when the comparison is made with the cultural questions, a reversal occurs; the mean score of the Negroes of the low Sims group is higher, but not significantly higher, than the mean score of the whites of the same Sims group. (Tables 11 and 12)

The overlapping data follow the same pattern. Within the high Sims groups, white overlap at the Negro mean is 77% for the cultural questions, and 89% for the non-cultural questions. Within the low Sims groups, the overlapping for the cultural and non-cultural questions is 47% and 72% respectively. The overlapping at the upper scores is in agreement with the mean overlapping. However, it is noted that the Negro overlapping at the upper white score is considerably greater with-

parental occupation. (8)(48)

The multi-criterion used in the present study is at least as acceptable as any of the criteria used in arriving at the conclusion that test score differences decrease when socio-economic conditions are more favorable for the Negro. On this basis, it is concluded that test score differences do not decrease as socio-economic status, as measured by the 11 items in the revised Sims Card, increases.

Comparison of Negro Subjects of the High Sims Group with White Subjects of the Low Sims Group

Whether or not the matching criteria used in the present study are valid measures of true socio-economic status cannot be determined. However, in terms of the matching criteria, the Negroes classed in the high Sims group differ from the whites of the low Sims group in the frequency with which the 11 items in the revised Sims Card were reported. The Negroes in the high Sims group are equivalent to the whites in the low Sims group in terms of age, grade, amount and place of schooling, and curriculum. These factors, it should be noted, are among the important variables which Klineberg (33)(34)(35) and others consider to be the causes of test score differences.

When the comparison between these two groups was made with the non-cultural questions, the difference in mean test scores was insignificant. The Negroes who fell in the high

be lower than in a group possessing these factors in the highest degree. This is not shown by the data of the present study. The findings of this comparison show that Negroes of the high Sims group do not make significantly different non-cultural scores than whites of the low Sims group. On the other hand, it is shown in the findings that the Negroes of the high Sims group obtain a mean score on the cultural questions that is greater than the mean score of the white subjects of the low Sims group, and that this difference is significant at the 6% level.

was in favor of the Negro subjects, and was significant at the 6% level. This finding supports the above conclusion that there is no evidence that the cultural questions are responsible for the lower Negro test score. It fails to support the conclusion of other writers who hold that, as socio-economic status of the two groups becomes more alike, test score differences tend to disappear.

The 11 items in the revised Sims Card cannot be used to explain the commonly found test score differences. If test scores were highly and positively related to these Sims items, high Sims scores should be associated with high cultural scores, and low Sims scores should be associated with low cultural scores. Such a relationship was not found.

The test score differences found in the present study cannot be explained by differences in age, school grade, school attendance in terms of the geographic location of the school, or by curriculum. These were the matching constants.

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26. HERSKOVITZ, M. J. On "racial" differences. Science, 1945, 101, 200.
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Appendix A

Test Questions and Directions

Suppose you were asked this question:

What letter is next to A in the alphabet?

(A) R (B) N (C) B (D) P (E) Z

The answer, of course, is B, and B is (C), so you would blacken in the circle under column C on the answer sheet to indicate that the proper answer was not columns A, B, D, or E. Watch this carefully. Where a number is the correct answer, you will not be so easily confused. If you make a mistake, erase it completely and mark the correct circle. Use pencil only.

PART TWO. This part consists of questions that cannot be marked on the answer sheet as they were in Part One. The answers must be printed on the answer sheet. PRINT ALL ANSWERS CLEARLY.

TRY EVERY QUESTION. Some are hard, and some are easy. Read the questions, and if you know the answer immediately, put it down. WHEN YOU COME TO A HARD QUESTION SKIP IT AND GO ON TO THE NEXT. When you have gone through the test once, and have marked the easier problems, start again on the hard ones. By doing this, you will get a higher score. Make the highest score you can.

Do not talk to your neighbor or make loud remarks. It may disturb someone else, and everyone wants to get as high

Questions 1 to 7. Directions.

