

JUDGMENTS OF PERSUASIVENESS

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INTRODUCTORY

The present study represents a two-fold endeavor. In the first place it is an attempt to learn something concerning the variability and consistency of the judgment of interest among different individuals and with the same individual under changed conditions. In the second place it is a preliminary attempt to learn something of practical value concerning the relative strength, permanence and universality of various interests, instincts, and conceptions as a basis of appeal in such practical operations as advertising, salesmanship, etc.

The first problem is of considerable interest for pure psychology. The statistical study of judgments has too long been confined to the comparison of simple sensory stimuli. A psychology which aims to be an account of behavior cannot go far without making a careful study of more complex judgments such as those of appeal and interest. Such a psychology is more interested in performance than in capacity. Psycho-physical measurements have failed to throw much light on the individual's actual performance in competitive life, and this must always be the result of capacity measurements under laboratory conditions. The concrete psychological life depends not on capacity alone, but largely on motive; and a psychology of behavior, as distinguished from a psychology of content (element and attribute), will be interested in performance, in the degree to which motive and capacity sustain each other. Especially will this be true of a psychology which aspires to be concretely serviceable. Such a psychology will find but little use for the introspective method. It will be interested, not in the momentary content of a conscious moment; nor in the descriptive character of

the sensory fragment which may at the moment be the bearer of meaning; nor in the instrument, criterion or vehicle of an act of apprehension, a comparison, a feeling or a choice. It will be most of all interested in the outcome of this moment in the form of behavior, an act, a choice, a judgment, and in the character, reliability, constancy and significance which the outcome of a mental operation bears. Such a psychology must undertake a study of the range, the distribution, the degree of permanence, and the interconnections of such complex judgments as those of preference, conviction, persuasion, satisfaction, amusement, interest, character, resemblance, etc. A merely analytical and introspective psychology is impotent here. What we want to know is the degree to which the individual performance or interest is typical of the average performance or interest of the group; the amount and rate of fluctuation in the individual from day to day and from epoch to epoch, situation to situation; and, in the group, the dependence of these features on the factor of composition. Such an attempt the writer has already reported in a study of judgments of the comic.¹ The present paper, in its first endeavor, attempts to extend the method there developed to the more complex judgments of interest and persuasiveness.

The second purpose of the paper, that of securing information concerning the relative strength of various appeals to interest, attention and response, is justified by purely practical considerations. The Senate Committee has recently attributed the present high cost of living to advertising. Advertising experts estimate that a billion dollars were spent in their industry last year, and that at least three fourths of this amount was wasted,—that is, that the same results in distribution could have been secured at one fourth the cost, if the methods of announcing and soliciting had been more intelligent. Apparently then it is not advertising, so much as bad advertising, perhaps unpsychological advertising, that is to blame for the committee's report. To men who desire to make their copy effective and at the same time economical, the question of the relative strength of various appeals, in-

¹ *PSYCHOL. REVIEW*, Vol. XVII., No. 2.

terests, instincts and effective conceptions is a live one. The writer has repeatedly been asked by such men to state the relative strength of various appeals in the case of the ordinary man,—to say in how far certain interests are universal, to what degree certain general types are pronounced, how they are distributed, how such interests are conditioned by age, sex, occupation, locality, race, etc. The practical man expects the expert psychologist to possess such information and he has the right to expect much more than we at present are able to tell him. The writer and his students have for some time been trying to answer such questions by concrete experimental methods. The results of most of these are being presented where the practical man can reach them, but certain more technical interests impel the presentation of some of these results in a psychological journal.

THE PRESENT PROBLEM

The problem, then, is the measurement of the validity, variability and consistency of judgments directed toward the relative persuasiveness of a series of appeals. In order to eliminate such widely varying factors as habit, association with particular objects, needs, brands, etc., the aim has been to make the appeal abstract. Fifty abstract appeals, each designed to reach a different interest, instinct or line of argument, were written, corresponding for the most part, to the salient points of various widely differing sorts of advertising copy. This series was given the observer along with the following directions:

DIRECTIONS

(Read these directions two times, carefully, before beginning the experiment.)

