

# A Small Catalogue of Classical Rating Scales

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The origin of the rating scale is vague and ambiguous. The present work aims to catalog classical rating scales developed before Likert (1932) in their original forms to exhibit their diversity in outward appearance and in the time of generation. This study goes backward in time.

## Likert Scales

Currently, Likert scales are undoubtedly the most adopted rating scheme. Figures 1 and 2 show the original Likert scales (Likert, 1932; Likert, Roslow, & Murphy, 1934). Figure 1 displays the three and five-point scales. There were no horizontal bars. In Figure 2, special symbols were employed to designate the response categories. It is often mentioned that *Likert scaling*, which attempts to construct a psychological scale and *Likert-type rating scheme*, as shown in Figures 1 and 2, are different. An alias of Likert scaling is the method of summated-ratings (Edwards & Kenny, 1946).

## Man-to-Man Scales

Figures 3 and 4 show Man-to-Man rating scales devised by W. D. Scott around 1918. They once flourished to measure the quality of officers of the U.S. army in WWI; however, their use declined quickly. This rating scheme has a cumbersome feature. The rater should prepare a master scale by selecting the best and the worst man in a group (to be rated) for each trait and then select an average man. Further, two other men, one midway between the highest and the average, and the other midway between the lowest and the average, should be selected. These five men served as standards to rate the other group members (Figure 4).

## Graphic Rating Scales

The graphic rating scale was the product of Scott & Company around 1920. The company was founded by W.D. Scott, the inventor of the Man-to-Man scale. The emergence of the graphic rating scale was unsystematic and disorderly. Perhaps, its first documented appearance was in a commercial journal in 1920 (Figure 5), followed by a book (1921, Figure 6). However, they were not academic. The Hays and Patterson (1921) study is often referred to as the first academic presentation of the graphic rating scale, although the paper is poorly documented: being a short resume of conference records, there are no figures comparable to Figures 5 and 6, and the name of the author was misspelled (incorrect: Patterson; correct: Paterson). Good early papers that introduced and examined the scale include Paterson (1922), Freyd (1923), and above all, Scott and Clothier (1923).

The scheme permits a rating as fine as possible by marking on the scale; in practice, a stencil (Figure 21) was used to transform an original position into an integer.

The circulation of the method was remarkable: the graphic rating scales were adopted by the U.S. gov-

ernment (Figure 7) and attracted attention in Japan (Figure 23).

### Variants of Graphic Rating Scales

There are rating schemes that were very similar to the graphic rating scale but did not mention Scott or his colleagues (Figures 8 and 9). It seems that the schemes were invented independently in educational settings rather than in personnel selection settings as in Scott.

Miner's Rating Blank (Figures 10 and 11) is sometimes referred to as the precursor to the Scott Company's graphic rating scale, wherein the response is made not by checking the cell but placing a dot on a line, to make fine ratings possible. Another curious variant is shown in Figure 12, in which a branching rating scale is used in the item "how does he control his emotion?"

### Score Card Method

The score card system was used in the educational context. The definition of score card is not very clear but Boyce (1915, p. 18) defines it as: "definite numerical values are given to the various qualities, and subtractions made from the maximum value of any quality in proportion to the deficiency. One of the simplest of such score cards is issued by the Department of Public Instruction of the state of Indiana. The Indiana scheme has three headings:

Teaching power .....	given	45	points
Government .....	"	35	"
General characteristics .....	"	35	" "

Figures 13 and 14 display Elliot's and Boyce's score cards. The items in Boyce's score card are similar to those of Graphic Rating Scale. Gray (1915, p. 7) indicated that agricultural science is the precursor of this method (Figure 15).

### Pearson and Galton

Psychological studies of the British biometric school occasionally used rating scales. The rating scale of Pearson (1906) is often cited in the literature; however, Pearson (1903) was earlier (Figure 16). Furthermore, Pearson used the same rating scale (Figure 17) as early as 1898. Galton's rating scale (1880; 1883, p. 93) was developed even earlier (Figure 18). Guilford (1936, p. 264) stated: "There seems to be little doubt that the first rating scale employed in a psychological problem was that of Galton."

### Experimental Aesthetics

In the studies of experimental aesthetics, rating scales have been widely used (Beebe-Center, 1932). This line of the study seems to be independent of educational and personnel studies. Keith (1906), for example, used a seven-point scale (Figure 19). Moreover, the editor stated that the scale followed "the early *tradition* of our laboratory," which implies the tradition of the scheme (Guilford, 1936) that goes back to Fechner (1871).

### **Very Old and Rare Ratings**

Hacket (1928) reported that an old newspaper (1784) contained a table of ratings for politicians (Figure 20).

Figure 22 shows an unfamiliar sequence of symbols defined by Galton (1863) to designate the force of wind. Titchener (1909) introduced similar naïve psychophysics. For very old rating scales, see McReynolds and Ludwig (1987) and its references.

### **Acknowledgment**

This work was supported by KAKENHI 16H02050 and 18K03048.

- 12. Should the United States enter the World Court?**
- |     |     |     |
|-----|-----|-----|
| YES | ?   | NO  |
| (4) | (3) | (2) |
- 16. All men who have the opportunity should enlist in the Citizens Military Training Camps.**
- |                  |         |           |            |                     |
|------------------|---------|-----------|------------|---------------------|
| Strongly Approve | Approve | Undecided | Disapprove | Strongly Disapprove |
| (1)              | (2)     | (3)       | (4)        | (5)                 |
- 4. Economic exploitation of territories and colonies by great powers:**
- (a) is totally unjustifiable. (5)
  - (b) has some justification, but is on the whole wrong. (4)
  - (c) has about as many unjustifiable aspects as justifiable ones. (3)
  - (d) has some questionable aspects, but on the whole is right. (2)
  - (e) is entirely reasonable and right. (1)

Figure 1. Original Likert Scale. Adapted from "A technique for the measurement of attitudes," by R. Likert, 1932, *Archives of Psychology*, 140, pp. 16–20.

The directions at the top of the attitude scales were changed to read as follows:

- If you agree with a statement put a plus (+).
- If you strongly agree with a statement, put a plus with a circle around it ( $\oplus$ ).
- If you disagree with a statement put a minus (—).
- If you strongly disagree with a statement, put a minus with a circle around it ( $\ominus$ ).
- If you are undecided, put a question mark (?).

Figure 2. Likert Scale in 1934. Adapted from "A simple and reliable method of scoring the Thurstone attitude scales," by R. Likert, S. Roslow, and G. Murphy, 1934, *Journal of Social Psychology*, 5, p. 229.

## RATING SCALE

<b>I. PHYSICAL QUALITIES.</b> Physique, bearing, neatness, voice, energy, endurance. Consider how he impresses his command in these respects.	Highest. . . . . 15 High. . . . . 12 Middle . . . . . 9 Low. . . . . 6 Lowest . . . . . 3
<b>II. INTELLIGENCE.</b> Accuracy, ease in learning; ability to grasp quickly the point of view of commanding officer, to issue clear and intelligent orders, to estimate a new situation, and to arrive at a sensible decision in a crisis.	Highest . . . . . 15 High . . . . . 12 Middle . . . . . 9 Low. . . . . 6 Lowest . . . . . 3
<b>III. LEADERSHIP.</b> Initiative, force, self reliance, decisiveness, tact, ability to inspire men and to command their obedience, loyalty and coöperation.	Highest . . . . . 15 High . . . . . 12 Middle . . . . . 9 Low . . . . . 6 Lowest . . . . . 3
<b>IV. PERSONAL QUALITIES.</b> Industry, dependability, loyalty; readiness to shoulder responsibility for his own acts; freedom from conceit and selfishness readiness and ability to cooperate.	Highest . . . . . 15 High . . . . . 12 Middle . . . . . 9 Low . . . . . 6 Lowest . . . . . 3
<b>V. GENERAL VALUE TO THE SERVICE.</b> Professional knowledge, skill and experience; success as administrator and instructor; ability to get results.	Highest . . . . . 40 High . . . . . 32 Middle . . . . . 24 Low . . . . . 16 Lowest . . . . . 8

Figure 3. Man-to-Man Scale before Use. Adapted from "How the army uses individual differences in experience," by Various Members of the Committee on the Classification of Personnel in the Army, 1918, *Psychological Bulletin*, 15(6), p. 205.

