

ADVENTURES IN STUPIDITY: A PARTIAL ANALYSIS
OF THE INTELLECTUAL INFERIORITY OF A
COLLEGE STUDENT

By Professor LEWIS M. TERMAN
STANFORD UNIVERSITY

A youth whom we will designate as "K" entered Stanford University with credentials showing graduation from a small but accredited California high school. On matriculation he presented 15 units of high school work, all of which were of "recommended" grade. The only suspicious circumstance was the fact that he had spent five years in high school and was almost 20 years old. He registered in mechanical engineering (woodwork), psychology (mental hygiene), drawing (still life, perspective). Three weeks later the instructor in drawing asked me to give the boy a mental examination, because of suspected mental deficiency. This instructor stated that he had never had a student who seemed so completely unable to grasp the principles of perspective or who made such foolish and absurd mistakes in trying to draw simple objects.

A Stanford-Binet test gave K a mental age of 12½ years. Some of the results of this test were so incredible that in the next few weeks I devoted about twenty hours to a further study of the case, applying a large assortment of standardized educational and mental tests. As we shall see later, his scores on the various intelligence scales ranged from 12 to 13½ years, and on the educational tests from the median for grade 5 to the median for grade 9 or 10. Average achievement in the educational tests was not far from grade 7.

K was of course not told the results of the tests. Effort was made, however, to impress him with the fact that he would have to work very hard in order to pass his courses. From time to time I gave him advice on use of references, methods of study, note taking, etc., partly to see whether it would be possible for an individual so lacking in intelligence to pass a college course. K responded with willing, even dogged, industry. He refrained from participation in the usual freshman frivolities and studied every night until 10 or 11 o'clock. It is not surprising, however, that at the end of the term he failed in all his courses and was dismissed from the university. His examination in psychology had included such questions as "Explain how anything is (a) retained, and

(b) brought back to consciousness. Distinguish between (a) philosophy and psychology; (b) sensation and perception; (c) mind and soul!"¹

In physical and personal appearance K was rather prepossessing than otherwise. He carried himself well and had a pleasant smile and expressive eyes. As he also had good clothes, excellent manners and a high-powered automobile, he was promptly initiated into one of the Greek letter fraternities.

For purposes of observation I invited K to my home for dinner. His behavior and manners gave unmistakable evidence of a home environment above the ordinary. However, in spite of a certain superficial polish, a discerning observer would readily note the extreme commonplaceness of his remarks, and occasional almost infantile crudities of language. He talked little, answering often with only a knowing smile or a softly spoken yes or no. There was something in both smile and voice that tended to disarm suspicion and to incline one to give him the benefit of the doubt, if doubt should arise. His attitude toward me was always one of child-like trustfulness. At no time during the tests did he raise any question regarding the propriety of taking so much of my time, as college students almost invariably do under such circumstances, and at no time did he appear self-conscious or apologetic because of his poor showing.

Investigation disclosed the fact that K belonged to one of the most prominent families in the small city where he lived. His father was a banker, proprietor of the leading general store, and had formerly been a member of the local school board. K's mother is said to be a superior woman. K is an only son. His one sister, several years his senior, is a graduate of the University of California.

When K left the university he came to my office to bid me good-bye and told me he was glad it was all over. He said he had not wanted to come to college or even to graduate from high school. He "never could learn books anyway," and now that he had done his best in college and failed he was glad to go back home to work in his father's store.

We will first recount K's test performances in some detail, and later examine them in order to discover, if possible, the psychological nature of their inadequacy.

STANFORD-BINET TEST

YEAR VIII, Credit, 12 months.

Although all the tests in this year were passed, K's responses to three of them gave clear evidence of intellectual inferiority. For example, *Finding Similarities* brought the following responses, each given only after 15 to 30 seconds of thinking:

¹ Only one of K's teachers knew anything about the results of the mental tests, or even that such tests had been given.

(a) Wood and coal—"Both used for *firewood*." (b) Apple and peach—"Skin about the only thing." (c) Iron and silver—"Don't know that one. Oh yes, they are heavy." (d) Ship and automobile—"Propeller."

In the *Ball and Field* test K studied for two minutes and said he could not do it. Persuasion finally brought a response which showed barely enough plan to satisfy the requirements for year VIII. Inferiority of practical judgment was evidenced by the crossing of lines and by the lack of parallelism.

Vocabulary. Score 45, or about median for 13½ years. Typical responses: Lecture—"To be taught. Sort of lecture course. One who relates about his experiences." Skill—"Knowledge." Ramble—"Go fast." Civil—"Don't know." Nerve—"Pertaining to mind. Get more nerves. Sort of brain." Regard—"Meaning good." Brunette—"White, I guess." Hysterics—"Pertaining to the nervous system." Mosaic—"Pertaining to architecture from a foreign country." Bewail—"Can't think of that at all." Priceless—"No value." Disproportionate—"Can't think of it at present." Tolerate—"Try to get away from." Frustrate—"Sort of nervous." Harpy—"Happy, I guess." Majesty—"Don't know how to use it. Would it pertain to a queen?" Treasury—"Pertaining to money." Crunch—"Don't know." Sportive—"Pertaining to sport; not sure about it." Shrewd—"Conservative." Repose—"Don't know that one." Peculiarity—"Very peculiar." Conscientious—"Good in his work, I guess." Promontory, Avarice, Gelatinous, Drabble, all met the answer, "I don't know." Philanthropy—"Would it be wealthy?" Irony—"Strong."