This is an experiment in the psychology of advertising. Its purpose will be explained after you have finished the series. Each card contains an advertisement of some fictitious article, indicated by a letter-numeral symbol (thus, 3K7). It need make no difference what the article might really be. It may be well to assume that all the cards advertise different brands or makes of the same article,—some ideal, imaginary article, to which any or all of the advertisements might apply.

1. Read all the advertisements through and arrange them in five consecutive piles, in an order of merit,—according to their *persuasiveness*, i. e., according to the degree in which they make you *desire* the article or *convince* you of its merit.

There will thus be five degrees of *persuasiveness*, which might be roughly designated:

1. Most persuasive.
2. Very persuasive.
3. Fairly persuasive.
4. Mildly persuasive.
5. Least persuasive.

Arrange the five piles in a row so that Group 1 is at the top, Group 5 at the bottom, and the three other groups in their respective positions between these extremes.

II. Having done this, turn to the top pile (Group 1) and arrange the advertisements in that group in a strict order of merit,—the strongest in the pile thus getting the first position, the next strongest the second position, and so on.

After the top pile is arranged, treat each of the other groups in the same manner. In this way the whole series of advertisements will have been arranged in an order of merit series with respect to their *persuasiveness*,—with the *most persuasive* at the top and the *least persuasive* at the bottom.

III. Without disturbing your arrangement of the Groups, notify the experimenter that you have completed the series.

The fifty appeals are given in the following list. The cards are here arranged in a final order of merit for a group of forty observers, consisting of twenty men and twenty women. The first pair of figures gives the average value and mean variation for the women, the second pair the same for the men.

1. 1K6,—*Scientific*.—Our 1K6 article is manufactured by approved scientific methods and scientifically tested processes, by technically trained men, working under the constant supervision of experts.

2—9.1, 2—8.4.

2. 1W5,—*Durability*.—Combine utility with durability by using 1W5. It lasts one third longer than the ordinary article. Stands the wear and tear of constant use, combining equal quality with greater permanence and longer service.

1—8.2, 6—8.0.

3. 1F3,—*Sanitary*.—This is the only sanitary 1F3 on the market. Put up in germ-proof, dust-proof, hermetically sealed packages, and made of strictly pure and unadulterated ingredients.

5—7.7, 3—10.5.

4. 2D8,—*Efficiency*.—Actual energy, earning power, is what counts in modern business. The day is past when recognition rested on pull and social influence. 2D8 will increase your efficiency 25 per cent. By no other means can you secure such prompt and sure increase of producing capacity.

7—12.8, 8—13.7.

5. 1T8,—*Time*.—Save the minutes and the hours will save themselves. Time is money. Our latest 1T8 is the biggest time saver on the market. Does in twenty minutes what requires, with other brands, a half an hour.

3—8.6, 14—12.2.

6. 1N6,—*Appetizing*.—Try 1N6. It comes fresh from the field and its appetizing flavor is a treat to the palate. It makes a dainty breakfast, a delightful luncheon and a delicious dessert.

13—8.9, 5—8.8.

7. 2B7,—*Family Affection*.—A final day must come to every man, and no one wants to see his children left dependent on mere accident. You owe a duty of provision and foresight to your family. A 2B7 will guarantee their comfort and security when you are gone.

17-13.5, 1-7.7.

8. 1Z5,—*Value*.—Absolutely superior quality and finer finish. 1Z5 may cost a little more, but it's worth the difference. One trial will convince.

4-7.3, 16-10.1.

9. 2L7,—*Evolution*.—Our latest 2L7 is the result of generations of experience and experiment. After years of trial 2L7 stands distinctly in a class by itself as the final product of a long evolution,—the climax of mechanical genius.

11-10.9, 12-9.1.

10. 2C8,—*Ambition*.—There's always room higher up. Capable leaders are always in demand. Why stay among the incompetent when 2C8 will bring you a better position and increase your salary. The man who uses 2C8 is sure of recognition and rapid promotion.

6-10.9, 18-13.5.

11. 2F6,—*Self Defense*.—Fore-armed is fore-warned. Your life is always threatened by some lurking danger or another. With 2F6 in your home you are always secure and able to protect the rights and person of yourself and of those whose safety is your chief concern.