**I. PHYSICAL QUALITIES**

*Physique, bearing, neatness, voice, energy, and endurance.  
(Consider how he impresses his men in the above respects.)*

Highest	Captain Benson	15
High	Lieutenant Gray	12
Middle	Lieutenant Spence	9
Low	Captain Clarke	6
Lowest	Lieutenant Anderson	3

**II. INTELLIGENCE**

*Accuracy, ease in learning, ability to grasp quickly the point of view of commanding officer, to issue clear and intelligent orders, to estimate a new situation, and to arrive at a sensible decision in a crisis.*

Highest	Captain Clarke	15
High	Captain Benson	12
Middle	Lieutenant Jones	9
Low	Captain Ingersoll	6
Lowest	Lieutenant Wilson	3

**III. LEADERSHIP**

*Initiative, force, self-reliance, decisiveness, tact, ability to inspire men and to command their obedience, loyalty and cooperation.*

Highest	Lieutenant Spence	15
High	Captain Ingersoll	12
Middle	Captain Mathewson	9
Low	Captain Benson	6
Lowest	Lieutenant Alexander	3

**IV. PERSONAL QUALITIES**

*Industry, dependability, loyalty, readiness to shoulder responsibility for his own acts, freedom from conceit and selfishness, readiness and ability to cooperate.*

Highest	Lieutenant Wilson	15
High	Lieutenant Spence	12
Middle	Lieutenant Alexander	9
Low	Lieutenant Anderson	6
Lowest	Lieutenant Jones	3

**V. GENERAL VALUE TO THE SERVICE**

*His professional knowledge, skill and experience; success as an administrator and instructor; ability to get results.*

Highest	Captain Abbott	15
High	Lieutenant Alexander	12
Middle	Captain Mathewson	9
Low	Captain Clarke	6
Lowest	Lieutenant Peters	3

Figure 4. Man-to-Man Scale with Names Filled. Adapted from *Personnel management: principles, practices, and point of view* (pp. 205–206), by W. D. Scott and R. C. Clothier, 1923, A. W. Shaw Company.

# Size Up Yourself or Others

FOR EXECUTIVES						
A	Ability to win confidence and respect because of his personality	Impressive	Favorable	Indifferent	Weak	Repellent
B	Originality in devising new and better methods: willingness to learn and to use improved methods	Very Original	Resourceful	Fairly Progressive	Occasionally Suggests	Routine Worker
C	Fairness in dealing with others; and ability to win their cooperation and loyalty	Powerful	Handles Men Well			Frequent Friction in Department
D	Ability to plan work intelligently, to delegate authority wisely, and to get results	Effective Even in Emergency	Effective Under Normal Circumstances		Unsystematic	Disrupting
E	Ability to make his own department efficient as a part of the whole organization; to understand the problems of other departments	Difficult to Handle	Obstructionist		Highly Cooperative	Cooperative
F	Ability to rouse the interest and ambition in his men, and success in developing their own abilities	Develops Men of High Caliber	Develops Men Satisfactorily		Neglects to Develop Men	Discourages and Misinforms Men
FOR SALESMEN						
G	How he impresses, by his appearance and manner, the men he deals with	Strong Personality	Favorable	Indifferent	Weak	Repellent
H	Ability to size up a sales situation and to present the company policy with tact, clearness and force	Very Successful	Capable		Mediocre	Unsuccessful
I	Energy, and application to his duties, day in and day out	Energetic	Industrious	Indifferent		Lazy
J	Is he accurate in statements, dependable in money matters, faithful in social relations	Absolutely Dependable	Conscientious		Careless	Unreliable
K	Ability to develop salesmanship in others by rousing ambition, maintaining their interest, and imparting information		Develops Salesmen Satisfactorily		Neglects to Develop Salesmen	Discourages and Misinforms Salesmen
FOR OFFICE EMPLOYEES						
L	Success in winning confidence and respect through his appearance and manner	Strong	Favorable	Indifferent	Weak	Repellent
M	Amount of work he is able to turn out	Exceptional	Satisfactory	Moderate		Always Behind
N	Accuracy and quality of work; ability to turn out work regularly that is up to the standard	Accurate	Dependable		Careless	Spoils Work Often
O	Energy and application to the duties of his job, day in and day out	Very Energetic	Industrious	Indifferent		Lazy
P	Ability to go ahead with a job without being told every detail; ability to suggest better methods	Very Original	Resourceful		Occasionally Suggests	Routine Worker
Q	Willingness to cooperate with others	Cooperative		Not Helpful	Difficult to Handle	Obstructionist

These three scales cover three different types of persons. Select the one which most nearly fits the person you want to rate, yourself or someone else. Read carefully the definition of the first quality. Opposite it are the degrees in which a person may possess this quality. Make a check at the point which, in your opinion, best describes the person you are sizing up. For instance, make a cross above "impressive," if you think he is unusually "successful" in gaining confidence and respect; or above "repellent," if you think he antagonizes people. If he is worse than "weak" but better than "repellent," check between these qualities on the line above.

Figure 5. First Appearance of the Graphic Rating Scale. Adapted from "Do you want to know what others think about you?" by W. D. Scott, 1920, *American Magazine*, 90(5), p. 45.

### GRAPHIC RATING SCALE FOR EXECUTIVES, DEPARTMENT HEADS, FOREMEN AND SUPERVISORS

Name of Executive Doing Rating \_\_\_\_\_ Date \_\_\_\_\_  
 Branch or Division \_\_\_\_\_ Name of Supervisor Being Rated \_\_\_\_\_  
 Department \_\_\_\_\_ Supervisor's Department \_\_\_\_\_

**Instructions for Making Out This Report:**—Before attempting to rate this supervisor, re-read carefully the definition of each quality immediately before rating the supervisor in that quality. Base your rating on the work this supervisor is actually doing at this time. Indicate your rating in each quality by placing a check (✓) on the line just where you think it ought to be. For instance, if in quality I, you think the person you are rating ranks somewhere between Indifferent and Favorable, put your check on the line somewhere between these two points.

QUALITIES	REPORT
<p><b>I.</b> Consider his success in winning confidence and respect through his appearance and manner.</p> <p><b>II.</b> Consider his success in doing things in new and better ways and in adapting improved methods to his own work.</p> <p><b>III.</b> Consider his success in winning the co-operation of his men, in welding them into a loyal and effective working unit.</p>	<hr/> <p style="text-align: center;">Inspiring      Favorable      Indifferent      Unfavorable      Repellent</p> <hr/> <p style="text-align: center;">Highly Constructive      Resourceful      Fairly Progressive      Routine Worker</p> <hr/> <p style="text-align: center;">Capable &amp; Forceful Leader      Handles Men Well      Falls To Command Confidence      Frequent Friction in His Department</p>
<p><b>IV.</b> Consider his success in organizing the work of his department, both by delegating authority wisely and by making certain that results are achieved.</p> <p><b>V.</b> Consider his success in making his department a smooth running part of the whole organization; his knowledge and appreciation of the problems of other departments.</p> <p><b>VI.</b> Consider his success in improving his men by imparting information, creating interest, developing talent and arousing ambition.</p> <p><b>VII.</b> Consider his success in applying specialized knowledge in his particular field, whether by his own knowledge of ways and means or through his use of sources of information.</p>	<hr/> <p style="text-align: center;">Effective Even Under Difficult Circumstances      Effective Under Normal Circumstances      Lacks Planning Ability      Inefficient</p> <hr/> <p style="text-align: center;">Exceptionally Co-operative      Co-operative      Not Helpful      Difficult to Handle      Obstructionist</p> <hr/> <p style="text-align: center;">Develops Men of High Calibre      Develops Men Satisfactorily      Neglects To Develop Men      Discourages and Misinforms Men</p> <hr/> <p style="text-align: center;">Expert      Competent      Uninformed      Neglects and Misinterprets the Facts</p>
<p><b>REMARKS:</b> _____                  _____                  _____</p>	<p style="text-align: right;">Total _____                      Final Rating _____</p>

Figure 3. Graphic Rating Scale for Gauging Foremen and Other Executives

Figure 6. Second Appearance of the Graphic Rating Scale. Adapted from *Science and common sense in working with men* (pp. 96-97), by W. D. Scott and M. H. S. Hayes, 1921, Ronald Press Company.