YEAR IX. Credit, 10 months. Failed on Rhymes.

No error in *Date, Weights, Change* or *Four Digits* reversed.

Three Words. (a) "The boy *hit* the ball into the river." (b) "Men must work to have money." (c) "The lakes flows into the river and the river comes to a desert where it dries up."

Rhymes. (a) No rhyme found for *day* even in two minutes. "I can't seem to get any." (b) Mill—"Pill, bill, hill, rill." (50 seconds). (c) Spring—"Spring, sprung." Told to give *rhymes*, "I can't seem to think of any."

YEAR X. Credit 10 months. Failed on *Report*.

Absurdities. No error; answers given quickly.

Designs. One correct, the other half correct.

Reading and report. Read passage in 18 seconds without error. "A fire burnt three blocks near the center of the city. There was a girl asleep in bed. While at the fire a fireman burnt his hands."

Comprehension. (a) What ought you to say, etc.—"Nothing." (b) Before undertaking, etc.—"Think about it." (c) Why judge, etc.—"Actions count more. You can see him so much on his actions. Actions usually tell a great deal about a man. He might not have much talking ability."

Sixty words. In successive half minutes gave 19, 15, 10, 11, 7, and 7 words; total 69. Hardly any of the words given were what Binet would call "aristocratic" words. Class series all very brief.

YEAR XII. Credit, 21 months. Failed on *Ball and Field*.

Abstract words. Hazily explained but all scored plus.

Dissected sentences. (a) and (c) correct. (b) "I asked my teacher for paper to correct."

Fables. (a) Hercules and Wagoner—"Don't sit in the same rut and call for help but get out and do it yourself." (Half credit.) (b) Milkmaid—"Not

to be thinking so far ahead." (Full credit.) (c) Fox and Crow—"Let's see. I know, but can't think. The crow was too vain of herself." (Half credit if liberally scored.) (d) Farmer and Stork—"That the innocent sometimes may be caught and the guilty get away. You must not judge all by the ones being caught." (No credit.) (e) Miller, son and donkey—"Mustn't do everything what other people tell us." (Full credit.)

Five digits reversed. One of three correct.

Picture interpretation. First picture brought description only, the others were fairly plausibly interpreted.

Similarities. (a) Snake, cow, sparrow—"Don't know unless it would be the tail." (b) Book, teacher, newspaper—"Learn knowledge from all of them." (c) Wool, cotton, leather—"Clothing." (d) Knife-blade, penny, piece of wire—"Steel." (e) Rose, potato, tree—"Skin, or the heart." (The first three were scored plus, the last two minus.)

YEAR XIV. Credit, 12 months. Failed on *Vocabulary, President and king, and Clock problems.*

Induction. Answers were 2, 2, 4, 8, 12, 32. That is, the principle was grasped only at the last folding.

President and King. (1) "President has more power. He has a cabinet and rules over the cabinet. A king is mostly a figurehead and is ruled over by parliament." (2) "President is commander-in-chief of the army." (3) "President has the veto power and a king has not." (Scored plus on power, minus on accession and tenure.)

Problems of Fact. (a) and (b) both plus. (c) Indian coming to town—"Carriage; wagon."

Arithmetical Reasoning. All correct in 20, 30 and 7 seconds, respectively.

Clock Problems. (a) 6:22—"It would still be 22 after 6." (Task explained again.) "Will it go like this—25 after 6?" (Failure in 2 minutes.) (b) 8:10—"After 2 minutes, 'I can't do it.'" (c) 2:46—"After 1½ minutes, 'I see now, it would be 15 after 10.'"

AVERAGE ADULT. No credit.

Responses on Vocabulary and Fables have already been described.

Abstract Words. (a) Laziness and idleness—"One is not willing to work, and other because he won't work." (Scored plus, but is hazy.) (b) Evolution and revolution—"Revolution means revolves. Don't know the other word." (c) Poverty and misery—"Poverty is without means, misery might be with means but not wanting to use them. One suffering." (Plus on liberal scoring.) (d) Character and reputation—"Reputation is what you have had, character is what you have got at present."

Six Digits Reversed. No success. Not over two successive digits given correctly in any series.

Enclosed Boxes. (a) and (b) correct. (c) "10." (d) "17."

Code. Time, 5 minutes and 40 seconds. Only two letters correct.

SUPERIOR ADULT. No credit.

Paper cutting test. Made one hole in center of paper.

Eight Digits Forward. Not over three successive digits given correctly in any series.

Thought of Passages. (a) "Tests that you are giving at present is very good for the scientific—let's see—the scientific way. This test may help a person in something what they take up. I forget the rest." (b) "Let's see—many people—happiness—we do not have all happiness in life—and many people wish upon us that—let's see—I can't get it."

Seven Digits Reversed. Would not attempt.

Ingenuity test. Showed no comprehension of the task whatever, although I twice explained it and even solved the first problem for him.