Look at sample problem 1 below.

Look at figures 1, 2, and 3.

Figure 1 is a large circle.

Figure 2 is a small circle. By

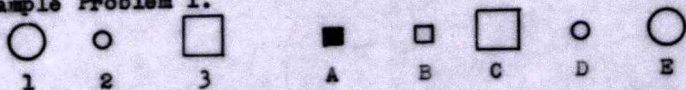
what rule is figure 1 changed

to make figure 2? The rule is "making it smaller". Now look at figure 3. It is a large square. What will it be if you change it by the same rule? It will be a small square of the same color as the large square. Figure B is a small white square. In the sample answer sheet above, the "0" under column B, for sample problem 1, has been blacked in to indicate the correct answer.

Sample Answer Sheet

	A	B	C	D	E
1.	0	●	0	0	0
2.	0	0	0	●	0
3.	●	0	0	0	0
4.	0	●	0	0	0
5.	0	0	0	0	●
6.	0	0	●	0	0

Sample Problem 1.

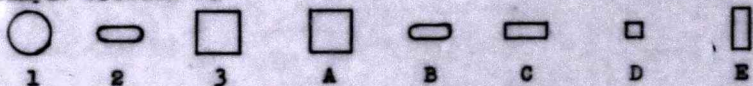


Now look at sample problem 2. The rule is turn figure 1 upside down to make figure 2. Now look at figure 3, and think how it would look when turned upside down. It would look like figure D. The space under column D on the sample answer sheet alongside of sample problem 2 is blacked in to indicate the correct answer.

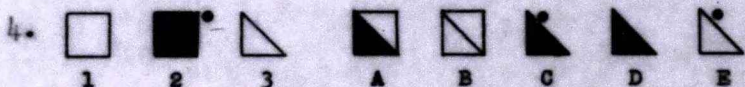
Sample Problem 2.



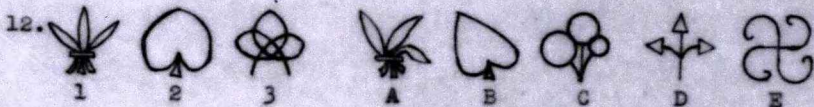
Sample Problem 6.



Now do these seven problems. Put your answers to these problems on the answer sheet by blackening the correct "O" for each problem.

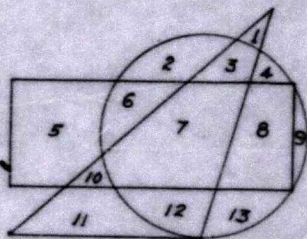


Question 12. Directions. Look at drawing 12 below. Notice the first three forms. How are they alike? Now look at the next five drawings lettered A, B, C, D, and E. Which one of these is most like the first three? Record your answer as before.



Question 13. Directions. Look at drawing 13. Note space number 5.

It is different from every other space shown on the drawing. Look carefully and you will see why it is different. We call space 5 UNIQUE. Any space is unique which has no other space like it exactly.



13.

Now examine spaces 8, 9, 10, 11, and 12 in that order until you find another unique space. Which one is it?

- (A)8 (B)9 (C)10 (D)11 (E)12

Questions 14 to 16. Directions. The directions for these three problems are alike. Find the way the three things in capital letters are alike. Then look at the words in small letters. Which one of the words in small letters is MOST LIKE the three words in capital letters?

pints of this mixture?

- (A)5 (B)6 (C)7 1/2 (D)9 (E)12

20. A man drove a distance of 120 miles in six hours, and then returned to his starting point in four hours. What was his average number of miles per hour for the entire trip?

- (A)12 (B)18 (C)20 (D)24 (E)25

21. A merchant sells men's ties at \$2.60, a profit to him of 30%. What would the price have been had he sold them at a profit of 10%?