CLASSIFICATION SYMBOLS			<b>GRAPHIC RATING SCALE</b>					Efficiency Rating Form No. 8		
SERVICE	GRADE	CLASS	(SEE INSTRUCTIONS ON REVERSE SIDE OF SHEET)					NON-SUPERVISORY	<input type="checkbox"/>	(CHECK ONE)
								SUPERVISORY	<input type="checkbox"/>	
Name _____			Department _____							
(Surname)			(Given name)		(Initial)					
(Bureau)			(Division)		(Section)		(Subsection)			
ELEMENT NUMBER	SERVICE ELEMENTS	NOTE: MARK ONLY ON ELEMENTS CHECKED IN LEFT-HAND MARGIN					DO NOT USE SPACE BELOW			
<input type="checkbox"/>	1 Consider accuracy; ability to produce work free from error; ability to detect errors.	Highest possible accuracy.	Very careful.	Careful. No more than reasonable time required for revision.	Careless. Time required for revision greatly excessive.	Practically worthless work.				
<input type="checkbox"/>	2 Consider reliability in the execution of assigned tasks; dependability in following instructions; accuracy of any parts of product appraisable in terms of accuracy.	Greatest possible reliability.	Very reliable.	Reliable.	Doubtful reliability.	Unreliable.				
<input type="checkbox"/>	3 Consider neatness and orderliness of work.	Greatest possible neatness and orderliness.	Very neat and orderly.	Neat and orderly.	Disorderly.	Slovenly.				
<input type="checkbox"/>	4 Consider the speed or rapidity with which work is accomplished; the quantity of work produced in a given time; the dispatch with which a task of known difficulty is completed.	Greatest possible rapidity.	Very rapid.	Good speed.	Slow.	Hopelessly slow.				
<input type="checkbox"/>	5 Consider industry; diligence; attentiveness; energy and application to duties; the degree to which the employee really concentrates on the work at hand.	Greatest possible diligence.	Very diligent.	Industrious.	Inattentive to work.	Lazy.				
<input type="checkbox"/>	6 Consider knowledge of work; present knowledge of job and of work related to it; specialized knowledge in his particular field.	Completely informed.	Unusually well informed.	Well informed.	Poorly informed.	Lacking.				
<input type="checkbox"/>	7 Consider judgment; ability to grasp a situation and draw correct conclusions; ability to profit by experience; sense of proportion or relative values; common sense.	Perfect judgment.	Excellent judgment.	Good judgment.	Poor judgment.	Neglects and misinterprets the facts.				
<input type="checkbox"/>	8 Consider success in winning confidence and respect through his personality; courtesy and tact; control of emotions; poise.	Inspiring.	Unusually pleasing.	Pleasing.	Weak.	Repellent.				
<input type="checkbox"/>	9 Consider cooperativeness; ability to work for and with others; readiness to give new ideas and methods a fair trial; desire to observe and conform with the policies of the management.	Greatest possible cooperativeness.	Very cooperative.	Cooperative.	Difficult to handle.	Obstructive.				
<input type="checkbox"/>	10 Consider initiative; resourcefulness; success in doing things in new and better ways and in adapting improved methods to his own work; constructive thinking.	Greatest possible originality.	Very resourceful.	Progressive.	Rarely suggests.	Needs detailed instruction.				
<input type="checkbox"/>	11 Consider execution; ability to pursue to the end difficult investigations or assignments.	Completes assignments in shortest possible time.	Completes assignments in unusually short time.	Completes assignments in a reasonable time.	Slow in completing assignments; or does not complete assignments.	Takes inordinately long and accomplishes little.				
<input type="checkbox"/>	12 Consider organizing ability; success in organizing the work of his section, division, or department; both by delegating authority wisely and by making certain that results are achieved; ability to plan so as to complete tasks on schedule.	Highest possible effectiveness.	Effective under difficult circumstances.	Effective under normal circumstances.	Lacks planning ability.	Inefficient.				
<input type="checkbox"/>	13 Consider leadership; success in winning the cooperation of his subordinates and in welding them into a loyal and effective working unit; decisiveness; energy; self control; tact; courage; fairness in dealing with others.	Most capable and forceful leader possible.	Very capable and forceful leader.	Capable leader.	Fails to command confidence.	Antagonizes subordinates.				
<input type="checkbox"/>	14 Consider success in improving and developing employees by imparting information, developing talent, and arousing ambition; ability to teach; ability to explain matters clearly and comprehensively.	Develops employees of highest possible caliber.	Develops very efficient employees.	Develops competent employees.	Fails to develop employees.	Discourages and misinforms employees.				
<input type="checkbox"/>	15 QUANTITY OF WORK (To be used only where accurate and comprehensive OUTPUT RECORDS are kept.)	Highest possible output.	High output.	Good output.	Low output.	Practically no output.				
On the whole, do you consider the department and attitude of this employee toward his work to be satisfactory? Answer "Yes" or "No"							Total _____			
Rated by: _____ (Rating officer) _____ (Date)			Reviewed by: _____ (Reviewing officer) _____ (Date)				Final rating _____			


Figure 7. Graphic Rating Scale Adopted by U.S. Government. Efficiency Rating Form No. 8 of United States Bureau of Efficiency (1924). Adapted from *Report of the United States Bureau of Efficiency for the period from November 1, 1923 to October 31, 1924* (A foldout between p. 12 and p. 13 without pagination), by United States Bureau of Efficiency, 1924, Government Printing Office



**THE PURDUE RATING SCALE FOR INSTRUCTORS**  
G. C. BRANDENBURG AND H. H. REMMERS

*Note to Instructors:* In order to keep conditions as nearly uniform as possible, it is imperative that no instructions be given to the students. The rating scale should be passed out without comment at the beginning of the period.

*Note to Students:* Following is a list of qualities that, taken together, tend to make any instructor the sort of instructor that he is. Of course, no one is ideal in all of these qualities, but some approach this ideal to a much greater extent than do others. In order to obtain information which may lead to the improvement of instruction, you are asked to rate your instructor on the indicated qualities by making a check (✓) on the line at the point which most nearly describes him with reference to the quality you are considering. For example, under *Interest in Subject* if you think your instructor is not as enthusiastic about his subject as he should be, but is usually more than mildly interested place the check on the scale thus:




Always appears full of his subject.                      Seems mildly interested.                      Subject seems irksome to him.

This rating is to be entirely impersonal. Do not sign your name or make any other mark on the paper which could serve to identify the rater.

Be sure to put your check *on the line* where you think it should be to express your judgment of the instructor.

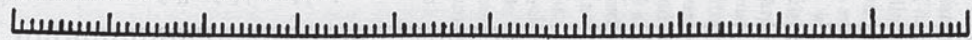
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*Interest in Subject*




Always appears full of his subject.                      Seems mildly interested.                      Subject seems irksome to him.

*Sympathetic Attitude toward Students*



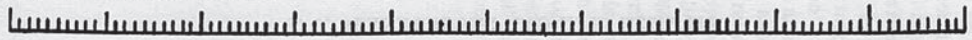
Always courteous and considerate.                      Tries to be considerate but finds it difficult at times.                      Always sarcastic or "hard-boiled."

*Fairness in Grading*



Absolutely fair and impartial to all.                      Shows occasional favoritism.                      Constantly shows partiality.

*Liberal and Progressive Attitude*



Welcomes differences in view point.                      Biased on some things but usually tolerant.                      Entirely intolerant, allows no contradiction.