The mental age score is 12 years, 5 months. The distribution of successes and failures does not differ especially from what one might expect of an average child of 12 or 13 years. Qualitatively, however, many of the responses are characteristically different from those of an average child of the same mental age. They show more of what Binet called "maturity" of intelligence, and less of "rectitude."

K's 14 years of schooling have brought his vocabulary about a half year or year above the average of his mental age and have made him a fairly fluent reader (pronouncer of words). He makes change quickly and solves simple arithmetical problems, but in practical judgment, in finding likenesses and differences, and in a certain inaccuracy and slowness of thought suggesting faint awareness, his stupidity is more apparent.

YERKES-BRIDGES POINT SCALE

Total score, 79 points, or about median for 13 years.

The following failures were typical:

Repeating 21 syllables. Three errors.

Absurdities. (a) I have three brothers, etc.—"Let's see. It should be Paul, Ernest and I." (b) Swinging cane with hands in pocket, etc.—"That one's all right." (c) Guidepost directions (if you can't read this sign inquire of the blacksmith, etc.)—"He never would be able to find the blacksmith."

Analogies. (b) Arm is to elbow as leg is to—"abdomen." (c) Head is to hat as hand is to—"arm." (d) Truth is to falsehood as straight line is to—"I have to pass that one." (e) Storm is to calm as war is to—"Have to pass that too." (f) Known is to unknown as present is to—"Known. No, I don't know."

YERKES-ROSSY ADOLESCENT POINT SCALE

Total score, 48 points. Satisfactory age standards are not available for this scale, but 48 points is probably not far from average for 13 years. Typical responses include the following:

Digits Forward. Memory span, 5 digits.

Repeating Sentences. Failed on all sentences of more than 14 syllables.

Comprehension Questions. (b) Actions versus words—"What they usually do is what they usually say." Asked to explain, "What a person usually does, he has his mind made up and if he should say anything that way his mind would run in the same order." (c) Why honesty is the best policy—"Because you're never caught in a lie; if you are, always there's nothing to hinder you from getting a position."

Definitions. (d) Conceit—"One who only thinks about himself. One who thinks nobody is as good as he is—the branches of work what he's in—pretty, or anything that way."

Analogies. Whole is to part as six is to—"half." (f) Sunday is to Saturday as January is to—"February."

Opposites. Wise—"not wise." (20 sec.) Silent—"still" (18 sec.). Similar—"things" (20 sec.). Cheap—"goods" (7 sec.). Never—"will" (12 sec.). (Here task was explained again, as it was evident K had lost the goal) Joy—"gloom" (4 sec.). Prompt—"late" (6 sec.). Vacant—"don't know." Busy—"dull" (12 sec.). Distant—"close" (3 sec.). Lazy—"don't know" (35 sec.). Easy—"hard" (2 sec.). Generous—"close" (3 sec.). Horrid—"mild" (12 sec.). Rude—"good" (5 sec.). Top—"tail" (13 sec.). Many—"few" (2 sec.). Rough—"calm" (4 sec.). Upper—"lower" (3 sec.). After—"before" (2 sec.).

Letter Line Test. Only one point credit.

Code Learning. No credit.

ARMY (1917) INDIVIDUAL EXAMINATION

Of tests A to V of the original individual examination methods prepared for use in the army (1917), the following were given:

Clock Test. Could tell time promptly and, when clock was visible, could tell what time it would be if hands were reversed. Failed on latter when clock was not visible. (About a 12 or 13-year performance.)

Knox imitation. Six successes in ten trials. No success beyond five moves.

Porteus maze. One error in 10-year maze, two in 11-year maze and none in mazes for 12 or 13 years. (About a 13 year performance.)

Oriental information. No failure.

Vocabulary. Average for two series of 50 words each was 21 correct definitions. Easy words failed included voluntary, perpetual ("motion in a line"), embers, tragic, optimist, repent, capitulate, contemplate, bestow, cooper ("builds coops"), hypocrite ("sort of non-believer"), etc. (About a 13½ year performance.)

Disarranged sentences. Two of three correct. (12 years).

Absurdities. Series 1 and 2, twenty absurdities in all, were given. Only the following were failed: Series 1 (i)—A mistake is much worse than a lie, for all people make mistakes and all liars tell lies; Series 2 (g)—Just before sunset we sat in the shade of a tall tree and amused ourselves by watching the shadows as they gradually grew shorter and shorter. (At least a 12 year performance).

Rhymes. For *stone* three rhymes were found in one minute, for *permit* one, and for *resist* four.

Likenesses and Differences. Series 1 and 2 were given, on 20 items in all. There were six failures, besides several passes of low value. (12 or 13-year performance.) Typical inferior responses were as follows:

How hat and coat are alike—"Both gold rimmed."

Rose, potato, and tree—"Can't get that."

Animal and plant—"Both have hearts."

Lamb, calf, and child—"All have feet."

Grass, cotton, tree, and thistle—"All green."

Memory for Designs. Of the five designs, two were reproduced correctly and two half correctly (liberal scoring). This is probably about a ten-year performance.