15-0.7, 10-11.3.

12. 1R4,—*Reputation*.—Established in 1870, we have been for forty years the leading manufacturers of 1R4 in the country. We have the longest and most enviable record of any house, in our line, on the continent.

9-12.8, 21-12.0.

13. 2E9,—*Guaranteed*.—Our well-known trade-mark guarantees quality and satisfaction. All our 2E9 is strictly warranted high grade. Your money refunded if 2E9 does not accomplish all we claim for it.

10-12.7, 20-11.4.

14. 1P5,—*Stimulating*.—1P5 fortifies the body against inroads of toil and disease gives new life and vigor to tired muscles and nerves, and removes unnecessary strain and fatigue.

12-9.6, 41-10.4.

15. 1V3,—*Safety*.—Avoid danger by using the only absolutely safety-built, and accident-proof 1V3. Do not court danger by taking chances. This is the only 1V3 in which you get all of the protection and none of the risk.

26-11.5, 7-10.2.

16. 1E5,—*Popular*.—The name is on all tongues. You will find 1E5 in the ladies dressing room, in the scholar's study, in the nursery, in the kitchens of the humble; in crowded eastern cities and on limitless western plains. Used in millions of homes and everywhere it is on top.

29-13.2, 4-9.9.

17. 2R5,—*Economize*.—A dollar saved is a dollar earned. 2R5 will save you money. Why not cut down expense items and start a bank account. 2R5 will help you do it.

14-8.0, 19-7.3.

18. 1Q3,—*Maternal Love*.—Nothing is too good for baby. 1Q3 comforts and soothes the little chap and makes of babyhood one happy play time. Assures the children's health and enjoyment.

18-13.2, 4-9.9.

19. 1J4,—*Modernity*.—Strictly up to date design, with all the latest improvements. 1J4 is equipped with every advantage and ingenious device known to recent invention.

22—8.8, 13—11.6.

20. 1C3,—*Health*.—As a general tonic 1C3 is unequalled. It nourishes the system, enriches the blood, builds up firm healthy tissue and gives tone and color to the whole body. Prevents grippe and pneumonia.

8—10.9, 30—15.6.

21. 1X9,—*Quality*.—Why keep on wasting money when for the price of the ordinary article you can get our superior 1X9. Goes farther and does the work better than any other.

16—12.5, 22—9.5.

22. 1A7,—*Elegance*.—Nothing contributes so strongly to the luxurious comfort of the modern home as 1A7. Its presence gives dignity and elegance to the whole and creates an atmosphere of daintiness and distinction.

30—10.9, 11—10.3.

23. 1G2,—*Bargain*.—No 1G2 was ever offered before for the money. As good as any others and only two thirds their cost. We are enabled to offer this proposition only by virtue of our mammoth plant and enormous capacity. Why pay more?

28—11.0, 17—12.0.

24. 2Q7,—*Sympathy*.—Kindness is the first law of humanity. Much of the pain and discomfort inflicted on dumb animals could be relieved by using 2Q7. Be humane to your beast. Use 2Q7.

37—15.3, 9—9.9.

25. 2O8,—*Necessary*.—You can not afford to do without 2O8. It is indispensable in your home, in your business, in your recreation. Every man, woman and child needs it constantly.

20—8.2, 27—14.0.

26. 2W8,—*Middlemen*.—Why pay middlemen's profits? Buy direct from the manufacturer and keep the profits yourself. We make 2W8 and ship straight to the consumer.

23—11.7, 26—10.4.

27. 2Z7,—*Courtesy*.—Nothing is more discourteous than an offensive breath. 2Z7 cleanses the system, purifies the blood and sweetens the breath.

27—10.1, 25—12.0.

28. 2T9,—*Remarkable Growth*.—The superior quality of 2T9 is demonstrated by the rapid development of our business.

Total Capital, 1890,— \$15,273.00.

" " 1895,— 85,896.00.

" " 1900,— 240,142.00.

" " 1905,— 703,279.00.

" " 1910,—3,875,639.00.

19—16.3, 36—11.5.