Figure 9. A Variant of Graphic Rating Scale. (No mention to Scott. Curtailed.). Adapted from "Rating scales for instructors," by G. C. Brandenburg and H. H. Remmers, 1927, *Educational Administration & Supervision*, 13(6), pp. 403-404.

FIGURE 1.—SAMPLE RATING BLANK

Will you please rate the student named below for the traits indicated. Place a dot along the line after each trait, grading the student as finely as you care to. Please give the rating independently without consulting others. The record sheet is to be returned to the secretary's office within three days.

JONES, JOHN Instructor—D  
 Among the members of the average senior class in this student's course and school the student would rank in the

	Lowest 5th	Fourth 5th	Middle 5th, Average	Second 5th	Highest 5th
Common sense					
Energy					
Initiative					
Leadership					
Reliability					
General Ability					

Figure 10. Rating Blank. Adapted from "Evaluation of a method for finely graduated estimates of abilities," by J. B. Miner, 1917, *Journal of Applied Psychology*, 1(2), p. 125.

Please rate the candidate named above for the traits indicated, keeping in mind employment in military service. Give the rating independently without consulting others.

Among the members of this company the candidate would rank in which fifth? Indicate the position in each trait by placing a dot along the line, grading the candidate as finely as you can.

	Lowest 5th	Fourth 5th	Middle 5th, Av	Second 5th	Highest 5th
Judgment.. . . .					
Initiative . . . .					
Aggressiveness . .					
Health . . . . .					
Integrity. . . . .					
Leadership . . . .					

Name the highest rank which you think this candidate has the ability to attain.

State the branch of service for which this candidate seems to be best qualified.

Figure 11. Rating Blank. Adapted from "Estimates of the military value of certain character qualities," by P. S. Achilles and E. M. Achilles, 1917, *Journal of Applied Psychology*, 1(4), p. 313.

## PERSONALITY RATING SCALE

TENTATIVE FORM FOR EXPERIMENT  
The information on this sheet is confidential.

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Name of student \_\_\_\_\_ Name of college \_\_\_\_\_

Selection and guidance of students are based on scholastic records of achievement, health and other factual records. Personality, difficult to evaluate, is of great importance. You will greatly assist in the education of the student named if you will rate him with respect to each question by placing a check mark on the appropriate horizontal line at any point which represents your evaluation of the candidate. It is not necessary to locate it at any of the division points or above a descriptive phrase.

If you have had no opportunity to observe the student with respect to a given characteristic, please place a check mark in the space at the extreme right of the line.

Please return this sheet to \_\_\_\_\_

How does his appearance and manner affect others?	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> </tr> <tr> <td style="text-align: center; font-size: small;">Sought by others</td> <td style="text-align: center; font-size: small;">Well liked by others</td> <td style="text-align: center; font-size: small;">Unnoticed by others</td> <td style="text-align: center; font-size: small;">Tolerated by others</td> <td style="text-align: center; font-size: small;">Avoided by others</td> </tr> </table>	-----	-----	-----	-----	-----	Sought by others	Well liked by others	Unnoticed by others	Tolerated by others	Avoided by others	No opportunity to observe		
-----	-----	-----	-----	-----										
Sought by others	Well liked by others	Unnoticed by others	Tolerated by others	Avoided by others										
Does he need constant prodding or does he go ahead with his work without being told?	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> </tr> <tr> <td style="text-align: center; font-size: x-small;">Needs much prodding in doing ordinary assignments</td> <td style="text-align: center; font-size: x-small;">needs occasional prodding</td> <td style="text-align: center; font-size: x-small;">Does ordinary assignments of his own accord</td> <td style="text-align: center; font-size: x-small;">Completes suggested supplementary work</td> <td style="text-align: center; font-size: x-small;">Seeks and sets for himself additional tasks</td> </tr> </table>	-----	-----	-----	-----	-----	Needs much prodding in doing ordinary assignments	needs occasional prodding	Does ordinary assignments of his own accord	Completes suggested supplementary work	Seeks and sets for himself additional tasks			
-----	-----	-----	-----	-----										
Needs much prodding in doing ordinary assignments	needs occasional prodding	Does ordinary assignments of his own accord	Completes suggested supplementary work	Seeks and sets for himself additional tasks										
Does he get others to do what he wishes?	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> </tr> <tr> <td style="text-align: center; font-size: x-small;">Displays marked ability to lead his fellows; makes things go.</td> <td style="text-align: center; font-size: x-small;">Sometimes leads in important affairs</td> <td style="text-align: center; font-size: x-small;">Sometimes leads in minor affairs</td> <td style="text-align: center; font-size: x-small;">Satisfied to have others take lead</td> <td style="text-align: center; font-size: x-small;">Probably unable to lead his fellows</td> </tr> </table>	-----	-----	-----	-----	-----	Displays marked ability to lead his fellows; makes things go.	Sometimes leads in important affairs	Sometimes leads in minor affairs	Satisfied to have others take lead	Probably unable to lead his fellows			
-----	-----	-----	-----	-----										
Displays marked ability to lead his fellows; makes things go.	Sometimes leads in important affairs	Sometimes leads in minor affairs	Satisfied to have others take lead	Probably unable to lead his fellows										
How does he control his emotions?	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; text-align: center;"> ----- </td> <td style="width: 30%; text-align: center;"> ----- </td> <td style="width: 30%; text-align: center;"> ----- </td> </tr> <tr> <td style="text-align: center; font-size: x-small;">Unusual balance of responsiveness and control</td> <td style="text-align: center; font-size: x-small;">Well balanced</td> <td style="text-align: center; font-size: x-small;">Usually well balanced</td> </tr> </table> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;"> ----- </td> <td style="width: 50%; text-align: center;"> ----- </td> </tr> <tr> <td style="text-align: center; font-size: x-small;">Tends to be over emotional</td> <td style="text-align: center; font-size: x-small;">Too easily moved to anger or fits of depression, etc.</td> </tr> <tr> <td style="text-align: center; font-size: x-small;">Tends to be unresponsive</td> <td style="text-align: center; font-size: x-small;">Unresponsive, apathetic</td> </tr> </table>	-----	-----	-----	Unusual balance of responsiveness and control	Well balanced	Usually well balanced	-----	-----	Tends to be over emotional	Too easily moved to anger or fits of depression, etc.	Tends to be unresponsive	Unresponsive, apathetic	
-----	-----	-----												
Unusual balance of responsiveness and control	Well balanced	Usually well balanced												
-----	-----													
Tends to be over emotional	Too easily moved to anger or fits of depression, etc.													
Tends to be unresponsive	Unresponsive, apathetic													
Has he a program with definite purposes in terms of which he distributes his time and energy?	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> <td style="width: 20%; text-align: center;"> ----- </td> </tr> <tr> <td style="text-align: center; font-size: x-small;">Aimless trifler</td> <td style="text-align: center; font-size: x-small;">Aims just to "get by"</td> <td style="text-align: center; font-size: x-small;">Has vaguely formed objectives</td> <td style="text-align: center; font-size: x-small;">Directs energies effectively with fairly definite program</td> <td style="text-align: center; font-size: x-small;">Engrossed in realizing well formulated objectives</td> </tr> </table>	-----	-----	-----	-----	-----	Aimless trifler	Aims just to "get by"	Has vaguely formed objectives	Directs energies effectively with fairly definite program	Engrossed in realizing well formulated objectives			
-----	-----	-----	-----	-----										
Aimless trifler	Aims just to "get by"	Has vaguely formed objectives	Directs energies effectively with fairly definite program	Engrossed in realizing well formulated objectives										

How well do you know this student? \_\_\_\_\_

---

Signature	Date	Position	Address
Revision of April 23, 1928.		Committee on Personality Measurement, American Council on Education, 26 Jackson Place, Washington, D. C.	

FORM III.

Figure 12. Graphic Rating Scale. Notice the branched item (How does he control his emotions?). Adapted from "American Council on Education Rating Scale: Reliability, Validity, and Use," by F. F. Bradshaw, 1930, *Archives of Psychology*, 119, pp. 36-37.