Logical memory. Passages 1 and 2 were given. These are perhaps slightly more difficult than the Binet passage (Fire in New York), and have 20 "memories" each. Both were read fluently and without error. Seven memories were given for the first and 11 for the second. (11 or 12-year performance).

Comprehension. All five series were given, or 25 in all. There were eight failures. (About a 10 or 11-year performance). The following errors are typical:

Why are people who are born deaf usually dumb also?—"Don't know."

You are hauling a load of lumber; the horses get stuck in the mud, and there is no help to be had. What would you do?—"Go for help."

Why has New York become the largest city in America?—"Because of its size and wealth. It covers such a large area."

Why should women and children be rescued first in a shipwreck?—"There ain't any reason."

Why should people have to get a license to get married?—"There would be too many marriages."

Sentence Construction (3 words). All five series given, 15 items. All the responses were correct. (This test belongs at 9 or 10 years).

The scoring of this series of individual tests has not been standardized and age norms are lacking, but I estimate that the value of K's performance is about equal to that of an average child of 12 or 13 years.

Miscellaneous Tests

Trabue Completion Tests. Series B. (3) "The stars and the stripes will shine tonight." (6) "She could if she will." (7) "Brothers and sisters should always try to help the other and should not quarrel." (9) "It is very annoying to have a tooth-ache, which often comes at the most bad time imaginable." (10) "To make friends is always—the—it takes." (Score is 12, or approximately seventh grade ability).

Series C. (6) "The boy who studied hard will do well." (7) "Men are more capable to do heavy work than women." (8) "The sun is so hot that one can not sit in it directly without causing great discomfort to the eyes." (9) "The knowledge of man to use fire is—of—important things known by—but unknown—animals." (10) "One ought to take great care to do the right—of—, for one who—bad habits—it—to get away from them." (Score again is 12, seventh grade ability).

Easy opposites. The easy opposites of List 3, Whipple's Manual, brought the following responses: (1) Best—"poor" (3.2 sec.); (2) weary—"tired" (2.4 sec.); (3) cloudy—"clear" (.6 sec.); (4) patient—"impatient" (2 sec.); (5) careful—"not careful" (5 sec.); (6) stale—"old" (.8 sec.); (7) tender—"tough" (1 sec.); (8) ignorant—"bright" (.6 sec.); (9) doubtful—"don't know" (6 sec.); (10) serious—"number" (3 sec.); (11) reckless—"not reckless" (.8 sec.); (12) join—"not joined" (1.2 sec.); (13) advance—"not advanced" (3.6 sec.); (14) honest—"dishonest" (.6 sec.); (15) gay—"don't know" (9 sec.); (16) forget—"remember" (.8 sec.); (17) calm—"rough" (.8 sec.); (18) rare—"tender" (.6 sec.); (19) dim—"bright" (.8 sec.); (20) difficult—"easy" (.6 sec.).

By the usual method of scoring only 8 of the 20 responses are correct. Although reliable age norms for this list are not available, this is probably no better than children of 9 or 10 years ordinarily do. The haziness of K's mental processes and his difficulty in holding to a goal are especially striking. The average time is 3.3 seconds, as compared with the Woodworth-Wells norm of 1.11 seconds for adults. This large difference is in line with K's time record in the Kent-Rosanoff test and suggests marked intellectual inhibition.

Whipple's information test. After checking up the words as marked, it was found that K was able to define only 5 of the 100 words and to give a rough, inexact explanation of only 5 others. This is probably not far from an average eighth grade ability.

Matching proverbs test (Otis). K was given the three Otis provisional lists. These resembled the form of the test included in later published editions of the Otis Group Scale, but were not identical with the latter. K's scores on the three lists were 4, 9 and 6. The average of 6.3 represents about eighth grade ability.

Absurd pictures. The Terman series of 44 absurd pictures was next given.² As these do not measure above 12 years, it is not surprising that K succeeded with all but two. His intellectual deficiency is clearly not found chiefly on the perceptual level.

Group Examination A (Original 10-Test Alpha)

Test 1. Oral Directions. Only 2 correct. Weighted score 6. (About 8½ years).

Test 2. Memory for digits. Four correct. Weighted score, 8. (About 9 years). Extreme memory span, 5 digits. (8 or 9 years).

Test 3. Disarranged sentences. Nine correct, 3 wrong. Raw score, 6; weighted score, 12. (About 12 years.) People are many candy of fond—marked false. Property floods life and destroy—marked false.

Test 4. Arithmetical reasoning. Raw score, 6; weighted score, 18. (12½ years.) How many hours will it take a truck to go 66 miles at the rate of 6 miles an hour?—Ans. "10." If you buy 2 packages of tobacco at 7 cents each and a pipe for 65 cents, how much change should you get from a two-dollar bill?—Ans. "1.28."

Test 5. Information. Raw score, 28; weighted score, 56. (About 16 years.)

Test 6. Synonym—Antonym. Score, 21. (About 16 years.) Score of this test is not weighted. Omitted definite—vague, concave—convex, adapt—conform, debase—exalt, repress—restrain.

Test 7. Best Answer. Five attempted, 4 correct. Weighted score, 12. (About 11½ years.) Why judge a man by what he does rather than by what he says?—"It is wrong to judge anybody."