29. 1S6,—*Amusement*.—Don't look bored! Buy 1S6. The most side-splitting, mirth-provoking novelty ever devised. Amuses old and young. Affords fun and laughter from morning till night.

34—10.7, 23—10.6.

30. 2X4,—*Hospitality*.—Don't be content with envying the successful hostess when you can secure the same keen pleasure for yourself. The homes equipped with 2X4 are known far and wide for their generous comfort and open hospitality.

24—8.0, 34—11.5.

31. 2Y9,—*Youth*.—The fountain of eternal youth has never been discovered, but it has been demonstrated beyond a doubt that 2Y9 restores youthful vigor, quickens the step and gives new life to both mind and body.

24—8.9, 34—13.1.

32. 2V7,—*Hunting*.—Just the thing for the fishing and hunting trip. Ensures a lively spirit in the field and solid comfort in the camp. No vacation outfit is complete without 2V7.

31—12.1, 28—11.6.

33. 1O9,—*Social Standing*.—The use of 1O9 is the stamp of the gentleman. It is always found where social standards are high, and is the favorite of men and women of discriminating taste and culture.

38—9.0, 24—12.6.

34. 2S8,—*Enormous*.—We have the largest establishment engaged in the production of 2S8 in the United States.

Capital, \$12,000,000,000.

Factories or branch establishments in every prominent city in the country.

25—14.6, 38—11.4.

35. 1Y2,—*Cheap*.—Buy 1Y2. Costs just one half the price of its competitors. Why spend two days' wages when one day's work will bring our high class article to your home?

32—10.1, 33—9.6.

36. 2J9,—*Get the Genuine*.—Avoid substitutes. Many may pattern after us but none can equal us. As a matter of fact 2J9 has many imitators, but there is only one standard, genuine article. Ask for 2J9.

21—12.0, 48—9.4.

37. 2P6,—*Progress*.—Don't be a dead one. Use 2P6 and be up to date. It is an essential part of every progressive modern establishment.

40—11.7, 29—12.3.

38. 2A3,—*Sale*.—We are closing out our large stock of 2A3 at a great sacrifice, to make way for next-year's goods. For the next ten days 2A3 will be sold for less than cost. Come early. Don't miss this rare opportunity.

41—11.7, 31—11.7.

39. 2M5,—*Excel*.—Don't be a wall flower. Use 2M5 and you will be the envy of all your friends. It gives that look of superiority which every one recognizes and respects but which few possess.

36—11.7, 42—13.0.

40. 2K4,—*Civic Pride*.—We appeal to your civic pride. 2K4 is made in your own city, by local workmen and backed by strictly home capital. Encourage home industry. Use 2K4.

33—15.0, 45—10.3.

41. 1H9,—*Patriotism*.—Our 1H9 product is made for American consumers, of strictly American grown materials, by an American firm, employing exclusively American labor and American capital.

35—15.6, 43—10.3.

42. 2G4,—*Union Made*.—We stand for organized labor. 2G4 is a strictly union-made product, built by union labor, of union raised material, and sold exclusively by all union dealers.

49—14.6, 32—11.6.

43. 1M8,—*Recommendation*.—Here's what the world famous tenor of the Metropolitan Opera House says of 1M9.

"I have used your product constantly and have continued to derive great benefit from it."—(Signed) Enrico Caruso.

46—14.0, 37—14.5.

44. 1D8,—*Nobby*.—Our 1D8 products are made by our smartest designers, especially for those who love nobby and dressy styles. Exclusive patterns and dashing cuts, unequalled in snap and color.

48—7.3, 35—10.3.

45. 1B5,—*Style*.—Our new 1B5, is fresh from the center of fashion, representing the latest creation of accepted artists of style, in exclusive designs and dressy patterns, chic and strictly *a la mode*.

47—5.8, 40—7.5.

46. 1L7,—*Royalty*.—1L7 will be found in most of the houses of European royalty. We are commissioned by official warrant to supply 1L7 to his Excellency, the Emperor of Germany.

50—8.5, 39—12.1.