PROVISIONAL PLAN			
FOR THE			
MEASURE OF MERIT OF TEACHERS			
EDWARD C. ELLIOTT			
The University of Wisconsin			
City (District).....	School.....	Room.....	
Teacher.....	Grade.....	Subject.....	
No. of Pupils.....	Boys.....	Date.....	
	Girls.....		
Special conditions.....			
GENERAL INSTRUCTIONS			
Deduct from possible 10; very slight, 2; slight, 4; marked, 6; very marked, 7; extreme, 8. (Possible 20, 40, 60, 80, or 100, in same proportion.)			
Total efficiency= Total Individual Efficiency plus Total Directed Efficiency.			
Minimum standard for approval; according to the standards and exigencies of the school or school system.			
Individual Efficiency—800 Units	Suggested Values	Deficiencies	Determined Values
<b>I. PHYSICAL EFFICIENCY—80 units</b> (80)			
1. Impressions—general.....	10		
2. Health—general.....	20		
3. Voice.....	20		
4. Habits—personal.....	10		
5. Energy and endurance; power of relaxation.....	20		
PROVISIONAL PLAN—Continued			
Individual Efficiency—800 Units	Suggested Values	Deficiencies	Determined Values
<b>II. MORAL—NATIVE EFFICIENCY—100 units</b> (100)			
1. Self-control.....	20		
2. Optimism—enthusiasm.....	20		
3. Sympathy—tact.....	20		
4. Industry—sense of responsibility.....	10		
5. Adaptability.....	10		
6. Sense of humor.....	10		
7. Judicial mindedness.....	10		
<b>III. ADMINISTRATIVE EFFICIENCY—80 units</b> (80)			
1. Regularity at post of duty.....	10		
2. Initiative; resourcefulness.....	20		
3. Promptness and accuracy.....	10		
4. Executive capacity.....	20		
5. Economy (time, property).....	10		
6. Co-operation (associates and superiors).....	10		
<b>IV. DYNAMIC EFFICIENCY—180 units</b> (180)			
1. Preparation. Including: (a) intellectual capacity; (b) academic education; (c) professional training; (d) command and use of English.....	20		
2. Professional attitudes and interest.....	10		
3. Human nature attitudes and interest (Appreciation of values—physical, intellectual, social, and moral, in child life).....	10		
4. Instructional skill.....	80		
Including:			
a) Definiteness of aim and procedure			
b) Attention and interest of pupils			
c) Formality vs. vitality of instruction			
d) Motor vs. verbal methods			
e) Application of the technique of teaching; organization and presentation of subject-matter; the recitation as an artistic product			
f) Application of the technique of living; extent and quality of participation and contribution of pupils; the recitation as a democratic activity			
g) The tools and machinery of instruction; effective adaptation			
h) Assignment of work			
5. Responsiveness to directions and suggestions.....	20		
6. Governmental and directive skill (discipline).....	40		
<b>V. PROJECTED EFFICIENCY—50 units</b> (50)			
1. Economical oversight of pupils not immediately under instruction.....	10		

Figure 13 (continued on the next page)

PROVISIONAL PLAN—Continued			
Individual Efficiency—800 Units	Suggested Values	Deficiencies	Determined Values
2. Continuing preparation . . . . .	10	.....	.....
(a) Daily; (b) Weekly; (c) Annual			
3. The school program . . . . .	10	.....	.....
4. Increase of professional equipment (professional association, study and reading; travel) . . . . .	20	.....	.....
<b>VI. ACHIEVED EFFICIENCY—250 units</b>	<b>(250)</b>		
1. Respect of pupils and community . . . . .	30	.....	.....
2. Leadership; stimulation of individuals and community . . . . .	30	.....	.....
3. School achievement			
a) Responsiveness of pupils; readiness and accuracy . . . . .	30	.....	.....
b) Illustrative results . . . . .	80	.....	.....
c) Examinations; rate and amount of progress of pupils . . . . .	80	.....	.....
<b>VII. SOCIAL EFFICIENCY—60 units.</b>	<b>(60)</b>		
1. Intra-mural interests . . . . .	30	.....	.....
2. Extra-mural interests			
a) Cultural and ethical . . . . .	10	.....	.....
b) Civic . . . . .	10	.....	.....
c) School—patrons . . . . .	10	.....	.....
<b>Total Individual Efficiency . . . . .</b>	<b>800</b>		

Directed Efficiency—200 Units	Suggested Values	Deficiencies	Determined Values
<b>I. SUPERVISORY EFFICIENCY—200 units</b>	<b>(200)</b>		
1. Constructive criticism . . . . .	40	.....	.....
2. Non-interfering supervision . . . . .	40	.....	.....
3. Community encouragement . . . . .	40	.....	.....
4. Professional confidence . . . . .	40	.....	.....
5. Recognition of individuality . . . . .	40	.....	.....
<b>Total Directed Efficiency . . . . .</b>	<b>200</b>		

SUMMARY		
Determined Individual Efficiency . . . . .	.....	units
Determined Directed Efficiency . . . . .	.....	units
<b>Total Efficiency . . . . .</b>	.....	<b>units</b>

Figure 13. Elliott's Score Card (1914 Version). Adapted from *Methods for measuring teachers' efficiency. Fourteenth yearbook of the National Society for the Study of Education* (pp.78–80), by A. Boyce, 1915, Bloomington, IN: Public School Publishing Company.





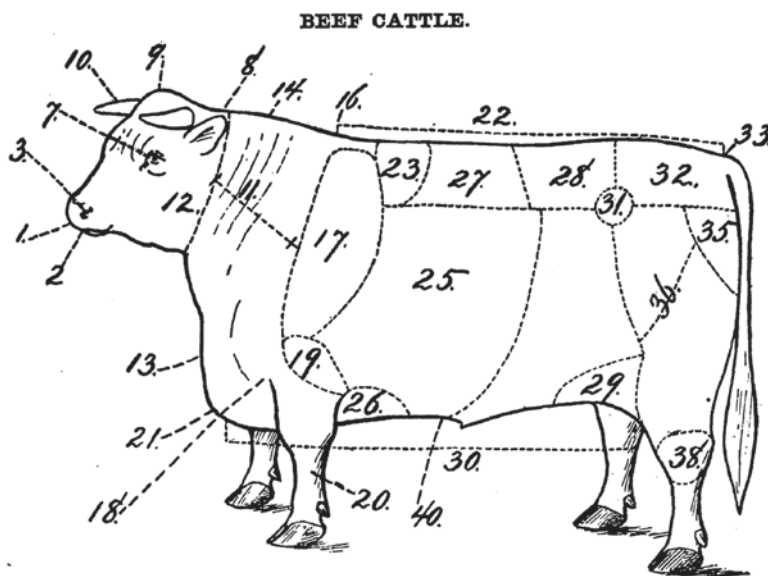


Fig. 2.—Points of beef cattle, side view.

- |             |                            |                        |                        |
|-------------|----------------------------|------------------------|------------------------|
| 1. Muzzle.  | 13. Dewlap.                | 23. Crops.             | 31. Hip, point of hip, |
| 2. Mouth.   | 14. Top of neck, or crest. | 25. Ribs, or barrel.   | hook, or hook bone.    |
| 3. Nostril. | 16. Top of shoulder.       | 26. Fore flank.        | 32. Rump.              |
| 7. Eye.     | 17. Shoulder.              | 27. Back, or chine.    | 33. Tailhead.          |
| 8. Ear.     | 18. Point of shoulder.     | 28. Loin.              | 35. Buttocks.          |
| 9. Poll.    | 19. Arm.                   | 29. Hind flank.        | 36. Thigh.             |
| 10. Horn.   | 20. Shank.                 | 30. Underline, or bot- | 38. Hock.              |
| 11. Neck.   | 21. Brisket.               | tom line.              | 40. Navel.             |
| 12. Throat. | 22. Topline.               |                        |                        |