Test 8. Number Series Completion. Raw score, 7; weighted score, 14. (About 15 years.)

Test 9. Analogies. Six correct. (About 10½ years.) This test is not weighted. Omitted or failed on items like the following:

- (5) Dress—woman: feathers—(bird, neck, feet, bill);
- (6) Water—drink: bread—(cake, eat, coffee, pie);
- (7) Shoe—foot: hat—(coat, nose, head, collar).

Test 10. Number Cancellation. Score, 19. (About 15 years.)

Total weighted score, 175. This is about median for the high seventh grade, or age 13½ to 14, and is approximately equivalent to score 70 on Alpha. The lowest score earned by any Stanford University student in a group of 300 tested was 205. However, K evidently does consider-

² Described in *J. of Applied Psychology*, 1918, vol. 2, p. 348. The pictures themselves have not been published.

ably better on this kind of test than on tests of the Binet type, perhaps because it is more subject to the influence of schooling.

KENT-ROSANOFF ASSOCIATION TEST

K presented no symptoms whatever of psychopathological tendencies, but the Kent-Rosanoff test was given in order to compare his responses with those found by the authors for typical dull subjects. The results showed 14 per cent. of "individual" and 4 per cent. of "doubtful" reactions. Kent and Rosanoff found 6.8 per cent. of individual responses for normal adults, 14.3 per cent. for normal ten-year olds, and 26.8 per cent. for insane adults. Eastman and Rosanoff found 13.2 per cent. for delinquents (presumably averaging much below normal in intelligence). Accordingly, as far as individual responses are concerned, K's performance resembles that of a dull youth or normal child.

The median frequency of the responses was 22, which is considerably lower than for normal adults. In this case, the low score indicates dullness rather than mental eccentricity. There were no predicate reactions.

There was only one instance of failure to respond, and seven instances of perseverance. These figures are not greatly different from those found for normal adults.

Average reaction time was 3.1 seconds, ± 1.54 . The average for college students is usually between 1.5 and 2.25; for children or mentally inferior adults, about 3. Four responses required more than 10 seconds. K's slow reaction time, as well as the quality of his responses, indicates mental inferiority.

Educational Tests

Handwriting. Smooth and legible, entirely lacking in infantile qualities. Grades 14 on Thorndike scale.

Kansas silent reading. Slightly better than eighth grade ability.

Buckingham spelling test. Lists 1 and 2. Better than ninth grade ability.

Courtis arithmetic. The results are shown in the following table:

Process	Attempts	Right	Notes
Addition	16	11	Far above eighth grade.
Subtraction	14	11	About eighth grade.
Multiplication	11	7	Slightly below eighth grade.
Division	7	4	Between fifth and sixth grade.
Speed of Reasoning..	5	2	About fifth grade.

The striking thing in the above table is the rapid deterioration in quality of performance in the successive parts of the test from addition to reasoning. That is, the higher the mental processes involved in a test, the more clearly it brings out K's subnormality. In speed and accuracy of adding he compares favorably with the average high school pupil, while in arithmetical reasoning he is little above fifth-grade ability. Three errors, all as absurd as the following, were made in indicating operations necessary to solve problems:

1. The children of a school gave a sleigh-ride party. There were 9 sleighs used, and each sleigh held 30 children. How many children were there in the party? Ans.—“Subtract.”

History. History was K's favorite school subject. He had studied it for four years in high school, covering ancient, medieval and modern, English, and American History. Van Wagenen's American History Scale (Information B) was first given. From K's responses, we learn that New York was settled by the English, that the Mississippi Valley was first explored by the United States and England, that Lafayette and Hancock were American generals in the Revolutionary War, that Jamestown was not settled until after the fall of Quebec and the capture of New Amsterdam by the English, that Louisiana was not purchased until after the Missouri Compromise and the Dred Scott Decision, and that Alexander Hamilton was president of the United States. This list of interesting facts could have been greatly extended. The performance indicated about seventh or eighth grade ability.

Sackett's Ancient History test was also given. This is also chiefly an information test. The test is in six parts.

I. What the following were noted for: Hannibal, Cheops, Solon, Attila, Mithridates—“Don't know”; Demosthenes—“Great writer”; Charlemagne—“He was a ruler over Egypt”; Constantine—“Ruled over Egypt.”

II. Name one of each of the following, from ancient history: a sculptor, a historian, a philosopher, a builder, a poet—“Don't know.” A painter—“Raphael”; law-giver—“Demosthenes.”

III. Historical significance of important events. K could tell nothing whatever about the historical significance of the Battle of Tours, the Age of Augustus, the Check of the Saracens, the Reign of Alexander the Great, the Age of Pericles, the Burning of Carthage, the Peloponnesian War, etc.

IV. Important battles. Could not tell who fought or won any of the important battles listed.

V. Important dates. The closest he came to any of the ten dates was about 100 years. The Roman Empire was established about 100 A. D. and fell to the Barbarians about 261 A. D. The Saracens were also defeated around 100 A. D. Most of the events in this list he had “never heard of.”