47. 2N7,—*Admiration*.—Do you desire the admiration of those you meet? Use 2N7 and you will be the constant center of attraction to adoring and envious eyes. No jewels or marvels of costuming can add so much to your appearance as 2N7.

43—9.4, 47—11.5.

48. 2H8,—*Imported*.—All 2H8 products are strictly imported and foreign stamped. 2H8 comes straight from European makers and is superior quality is thereby guaranteed.

45—10.0, 46—9.8.

49. 1U4,—*Beauty*.—Are you as pretty as you might be? No one wants to be homely. The continued use of 1U4 removes the undesirable blemish, beautifies the complexion, renders the form attractive and gives charm to the figure.

42—8.9, 50—9.9.

50. 2U3,—*Personality*.—Every one desires to be attractive to the opposite sex. 2U3 will give you distinctive presence and engaging personality which is irresistible in its appeal.

44—10.9, 49—10.2.

The appeals of the foregoing series were typewritten on separate slips of uniform size. Each card bore a single word or pair of words, designed to emphasize the specific character and direction of the appeal, to reinforce the suggestion or argument offered by the text itself, and insure so far as possible, the same attitude in all the observers in the presence of the respective appeals. By employing such copy the following results are secured:

1. Each appeal tends to be single and uncomplicated by other interests.

2. Each is divorced from reactions to any article or brand as such.

3. The elimination of cuts and the use of the same general style and expression lends homogeneity to the group.

4. A wide range of specialized isolated appeals is secured.

As a result of these conditions, the variations and tendencies disclosed by a study of the judgments may be supposed to depend chiefly on the constancy and universality of the interests themselves and on the characteristics of the judgment of such a subjective thing as *interest* or *persuasiveness*. The results will then be chiefly of interest from the point of view of judgment statistics. So far as practical application is concerned, these results can only be said to point the way toward a more definite study of the variation of interest with the variation of the concrete object or commodity in the interest of which the appeal is made. Obviously the arguments which might tend to make a piece of jewelry desirable in the mind of a prospective customer might not be effectively used in the advertising of soap on the one hand or of insurance policies on the other. For each commodity there is probably a more or less definite and distinct set of appeals which is generally efficient. From the practical point of view it is important that each of these general types of commodity be investigated in its own right. Such studies are already in progress, and the results so far obtained have been compared with the actual keyed results of the appeals when they have appeared before the public. It is exceedingly interesting to know that the three such studies already made by the writer of the measurements of persuasiveness, according to the above described introspective laboratory method, have tallied closely with the pulling power of the separate compositions when they are rated according to the keyed results, thus testifying to the validity of the method and to its usefulness for practical purposes. A fuller account of these experiments is to appear in a forthcoming book on *The Principles of Appeal and Response*.

Certain sources of error in such an experiment are at once obvious.

1. It is difficult to keep out of even these abstract appeals some suggestion of special reference. Thus the appeal to *appetite* will inevitably suggest food; some *health* appeals are strikingly medicinal in tone; and doubtless in most cases

there is a more or less pronounced tendency to think of one article rather than another.

2. There is a certain feeling of self consciousness and reserve in submitting honestly to such an experiment, a tendency to place low certain appeals which really bulk large outside of the laboratory, or a tendency towards ideal arrangement strongly suggestive of the inclination to give learned responses in association tests.

Of these two sources of error, it may be said that neither affects in any undesirable way, the character of the experiment as a study of judgment. From the practical point of view only the second error is of importance. And that the danger here is minimal is attested by the fact that the results of such tests are verified by the keyed results. The observers used were thirty women, mostly juniors in Barnard College, taking their second year's work in psychology, and twenty men in Columbia College of corresponding age and class. Twenty of the women made two arrangements, one month apart, without having meanwhile seen the cards. The other ten women and the twenty men made but one arrangement. No time limit was given. Each observer was allowed to work over the material until a satisfactory order had been secured.

Comparison of the two trials of the group of twenty women will thus throw light on the permanence of such judgments and on the consistency of different individuals. Comparison of this group with the group of ten women will show how far the average judgments of such an experiment are typical of the results to be expected from observers of approximately the same class. Comparison of the group of men with the women will reveal such sex differences in these traits as may be present. Separate study of each group will show the degree of variability introduced by the personal equations of the various observers, the general relationships of individual judgments to group averages, etc. The array of figures yielded by such an experiment is a veritable mine of suggestions and material. The chief coefficients of correlation for the present experiment are brought together in the following table.