- (A)1.82 (B)2.00 (C)2.10 (D)2.20 (E)2.50

22. A and B buy a ten gallon can of gasoline at 22.4 cents per gallon, and 55 cents for the can. Each takes 5 gallons of gasoline, and A keeps the can. A pays \$1.50, and B pays the rest. Which one is indebted to the other, and how much is owed?

- (A)B owes A \$.74 (B)A owes B \$1.50 (C)B owes A \$1.29
(D)A owes B \$.17 (E)B owes A \$.17

23. If a wire 20 inches long is to be cut so that one piece is $3/4$ as long as the other piece, how long must the shorter piece be?

- (A)5 (B)8 12/21 (C)12 3/4 (D)11 9/21 (E)15

24. A man died leaving \$1200 to be divided among his wife, his son, and his daughter. For every dollar the daughter got,

28. LEVIABLE: (A)able to vote (B)indicative (C) open for discussion (D)subject to tax (E)traitorous
29. CUMULATIVE: (A)attached (B)destruction (C)increasing by addition (D)recuperative (E)used cautiously
30. EQUERRY: (A)knight (B)officer in charge of horses (C)squire (D)steward (E)waiters
31. CAVORT: (A)caper (B)denounce (C)envy (D)required (E)suit
32. INTAGLIO: (A)cement (B)harem (C)incised carving (D)moss (E)stained glass
33. HAUTEUR: (A)archer (B)haughtiness (C)regret (D)staleness (E)warmth
34. AGENDA: (A)business (B)council (C)diseases of the liver (D)odds and ends (E)remnants
35. AMELIORATION: (A)agreement (B)discussion (C)improvement (D)seduction (E)softening
36. MAYHEM: (A)brokerage (B)coroner's inquest (C)murder (D)rajah (E)violent bodily injury

Questions 37 to 46. Directions. Find the word in small letters which is either the same as or the opposite of the

what best fits the definition. Which one of the letters is the right answer?

47. MEMOIRS OF ONE'S LIFE WRITTEN BY ONESELF.

(A) A (B) F (C) K (D) S (E) U

48. DOCTRINES OR IDEAS SPREAD BY ORGANIZED EFFORT.

(A) L (B) N (C) O (D) V (E) P

49. A SUSPENDED HORIZONTAL BAR USED BY ACROBATS.

(A) E (B) F (C) L (D) R (E) T

Questions 50 and 51. Directions. Here you find incompleting statements written in capital letters. Below the incompleting statements are four or five words in small letters. Which one of these words completes the statement best?

50. SUNLIGHT IS TO DARKNESS AS (?) IS TO STILLNESS.

(A)quiet (F)sound (C)dark (D)loud (E)moonlight

51. AUTOMOBILE IS TO GASOLINE AS BULLET IS TO (?)

(A)soldier (B)powder (C)rifle (D)bomb

Questions 52 to 54. Directions. Each of the three statements in capital letters has almost the same meaning as one of the 14 statements in small letters below. Notice the five numbers below each of the statements in capital letters. These numbers refer to the numbered statements in small letters.

be forced by men less cautious than himself. What he wanted was a minister of foreign affairs who would be at once vigilant and prudent, active and obedient, and who would relieve him from the trouble and worry of routine work while allowing him to control the main lines, and occasionally the details of the national policy. M. de Giers was exactly what he wanted, and accordingly the tsar not only appointed him minister of foreign affairs on the retirement of Prince Gorchakov in 1882, but retained him to the end of his reign in 1894. In accordance with the desire of his august master, M. de Giers followed systematically a pacific policy. Accepting as a fait accompli the existence of the triple alliance created by Bismarck for the purpose of resisting any aggressive action on the part of Russia and France, he sought to establish more friendly relations with the cabinets of Berlin, Vienna, and Rome. To the advances of the French Government he at first turned a deaf ear, but when the rapprochement between the two countries was effected with little or no cooperation on his part, he utilized it for restraining France and promoting Russian interests. He died, aged 75, on the 26th of January, 1895, soon after the ascension of Nicholas II.

62. What opinion was generally held about the views of Alexander III?

(A) He was thought to be cautious.