VI. The most important contribution of each of the following to civilization: Greeks—“No idea unless ships. Sort of a fleet is what they had mostly.” Teutons—“Came from Northern Europe. Don't know what they gave to the people.” Phoenicians—“Don't know who they were.” Saracens and Arabians—“Don't know.” Romans—“Don't know, unless it was the great art what they had.” Hebrews—“Hebrew language only thing I know.” (Who were the Hebrews?) “Don't know who they were.” (Are they related to the Jews?) “Sort of same thing; are not Jews, though.” Persians—“Don't know.” Egyptians—“Don't know.” Babylonians—“Don't know.” Prehistoric Man—“Don't know.”

K's stock of historical information may be inferred from the fact that of the 55 questions in the above six series, 2 were answered correctly. He did know that Cicero was an orator and that Alexander was a warrior (“general”).

NOTES ON READING AND HOBBIES

Reading. K stated that from the time he entered high school he had read from one to two hours a day, chiefly newspapers and magazines. The latter included *American Boy*, *The Youth's Companion*, *Popular Mechanics*, *The Literary Digest* and *World's Work*. Asked what books he had read through, he could name only the following: *Little Women*, Alger's books, *Robinson Crusoe*, and several volumes of Draper's *Self Culture*. Said he had also read a book about the Civil War, but could not name it. Could not remember that he had ever read a book of travel, any novel, or any books on mythology. He had read no poems except those in his school texts—"I don't like poetry."

Hobbies. Seems never to have had any persisting hobbies. Four years earlier had put up a telegraph line, which worked, and learned some of the Morse code. This interest lasted only one winter. Had never tried wireless telegraphy. Once he "helped" another boy construct a biplane model. It seems that this was a simple affair and that K played only a minor rôle in it. Can ride a motorcycle, but "does not take care of it himself or try to fix it when it is out of order." Likes an auto better; says he can grease it, fix the fan belt, repair punctures or adjust the carburetor. However, could not explain the principle of the gas engine or tell what the carburetor and commutator are for. Has never had a set of tools and admits that he was "never much good" with them.

THE PSYCHOLOGY OF STUPIDITY

The details of K's test performances have not been set forth merely as amusing illustrations of intellectual gaucherie. Let us see what light they throw on the psychology of stupidity, for the essential nature of intelligence or stupidity is best grasped by thoughtful observation of the bright or dull mind in action.

First, however, it will be well to note that the degree of stupidity with which we are here concerned is really not extreme. K is in fact only moderately less dull than the average of the genus homo, judging from the intelligence scores made by nearly two million soldiers. His intelligence is probably not equalled or exceeded by more than 70 per cent. of our white voters, by more than 50 to 60 per cent. of semi-skilled laborers, by more than 40 to 50 per cent. of barbers or teamsters, or by more than 20 to 30 per cent. of unskilled laborers. It is probably not equalled or exceeded by more than 30 to 40 per cent. of our South Italian or by more than 20 to 30 per cent. of our Mexican immigrants. Compared to the average American Negro, K is intellectually gifted, being equalled by probably not more than 10 to 15 per cent. of that race. Among the Jukes, Kallikaks, Pineys or Hill Folk, he would represent the aristocracy of intellect. Just as we are prone to forget how the other half lives, so we are equally likely to forget how the other

half thinks. It is now fairly well established that the strictly median individual of our population meets with little success in dealing with abstractions more difficult than those represented in a typical course of study for eighth grade pupils, that the large majority of high-school graduates are drawn from the best 25 per cent. of the population, and that the typical university graduate ranks in intellectual endowment well within the top 10 per cent. K is stupid only by contrast. Only occasionally does an individual of his moderate ability manage to graduate from high school or enter college. Only an exceptional combination of dogged persistence and parental encouragement or other favoring circumstances can accomplish it. But the introduction of intelligence tests is showing that the majority of colleges and universities do unknowingly enroll a few students of K's intellectual caliber. How this happens and how it may be prevented are questions with which we are not here concerned.

In what, psychologically, does K's stupidity consist? Certainly not in the ordinary sensorial, perceptual or sensorimotor processes. In visual acuity he probably equals or exceeds the average savant. In the cancellation of given letters or figures in a mass of printed matter he would rank little if at all below the average of college students. He is probably in less danger of being run over by an automobile than the average college professor. He can probably drive an automobile as skillfully as the average lawyer, doctor or minister could do with the same amount of experience. There is nothing in his intelligence that would prevent him from reaping world renown as a champion athlete. His handwriting would be a credit to a statesman. His spelling is unquestionably more accurate than the spelling we find in the letters and official reports of Colonel Washington, afterward the savior and the father of his country.

Going from these relatively simple functions to the slightly higher processes of memory, we at once find unmistakable evidence of K's mental inferiority. His memory span is only five digits, direct order, and four digits, reversed order. But we have to do not merely or chiefly with a weakness of memory for discrete impressions. He is able to recognize and pronounce almost any printed word in his spoken vocabulary, but his memory span for words making sentences resembles that of a child of eight or ten years. His "report" of glibly read passages of the newspaper type is childish in its scantiness and inaccuracy, while his report of abstract passages rises little above zero efficiency. He is sometimes able to carry out directions given orally in 15-word sentences, but he responds with only a blank stare to similar directions in 30 to 40 word sentences. So many sounds will not coalesce in his mind into a meaningful whole. Nor is this weakness confined to memory for words, for he does little better with simple geometrical designs. He

is unable to reproduce correctly simple geometrical designs because he apperceives the figures merely as composed of many lines in apparently complex relationship to one another.