**College of Agriculture of the University of Minnesota.**

Scale of points.	Perfect score.
<b>General appearance:</b>	
1. Weight, score according to age .....	10
2. Form, topline and underline straight; deep, broad, low set, stylish .....	10
3. Quality, hair fine; skin pliable; bone dense; flesh firm, even, deep, especially in regions of valuable cuts .....	12
4. Condition, good health; vigorous; fat abundant, evenly distributed .....	8
<b>Head and neck:</b>	
5. Muzzle, broad; mouth large; jaw wide; nostrils large .....	1
6. Eyes, large, clear, placid .....	1
7. Face, short; expression quiet .....	1
8. Forehead, broad, full .....	1
9. Ears, size medium; texture fine .....	1
10. Horns, oval; texture fine; size medium .....	1
11. Neck, thick, short; throat clean .....	1
<b>Fore quarters:</b>	
12. Shoulder vein, full .....	2
13. Shoulder, covered with flesh, compact on top, smooth .....	2
14. Brisket, advanced; breast wide .....	1
15. Dewlap, skin not too loose and drooping .....	1
16. Legs, straight, short; arm full; shank fine, smooth .....	2
<b>Body:</b>	
17. Chest, full, deep, wide; girth large; crops full .....	4
18. Ribs, long, arched, thickly fleshed .....	8
19. Back, broad, straight, smooth, even .....	10
20. Loin, thick, broad .....	8
21. Flank, full, even with underline .....	2
<b>Hind quarters:</b>	
22. Hips, smoothly covered; distance apart in proportion with other parts .....	2
23. Rump, long, wide, even; tail head smooth, not patchy .....	2
24. Pin bones, not prominent, far apart .....	1
25. Thighs, full, deep, wide .....	4
26. Twist, deep, plump .....	1
27. Pure, full, indicating fleshiness .....	1
28. Legs, straight, short; shank fine, smooth .....	2
<b>Total .....</b>	<b>100</b>

Figure 15. Score Card in Livestock Science. Adapted from *Score card in stock judging at agricultural colleges* (pp. 40, 45), by G. M. Rommel, 1904, Government Printing Office.

210 PROF. K. PEARSON.—*On the Inheritance of the Mental and Moral Characters*

APPENDIX IB.

DATA PAPER FOR COLLATERAL HEREDITY INVESTIGATIONS.

B. SISTER-SISTER SERIES.  
(Whole, not half sisters.)

No. in whole series.  
(Not to be filled in.)

Please return this Paper to Professor KARL PEARSON, F.R.S., University College, London.

School :

Observer :

Date :

No. in School Series

Place a cross against the class of each sister under as many headings as possible, except under III and VIII. Please read first the General Directions.

	ELDER SISTER.	YOUNGER SISTER.
Name ... ..		
Age ... ..		
District of Home ... ..		

I. PHYSIQUE :

	Very Strong.	Strong.	Normally Healthy.	Rather Delicate.	Very Delicate.	Athletic.	Non-Athletic.
ELDER SISTER ...							
YOUNGER SISTER ...							

II. ABILITY : (a) General Scale.

	Quick Intelligent.	Intelligent.	Slow Intelligent.	Slow.	Slow Dull.	Very Dull.	Inaccurate-Eratic.
ELDER SISTER ...							
YOUNGER SISTER ...							

(b) HANDWRITING :  
(See Back.)

	Very Good.	Good.	Moderate.	Poor.	Bad.	Very Bad.
ELDER SISTER ...						
YOUNGER SISTER ...						

(c) WORK :

	Classics.	Modern Languages.	History.	Mathematics.	Descriptive Science.	Drawing.	Singing, Music.
ELDER SISTER ...	Good at ...						
	Best at ...						
	Likes best						
YOUNGER SISTER ...	Good at ...						
	Best at ...						
	Likes best						

(d) GAMES OR PASTIMES :

	ELDER SISTER.	YOUNGER SISTER.
Likes ...		
Good at ...		

III. HEAD

MEASUREMENTS :

	Length.	Breadth.	Height.	a.	b.	c.	(a), (b), (c), Indices (not to be filled in).
ELDER SISTER ...							
YOUNGER SISTER ...							

IV. HAIR :

	Red.	Fair.	Brown.	Dark.	Jet Black.	Smooth.	Wavy.	Curly.
ELDER SISTER ...								
YOUNGER SISTER ...								

V. EYES :

	Light.	Medium.	Dark.
ELDER SISTER ...			
YOUNGER SISTER ...			

VI. RELATIVE CAPABILITIES : This is only to be filled in in those cases wherein the two sisters fall into the same class.

	Physique, stronger in	More Athletic.	Ability, greater in	Handwriting, better in	Hair, darker in	Eyes, darker in
ELDER SISTER ...						
YOUNGER SISTER ...						

VII. CHARACTER, ETC. :

	Noisy.	Quiet.	Self-conscious.	Unself-conscious.	Self-assertive.	Shy.	Conscientiousness, Keen.	Dull.	Popular.	Unpopular.	Temper. Outok.	Good-natured.	Sullen.
ELDER SISTER ...													
YOUNGER SISTER ...													

VIII. GENERAL REMARKS. Add here any striking features of resemblance or dissimilarity in the sisters.

ELDER SISTER ...	
YOUNGER SISTER ...	

[On the back of the Schedule spaces were arranged for samples of the handwriting.]

Figure 16. Karl Pearson's Questionnaire. Items I and II use rating scales. Adapted from "On the inheritance of the mental and moral characters in man and its comparison with the inheritance of the physical characters," by K. Pearson, 1903, *The Journal of the Anthropological Institute of Great Britain and Ireland*, 33, p. 210.

Unfortunately, my teaching experience is confined to one subject and one class of students, of a much more advanced age than I am seeking to deal with in the present investigation. In students of from eighteen to twenty-two years of age, I have found the scale below to be fairly useful ; a student of that age rarely passes from one class to another ; indeed, I have found it serves fairly well to classify after-success in professional life. Most of my students, however, are students undergoing a technical training with a view to engineering, and thus the subject-matter by which they are classified is closely related to the faculties they have afterwards to exercise professionally. The following is the scale to which I refer :—

1. *Very Dull*.—Capable of holding in their minds only the simplest facts, and incapable of perceiving or reasoning about the relationship between facts.

2. *Slow Dull*.—Capable of perceiving relationship between facts in some few fields with long and continuous effort ; but not generally, or without much external assistance.

3. *Slow*.—Very slow progress generally ; but, with time and continual care, progress will be made.

4. *Slow Intelligent*.—Slow generally, although possibly more rapid in certain fields. Quite sure of knowledge when once acquired.

5. *Intelligent*.—Ready to grasp and capable of perceiving facts in most fields ; capable of good progress without much effort.

6. *Quick Intelligent*.—Very bright and quick in both perception and acquirement, and this not only of customary, but of novel, facts. Ready to reason rightly about things on purely self-initiative.

This is the scale on which I should like to have the opinion of fellow-teachers. There are one or two points, however, which

Figure 17. Karl Pearson's Scale. Adapted from "On a scale of intelligence in children," by K. Pearson, 1898, *Journal of Education*, 20, p. 509.

*Highest.*—Brilliant, distinct, never blotchy.

---

*First Suboctile.*—The image once seen is perfectly clear and bright.

*First Octile.*—I can see my breakfast-table or any equally familiar thing with my mind's eye quite as well in all particulars as I can do if the reality is before me.

*First Quartile.*—Fairly clear; illumination of actual scene is fairly represented. Well defined. Parts do not obtrude themselves, but attention has to be directed to different points in succession to call up the whole.

*Middlemost.*—Fairly clear. Brightness probably at least from one-half to two-thirds of the original. Definition varies very much, one or two objects being much more distinct than the others, but the latter come out clearly if attention be paid to them.

*Last Quartile.*—Dim, certainly not comparable to the actual scene. I have to think separately of the several things on the table to bring them clearly before the mind's eye, and when I think of some things the others fade away in confusion.

*Last Octile.*—Dim and not comparable in brightness to the real scene. Badly defined with blotches of light; very incomplete; very little of one object is seen at one time.

*Last Suboctile.*—I am very rarely able to recall any object whatever with any sort of distinctness. Very occasionally an object or image will recall itself, but even then it is more like a generalised image than an individual one. I seem to be almost destitute of visualising power as under control.