(B) He was thought to be strongly anti-German and pro-Slav.

Now you do this one: $2^3 \cdot 3^3 \cdot 12 \cdot x \cdot x = \sqrt{\quad}$

68. If $a = 1$, $p = 3/4$, and $q = 5$, what does this equal?

$$7a^2q + 3a^4p$$

69. If $x^3 = m$, $x^2 = n$, and $x = p$, what does this equal?

$$\frac{m - mp}{mnp}$$

Questions 70 to 75. Directions. Here you will find sentences with some words left out. The omitted words have been mixed with other words and are written in capital letters below each sentence. Find one word among those in capital letters that fits into each blank, and print it on the answer sheet in the proper order. On the answer sheet, there are as many spaces for the answers for each sentence as there are blank spaces in each sentence. When you print the answers on the answer sheet, print them in the same order as they come in the question. Be sure to print only one word for each blank, and be sure that that word is one of those in capital letters below the sentence.

70. (.....) victories can be won (.....) for the right.

ALL ALWAYS AS BLOODY NOW ONLY REAL THAT

71. There was a (.....) interrelation which (.....) in primitive (.....) (.....) magic, priesthood, and kingship.

AWAY BELIEVED BETWEEN BETWEEN CLOSE EXISTED MOODY
OPENED ONE OVERLOOKED SOCIETY SUBJECTED

Appendix B

**Judges' ratings, type of question,
percent passing, and source of question
for each test question used**

Appendix B. (cont.)

Quest. No.	Percent of judges rating question as:			Type of question	Total % passing*	Source of question
	Cul-tural	Neu-tral	Non-cult.			
41	44	37	19	C	42	I, p. 10; 11
42	51	30	19	C	22	I, p. 10; 47
43	78	24	4	C	29	I, p. 10; 38
44	44	42	14	C	25	I, p. 10; 32
45	51	32	17	C	19	I, p. 10; 26
46	54	32	14	C	17	I, p. 10; 29
47	42	33	25	C	78	I, p. 6; 4
48	52	35	13	C	45	I, p. 6; 19
49	42	31	27	C	47	I, p. 6; 26
50	13	31	56	NC	49	VIII; 41
51	15	36	49	NC	19	I, p. 14; 25
52	49	38	15	C	14	V, Level N; 34
53	40	37	23	C	37	VI, Test 4; 2
54	42	31	27	C	37	VI, Test 4; 2
55	14	31	55	NC	58	IX; 48
56	15	27	58	NC	35	VI, Test 1; 18
57	9	31	60	NC	22	VI, Test 1; 20
58	3	21	76	NC	36	VI, Test 1; 19
59	15	27	58	NC	27	VII; 50
60	16	26	58	NC	26	II; 75
61	8	24	68	NC	35	VII; 55
62	43	26	31	C	28	V, Level N; 31
63	32	30	38	Neutral	not scored	
64	41	28	31	C	11	V, Level N; 17
65	23	33	44	NC	1	V, Level N; 20
66	10	22	68	NC	11	VIII; 71
67	53	25	22	C	1	V, Level O; 20
68	46	33	21	C	2	V, Level N; 14
69	42	35	23	C	2	V, Level N; 14
70				C**	3	IV, Level O; 1
71				C**	3	IV, Level N; 1
72				C**	2	IV, Level N; 4
73				C**	2	IV, Level N; 4
74				C**	0	IV, Level F; 4
75				C**	0	IV, Level Q; 9

*See Table 7 for the separate percentages of Negroes and whites passing each question.

**These questions were substituted for the same type of question selected from CAVD, 1947, form 4 because the latter test was not available for proof-reading. The questions from CAVD, 1933, form 3 were not rated by the judges, but since they were

Appendix B. (cont.)

Test 4, group 2, no. 10.

Test 5, questions 14, 16, and 18.

Test 6, questions 13, 18.

Test 8, questions 9, 12, 16, 18.