How can we reconcile this apparent weakness of memory with the fact that K's fund of general information, as measured by the army test, is equal to that of the average high-school sophomore? Does not the acquisition of information depend upon memory? The answer is that it depends largely on the kind of information. The kind called for in the original form of the army test relates largely to every-day perceptual experiences (common animals, plants, advertisements, sports, etc.). In information involving memory for abstract terms or appreciation of logical relationships, K makes a ludicrous showing. Information about base-ball champions or movie stars is within his reach; historical information is not.

K's success is no more brilliant when it comes to feats of constructive imagination. He was able to draw a clock face so as to show the position of the hands at any specified time, but he could not in imagination reverse the hands. He could not construct in imagination the situation represented by the problem of enclosed boxes. In the Binet paper cutting test, he could not imagine how the notched sheet of paper would look when unfolded. He could not retain or manipulate visual imagery well enough to reproduce the letter code. To think out new combinations of machinery or forces, as in the field of mechanical inventions, appears to be as far beyond him as the ability to manipulate abstract language symbols.

The weakness of K's constructive imagination is also shown in his lack of resourcefulness in meeting practical difficulties like those involved in the Ball and Field problem, the ingenuity test or the Knox Imitation test. The latter is not, strictly speaking, an imitation test, for success in its more difficult parts depends chiefly on adopting the scheme of numbering the positions, as 1, 2, 3, 4, etc., and remembering the numbers. This required resourcefulness is of a kind K can not bring to bear on a new problem. If he were a factory laborer, he could doubtless be taught to perform satisfactorily fairly complicated kinds of routine work, but he would not be likely to devise any new procedure to make work easier or lighter.

In the appreciation of absurdities of a kind which are chiefly on the perceptual level or which involve only the simplest of ideas (absurd pictures), K makes a fairly good showing. He shows somewhat less ability to detect absurdities expressed in language, particularly if expressed in fairly long or complicated sentences. To absurdities on the level of the abstract he is of course blind. He would doubtless read without the slightest suspicion of fraud a poem or sermon or legal document constructed so as to contain nothing but absurdity, provided

only the language was sufficiently smooth-flowing. The absurdity about the road which was down hill in both directions involves little more than the re-presentation of sensed experience, hence was well within K's ability. That about the three brothers demands an appreciation of language relationships which proved to be beyond him.

In "Combinative ability" of the kind which Ebbinghaus rightly regarded as such an important aspect of intelligence, K reveals, notwithstanding fourteen years of schooling, the capacities of an average child of twelve years. His desert-rivers-lakes sentence is correct in form, but absurdly foolish. In the Trabue test we find habitual associations dominant over sense, as in "The stars and *stripes* will shine to-night"; also a weak appreciation of sequential relationships and language form, as in "She *could* if she will," "The boy who *studied* hard will succeed," etc. The meaning of a simple mixed sentence like "people are many candy of fond" is not grasped by K because he is unable to profit from logical cues. He sometimes reacts to pictures by descriptions rather than interpretations because he sees merely parts without grasping the whole they compose. Subtle meanings, whether of language or pictorial representation, are lost on him. The gulf that separates him from Millet is as enormous as that which separates him from Shakespeare. In no intellectual activity that involves the "elaboration of parts into their worth and meaning" (Ebbinghaus) could he possibly excel. "Two and two" as numbers he can put together by the simple laws of habit; "two and two" as parts of a more complex situation will not combine.

In comprehension K fails equally with simple cause and effect relationships in nature, human relationships, and the rationalization of custom. Why the deaf should also be dumb is as much a mystery to him as why the rainbow is many-colored. New York is the largest city "because it covers such a large area." Why honesty is the best policy, why women and children should be saved first in a shipwreck, why marriage licenses are necessary, involve issues too subtle for him to grasp. Although his inferior powers of comprehension render him incapable of real morality, his moral life, measured by the ordinary standards, appears to be quite normal. He is honest, and considerate and not likely to commit bigamy or marry without license. He follows custom but can not see beneath it or behind it. He is about as likely to be a moral reformer as to be a philosopher or poet or inventor or scientist.

Closely associated with this weakness of comprehension is his inability to interpret fables, which usually bring either a comment in terms of the concrete situation or else a generalization which is beside the point. He grasps crudely the general trend of the story, but is insensible to the thought fringes which give it meaning. He is able to imagine the objects and activities described, but taken in the rough such imagery gets him nowhere. It is no wonder, therefore, that he should

match as equivalents proverbs of the most diverse meaning, for proverbs are generalized experience expressed in highly figurative language. K's moral life will never be integrated by principles of action derived from experience. It is more likely to consist of rule-of-thumb behavior. And if he can not generalize his own experiences he is not likely to read much meaning into the behavior of others. He is not likely to develop that intuitive appreciation of the motives and attitudes of others which are necessary for the exercise of leadership. He will make as little headway in understanding the universe of personalities around him as in understanding the laws of gravity, the properties of the atom, the theory of evolution, or the canons of poetry.