---

*Lowest.*—My powers are zero. To my consciousness there is almost no association of memory with objective visual impressions. I recollect the table, but do not see it.

Figure 18. Galton's Scale for the Vividness of Mental Imagery. Adapted from *Inquiries into human faculty and its development* (p. 93), by F. Galton, 1883, Macmillan and Company.

## THE MUTUAL INFLUENCE OF FEELINGS

BY JOHN A. H. KEITH

THE object of this investigation was to ascertain the mutual influence of simultaneous stimuli that appealed to different senses with regard to the *intensity* of their feeling values. The investigation covers combinations: (1) of colors and active touches, (2) of colors and passive touches, (3) of tones and active touches, (4) of tones and passive touches, (5) of colors and tones.

The basis of appreciation was a numerical scale<sup>1</sup> as follows:

1. Very disagreeable.
2. Disagreeable.
3. Slightly disagreeable.
4. Indifferent.
5. Slightly agreeable.
6. Agreeable.
7. Very agreeable.

<sup>1</sup> Attention may be called to the fact that this paper arranges the conventional seven degrees of feelings in an order opposite to that of the other papers of this volume; it follows still the earlier traditions of our laboratory, while the more recent investigations call very disagreeable 7 and very agreeable 1; the indifference point remains the same. — EDITOR.

Figure 19. Experimental Aesthetics. Adapted from "The mutual influence of feelings," by J. A. H. Keith, 1906, *Harvard Psychological Studies*, 2, p. 141.

**S C A L E,**  
Comparatively shewing the **PARLIAMENTARY MERITS**  
of the most **DISTINGUISHED SPEAKERS**  
In the **HOUSE OF COMMONS OF IRELAND.**  
*Thus marked \* have been since promoted to Judicial Seats.*

**N. B. TWENTY the ultimate** }  
**of Perfection.** }

	Independence	General Knowledge	Political Information	Argument	Language	Temper	Grace	Influence	Honesty	Total
Adderley, Thomas	1	1	1	0	0	2	0	0	0	5
Annelley, Richard	0	3	4	3	3	0	0	0	0	13
Peresford, John	2	12	15	10	10	2	2	0	0	63
Blaquiere, Sir John	3	8	15	10	2	14	0	0	8	66
Bolton, Cornelius	10	9	6	2	2	8	0	1	20	59
Buihe, Gervais-Parker	5	5	10	14	6	0	2	2	5	66
* Bradstreet, Sir Samuel	10	15	12	12	15	7	1	1	15	96
Browne, Hon. James	10	3	2	7	7	3	2	2	7	44
Browne, Hon. Dennis	4	2	2	5	10	0	0	0	7	36
Brownlow, William	23	15	13	10	0	0	0	4	25	131
Burgh, Thomas, of Old Town	3	7	7	12	15	15	15	1	10	87
Burgh, Captain Thomas	0	10	7	7	10	10	0	0	5	53
* Carleton, Huga	8	5	12	16	12	10	3	0	10	76
Cavendish, Sir Henry	20	12	18	10	7	5	0	0	6	78
Clements, Henry-Theophilus	0	2	2	0	0	10	0	0	15	34
Conolly, Thomas	20	0	0	0	0	12	15	20	67	
Conyngham, General	20	5	5	9	9	7	7	1	20	85
Cromie, Sir Michael	6	0	1	3	5	12	10	0	3	40
* Crookshank, Alexander	10	8	10	10	10	10	0	0	8	73
Corry, Isaac	10	15	13	12	16	7	15	2	12	102
Curran, J. P.	0	3	8	8	11	3	0	0	9	45
Daly, Dennis	7	7	12	10	8	3	1	1	0	51
Delvin, Lord	10	1	2	3	3	3	0	0	12	35
Doyle, John	0	0	3	5	6	5	0	0	10	37
Fitzgibbon, John	20	10	15	15	10	0	0	0	10	82
Flood, Henry	18	18	20	20	20	10	11	2	15	139
Flood, Sir Frederick	5	5	5	6	6	3	0	0	7	40
Forbes, John	20	12	10	14	14	14	0	0	18	105
Foster, John	0	20	20	15	15	20	10	10	15	127
Gardiner, Luke	20	18	15	15	15	20	10	20	15	151
Grattan, Henry	20	10	14	14	12	2	0	2	13	87
Green, Godfrey	8	8	8	8	8	8	0	3	59	
Hartley, Travers	18	14	9	6	7	20	3	4	20	101
Hutchinson, J. H.	0	20	20	20	20	5	20	4	2	111
Kearney, James	10	10	0	5	5	0	0	0	11	41
* Kelly, Thomas	20	10	5	10	8	3	0	0	13	69
Langrishe, Sir Hercules	0	15	15	10	10	8	15	0	14	77
Latoche, David	20	8	8	2	1	0	0	5	18	67
Lawless, Sir Nicholas	20	5	5	3	2	0	0	0	13	56
Luttrell, General	10	10	5	10	10	0	3	0	9	57
Mafon, Monck	0	10	15	10	8	10	0	0	2	55
* Meege, Peter	10	5	10	5	5	8	0	0	2	46
Mulgrave, Sir Richard	10	3	3	5	5	3	0	0	7	36
Molyneux, G. W.	5	5	5	5	5	2	5	0	10	37
Montgomery, Cavan	20	3	3	2	2	1	2	0	15	43
Newenham, Sir Edward	20	5	7	5	5	4	1	1	20	68
Ogle, George	10	5	10	5	10	5	0	2	17	74
O'Neill, John	20	5	5	5	8	3	0	3	15	74
O'Hara, Charles	10	10	7	7	7	5	5	0	6	57
Pelham, Thomas	0	10	10	5	5	10	10	20	5	73
Parsons, Lawrence	10	5	3	8	5	10	7	0	10	61
Parrell, Sir John	5	5	5	10	12	10	0	0	8	55
Pery, Sexton	20	18	20	20	20	0	15	0	12	125
Pole, Wesley	18	0	2	6	6	0	2	0	18	52
Pontonby, John	15	5	15	4	0	15	15	3	10	82
Pontonby, George	0	6	8	8	6	4	0	0	8	40
Scott, John	20	12	18	13	10	18	5	2	14	115
Toler, John	0	5	7	10	10	0	0	0	1	33
* Yelverton, Barry	10	10	12	15	12	0	0	5	7	71

Figure 20. Dublin Evening Post of January 24, 1784. Hackett (1928) pointed out this article.

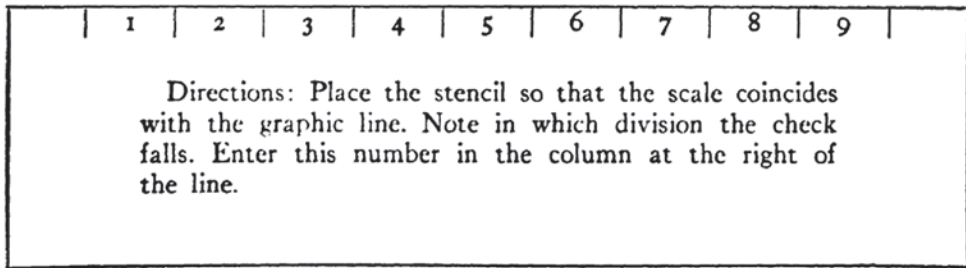


Figure 21. A Stencil that was Used with Graphic Rating Scale to Transform an Original Position into an Integer. Adapted from *Diagnosing personality and conduct* (p. 62), by P. M. Symonds, 1931, Century.