From OSATMA: HE: A-14: questions 1, 5, 10, 15, 20, 35,
40, 45, 60, 65.

From OSATMA: IE: A-8: questions 24, 53.

From self-constructed questions: 4 questions.

The following questions were rejected for use because they were rated as neutral questions, or because the ratings were considered inadequate:

From the ACE 1947:

page 6, questions 1, 7, 13, 16, 28.

page 10, questions 2, 5.

page 14, questions 7, 10, 19, 22, 28, 31, 34, 37, 40.

From the BETA: A-24: question 45.

From the BETA: CM-7: question 55.

From the CAVD 1947:

Level M, question 34.

Level N, questions 11, 17, 31.

Appendix B. (cont.)

- Edition, form 3. Institute of Educational Research, Bureau of Publications. Teachers College, Columbia University, N. Y.
- V - CAVD, 1947. The I. E. B. Intelligence Scale, CAVD, 1947 Edition, form 4. Institute of Educational Research, Bureau of Publications. Teachers College, Columbia University, N. Y.
- VI - OGIS: A-5. Otis Group Intelligence Scale. Advanced Examination, form A. World Book Company, Yonkers-on-Hudson, N. Y.
- VII - OSATMA: HE: A-14. Otis Self Administering Tests of Mental Ability. Higher Examination, form A. World Book Company, Yonkers-on-Hudson, N. Y.
- VIII - OSATMA: HE: B-10. Otis Self Administering Tests of Mental Ability. Higher Examination, form B. World Book Company, Yonkers-on-Hudson, N. Y.
- IX - OSATMA: HE: D-23. Otis Self Administering Tests of Mental Ability. Higher Examination, form D. World Book Company, Yonkers-on-Hudson, N. Y.
- X - OSATMA: IE: B-2. Otis Self Administering Tests of Mental Ability. Intermediate Examination, form B. World Book Company, Yonkers-on-Hudson, N. Y.

13. Gifts persuade even the gods.

14. When the rabbit was caliph, he used a lion for vizier.

Questions 55 to 61. Directions. Each question in this section has its own set of directions. Read each one carefully. Some questions refer to the alphabet, which is reproduced below.

A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z

55. Suppose that the first and second letters of the alphabet were interchanged, also the third and fourth, fifth and sixth, etc. Which letter would then be the sixteenth letter of the series?

(A) P (B) N (C) S (D) R (E) O

56. If the letters in the word IP appear in the same order that they do in the alphabet, and if the same is true of the letters in the word AN, put a black mark under column A on the answer sheet. But if this be true only of one of these words, put a black mark under column B if that word is IP, and under column C if that word is AN.

57. Find the two letters in the word AFTER which have just as many letters between them in the alphabet as in the word. Which one of these two letters comes first in the alphabet?

(A) F (B) T (C) E (D) R (E) A

58. Find the letter which, in this sentence itself, appears a second time nearest the beginning.

(A) i (B) e (C) t (D) w (E) r

59. If the first two statements below are true, the third is

(A) true (B) false (C) not certain

Some of Brown's friends are Baptists.

Some of Brown's friends are dentists.

Some of Brown's friends are Baptist dentists.

60. When the time by a clock was 8 minutes past 10, the hands were interchanged. The clock then said about what time?

(A) 8:10 (B) 1:50 (C) 10:10 (D) 2:05 (E) 10:08

61. If the following words were seen on a wall by looking in a mirror on an opposite wall, which word would appear exactly the same as if seen directly?

(A) OHIO (B) SAW (C) NOON (D) MOTOR (E) OTTO

Questions 62 and 63. Directions. Read the paragraph below, and answer the two questions that follow.

On the death of Alexander II in 1881, it was generally expected that M. de Giers would be dismissed as deficient in Russian nationalist feeling, for Alexander III was credited with strong anti-German, Slavophile tendencies. In reality, the young tsar had no intention of embarking on wild political adventures, and was fully determined not to let his hand