Striking examples of the poverty of K's intellectual resources are seen in the various tests of association. Of the dozens of words in his vocabulary which rhyme with *spring* he could not think of one. During the last minute of the sixty-word test he was able to name words only at the rate of 7 in a half minute. Analogies involving concrete objects he can sometimes complete correctly, more often not; but his response is not often wholly irrelevant. *Arm is to elbow as leg is to*—he completes with "abdomen"; a part of the human body, but not the part called for by the logical relationships given. In naming opposites he sometimes loses sight of the goal and responds with a synonym, as in weary—"tired"; stale—"old." In other cases he responds with a word which is frequently associated with the stimulus word in everyday phraseology, as cheap—"goods"; never—"will." Still other responses are either slightly inexact, at best—"poor," or else almost but not quite irrelevant, as top—"tail"; horrid—"mild." Both the low "frequency" of the Kent-Rosanoff response words, and the slowness with which they are given, indicate a lack of variety in concept interconnections, with consequent poverty of verbal associations. As Binet might put it, K's ideas lack direction, are not fruitful, and do not multiply. They are inert and lack valence. The result is intellectual sluggishness and haziness. Our subject will never draw hair-splitting distinctions; he is even incapable of quibbling or making puns.

An essential aspect of the higher thought processes is the ability to associate ideas on the basis of similarities or differences. This ability is involved in such diverse mental acts as the understanding of simple figures of speech, the appreciation of poetry, the scientific classification of natural phenomena, and the origination of hypotheses of science or philosophy. Intellectual superiority is especially evidenced in the ability to note *essential* likenesses and differences, as contrasted with those which are superficial, trivial or accidental. It is here that K displays one of his most characteristic weaknesses. An apple and a peach are alike because they have a skin; iron and silver, because they are heavy; an animal and a plant, because they have hearts; a snake, a cow and a

sparrow, because they have a tail; grass, cotton, tree and thistle, because they are green. Other similarities given are far-fetched or inaccurate. A hat and a coat are alike because they are gold rimmed; a rose, a potato and a tree, because they have a skin or heart. There is little logical connection among K's concepts; they do not light up one another; they have not been subsumed under classes; they lack definiteness of content.

All of this is again brought out in the vocabulary test, which in a remarkable degree is a test of one's ability to distil concepts—from experience. Mere schooling affects it a little, but very little. Although K has attended school fourteen years, his vocabulary is less than a year beyond the standard for average children of his own *mental* age. Both the school and the cultural influences of a superior home have failed to give him an understanding of such common words as civil, brunette, bewail, priceless, disproportionate, tolerate, shrewd, repose, character or reputation. His definitions are occasionally infantile in form (given in terms of use, etc.), but are more often vague, or grossly inaccurate without being wholly irrelevant. For example, lecture means "to be taught"; ramble, "to go fast"; conscientious, "very good in his work"; brunette, "white"; tolerate, "to get away from." All of these words he has probably seen or heard scores of times, but he has failed to grasp their meanings because of inability to analyze the situations in which they have appeared.

Summing it all up we may say that K responds normally to simple situations directly sensed, and that his inferiority is chiefly evident in responses involving intellectual initiative, planning, range and flexibility of association, analysis of a situation into its elements, alertness, and the direction of attention toward the significant aspects of experience. Most of all, K is stupid because he is not adept in the formation and manipulation of concepts; because he is unable to master the intellectual shorthand of general ideas.

What is the practical bearing of the above facts on K's vocational outlook? While an exact answer to this question is at present not possible, a few tentative predictions may be ventured. K is at present performing the duties of a regular clerk in his father's store, apparently with success, but it is unlikely that he will ever be able to manage a business of any considerable importance. That he will ever succeed his father in the local bank is hardly in the bounds of possibility. Perhaps he will know how to get credit and how to grant it with fair discretion, but he will never understand the principles of credit by which banking is carried on. He may learn how to purchase bonds, to clip coupons, and how to save his income; but he will never know what a bond is. That he could become a minister, lawyer or doctor is unthinkable. He will never engage in theological disputes or concern himself about

principles of artificial immunization. On the other hand, a hundred kinds of skilled or at least semi-skilled work are open to him. As far as intelligence is concerned there is no reason to suppose that he could not be a reasonably good baker, barber, bricklayer, butcher, carpenter, drill sharpener, freight checker, game warden, glass blower, harness-maker, horse-clipper, jail-keeper, joiner, lathe-hand, policeman, professional baseball player, plumber, prize fighter, peddler, railroad brakeman, riveter, roofer, section boss, soldier, street car conductor, timer, truckman, valet, weaver or yardman. There are doubtless also innumerable kinds of routine clerical work in which he could do well. For all we know he may become a successful business man, but this is unlikely unless through the shrewd choice of assistants or marriage to a capable woman.

Whatever he does for a living, K may be expected to become a citizen of average respectability, though he is not likely to be elected to important office or to play a leading rôle in the affairs of his community. As a voter, he will never glimpse the fundamental problems relating to taxation, tariff, government ownership, systems of credit, education, labor or capital. If he ever concerns himself at all with political matters, it will probably be as a loyal adherent to his party and a devout repeater of its catchwords.