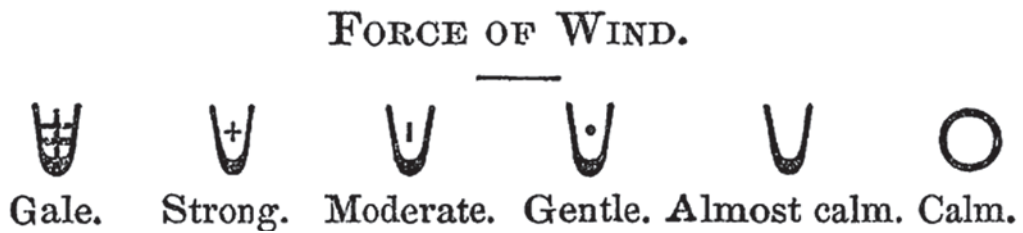


Figure 22. Galton's Symbols to Represent Wind Forces. Adapted from *Meteorographica, or methods of mapping the weather: Illustrated by upwards of 600 printed and lithographed diagrams referring to the weather of a large part of Europe, during the month of December 1861* (Index Map section), by F. Galton, 1863, London: Macmillan.

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適性検査法要領

第 89 圖 圖示的評定尺度による人物  
判定用紙 (第一頁のみ)

**人物判定用紙**  
(生命保険勸誘員候補者ニ面接ノ際用フベキモノ)  
カーネギー工藝研究所人事部案

候補者名 \_\_\_\_\_ 面接日 \_\_\_\_\_  
周旋者名 \_\_\_\_\_ 面接者 \_\_\_\_\_  
コノ候補者トコレ迄ニ面接セシ回数 \_\_\_\_\_  
面接時間總計約 \_\_\_\_\_ 時間 \_\_\_\_\_ 分

候補者ハ part-time 契約, whole-time 契約, 又ハユクユクハ part-time 契約ノ前提トシテノ part-time 契約, ノ何レヲ考ヘテヲル.  
ヤリ方—次ノ質問ハコノ候補者ノ種々ノ點ニツイテノ貴下ノ判断ヲ問フノデアル. 自己ノ意見ヲ記載スル前ニマツ質問ノ右方ノ直線ノ下ニ書カレテアル評語ヲ充分注意シテ讀ムコト. 何レノ點ニツイテモ, 判定ヲ下スニ當ツテハ, コノ面接ノ際ノ印象ノ外本人ノ履歴, 他者ノ推薦等アラユル参考事項ヲ併セ考量スルコトヲ要スル.  
評定ハ直線ノ上ニ適當ナリト思惟スル所ヘ(×)ヲ記ス. 例ヘバ第一問ニ於テ, コノ人間ハ容姿普通ナル點ヨリ少シク下位デアルガ, 然シ“稍ヨクナイ印象ヲ與ヘル”トイフ程デモナイト考ヘタトシタラ, コノ二點間ノ何處カヘ(×)ヲ記セバヨイノデアル.

1. 彼ノ容姿ハ如何ナル印象ヲ與ヘルカ, 特ニ顔ノ表情, 體格, 態度等ニツキ考ヘヨ	極メテヨイ印象ヲ與ヘル	容姿佳	容姿普通	稍ヨクナイ印象ヲ與ヘル	容姿貧弱
2. 舉措ハ如何	垢抜ケガシテイル	快感ヲ與ヘル	普通	醜イ, 見テ氣持ガ悪イ	粗野
3. 音聲ハ如何	非常ニ快感ヲ與ヘル	快感ヲ與ヘル	普通	弱イ	不快
4. 君ノ視線ニ對シチャント見返スカ, デツト貴下ヲ見詰メルカ	デツト見詰メ動搖サセズ	當ニコナラヲ見返ス	不安サツニコナラヲ見ル		視線絶エズ動搖ス

Figure 23. A Graphic Rating Scale in Japanese. Adapted from *Outline of the Aptitude Assessment* (p. 112), by K. Masuda, 1925, Tokyo: Dobunkan. 増田幸一 (1925). 適性検査法要領 同文館 p. 112



**[References]**

- Achilles, P. S., & Achilles, E. M. (1917). Estimates of the military value of certain character qualities. *The Journal of Applied Psychology*, 1(4), 305–316.
- Beebe-Center, J. G. (1932). *The psychology of pleasantness and unpleasantness*. Van Nostrand.
- Boyce, A. (1915). *Methods for measuring teachers' efficiency*. Fourteenth yearbook of the National Society for the Study of Education. Bloomington, IN: Public School Publishing Company.
- Bradshaw, F. F. (1930). American Council on Education Rating Scale: its reliability, validity and use. *Archives of Psychology*, 119.
- Brandenburg, G. C., & Remmers, H. H. (1927). Rating scales for instructors. *Educational Administration & Supervision*, 13(6), 399–406.
- Edwards, A. L., & Kenney, K. C. (1946). A comparison of the Thurstone and Likert techniques of attitude scale construction. *Journal of Applied Psychology*, 30, 72–83.
- Fechner, G. T. (1871). *Zur experimentalen Aesthetik*. Hirzel.
- Freyd, M. (1923). The Graphic Rating Scale. *Journal of Educational Psychology*, 14(2), 83–102.
- Galton, F. (1863). *Meteorographica, or, methods of mapping the weather; Illustrated by upwards of 600 printed and lithographed diagrams referring to the weather of a large part of Europe, during the month of December 1861*. London: Macmillan.
- Galton, F. (1880). Statistics of mental imagery. *Mind*, 5(19), 301–318.
- Galton, F. (1883). *Inquiries into human faculty and its development*. Macmillan and Company.
- Gray, C. T. (1915). A score card for the measurement of handwriting. *Bulletin of the University of Texas*, No. 37.
- Guilford, J. (1936). *Psychometric methods*. New York, McGraw Hill.
- Hackett, J. D. (1928). Rating legislators. *Personnel Journal*, 7, 130–131.
- Hayes, M. H. S., & Patterson, D. G. (1921). Experimental development of the graphic rating method. *Psychological Bulletin*, 18, 98–99.
- Hughes, W. H. (1923). A rating scale for individual capacities, attitudes, and interests. *Journal of Educational Method*, 3(2), 56–65.
- Keith, J. A. H. (1906). The mutual influence of feelings. *Harvard Psychological Studies*, 2, 141–157.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 140, 1–55.
- Likert, R., Roslow, S., & Murphy, G. (1934). A simple and reliable method of scoring the Thurstone attitude scales. *Journal of Social Psychology*, 5, 228–238.
- Masuda, K. (1925). *Outline of Aptitude Assessment*. Tokyo: Dobunkan.  
(増田幸一 (1925). 適性考査法要領 同文館)
- McReynolds, P., & Ludwig, K. (1987). On the history of rating scales. *Personality and Individual Differences*, 8(2), 281–283.
- Miner, J. B. (1917). The evaluation of a method for finely graduated estimates of abilities. *Journal of Applied Psychology*, 1(2), 123–133.
- Paterson, D. G. (1922). The Scott Company graphic rating scale. *The Journal of Personnel Research*, 1, 361–376.
- Pearson, K. (1898). On a scale of intelligence in children. *Journal of Education*, 20, 509–10.
- Pearson, K. (1903). On the inheritance of the mental and moral characters in man, and its comparison with the inheritance of the physical characters. *The Journal of the Anthropological Institute of Great Britain and Ireland*, 33, 179–237.
- Pearson, K. (1906). On the relationship of intelligence to size and shape of head, and to other physical and mental characters. *Biometrika*, 5, 105–146.

- Rommel, G. M. (1904). *Score card in stock judging at agricultural colleges*. Government Printing Office.
- Scott, W. D. (1920). Do you want to know what others think about you? *American Magazine*, 90(5), 44–47, 98, 101–102.
- Scott, W. D., & Hayes, M. H. S. (1921). *Science and common sense in working with men*. Ronald Press Company.
- Scott, W. D., & Clothier, R. C. (1923). *Personnel management: principles, practices, and point of view*. A.W. Shaw Company.
- Symonds, P. M. (1931). *Diagnosing personality and conduct*. Century.
- Titchener, E. B. (1909). The psychophysics of climate. *The American Journal of Psychology*, 20(1), 1–14.
- United States Bureau of Efficiency (1924). *Report of the United States Bureau of efficiency for the period from November 1, 1923 to October 31, 1924*. Government Printing Office.
- Various Members of the Committee on the Classification of Personnel in the Army (1918). How the army uses individual differences in experience. *Psychological Bulletin*, 15(6), 187–206.