TABLE I
COEFFICIENTS OF CORRELATION

$$r = 1 - \frac{6\Sigma(d^2)}{n(n^2 - 1)}$$

	Final Average Positions		P.E.
1	20 women with 20 men, one trial.....	+ .624	.06
2	10 women with 20 men, one trial.....	+ .598	.06
3	20 women with 10 women, one trial.....	+ .610	.06
4	20 women, first and second trials.....	+ .903	.02
5	Av. r of girls, first and second trials.....	+ .677	.05
6	Median r of girls, first and second trials.....	+ .719	.05
7	Av. r of 20 girls with average of group.....	+ .432	.08
8	Median r of 20 girls with average of group.....	+ .480	.07
9	Av. of 20 men with average of group.....	+ .588	.06
10	Median of 20 men with average of group.....	+ .610	.06
11	r between agreement with group av. and personal consistency of 20 women.....	+ .285	.12
12	r of final pos. of 50 cards by the method of av. with method of median, 20 women, first trial.....	+ .947	.02
13	r of M.V.'s for the 50 cards.....	+ .743	.04
14	20 women, first and second trials.....	+ .743	.04
15	20 women and 10 women.....	+ .310	.08
16	20 women and 20 men.....	+ .130	.13
17	Av. M.V. of 20 women, first trial.....	10.8 places.	
18	Av. M.V. of 20 women, second trial.....	10.6 places.	
19	Av. M.V. of 10 women, first trial.....	10.5 places.	
20	Av. M.V. of 20 men, first trial.....	10.9 places.	

TABLE II

Average M.V.'s of	Best 10	Middle 10	Poorest 10
20 women (1st).....	10.10	11.18	10.07
20 women (2d).....	9.76	11.93	9.59
10 women.....	9.37	10.58	8.77
Av. women.....	9.74	11.23	9.47
20 men.....	9.84	12.96	10.79
Grand average.....	9.76	11.44	9.80

ANALYSIS OF THE JUDGMENTS

Coefficients 1, 2 and 3 (Table I.) show the degree to which the final average order of the 50 appeals as judged by one group of observers correlates with the order of the same series according to the average judgments of each of the other two groups. The three coefficients are strikingly equal, being .62, .60 and .61, for 20 women with 20 men, 10 women with 20 men, and 20 women with 10 women. It seems safe to conclude that a coefficient of about + .60 is a fair measure of the likelihood that the results from one group will coincide or confirm the

TABLE III
INDIVIDUAL COEFFICIENTS

Observers	Women		Men
	<i>r</i> with Group Average	<i>r</i> First and Second	<i>r</i> with Group Average
1	+.660	+.808	+.743
2	+.626	.713	.730
3	+.620	.756	.680
4	+.620	.739	.677
5	+.575	.743	.676
6	+.552	.781	.675
7	+.530	.654	.660
8	+.520	.780	.656
9	+.512	.526	.640
10	+.510	.600	.617
11	+.451	.591	.600
12	+.439	.893	.572
13	+.430	.725	.525
14	+.358	.127	.524
15	+.355	.874	.513
16	+.347	.681	.510
17	+.241	.553	.467
18	+.216	.529	.460
19	+.214	.763	.422
20	-.130	.712	.400
Average.	+.432	+.677	+.588
Median.	+.480	+.719	+.610
<i>r</i> = +.285			

results from another. No sex difference seems to be present, so far as final average rating of the appeals is concerned. The group of 20 women correlate equally well with a group of 20 men and with another group of women while the men correlate about as high with the one group of women as with other.

As compared with this rather low correlation, the two successive trials, a month apart, made by the group of 20 women, yield a high coefficient. Correlating the final average positions of the 50 cards in the two trials gives +.90 (no. 4). This indicates that the average judgment of a given group is rather a stable and significant thing, and is characteristic of that group over a considerable period of time. For single individuals, however, the coefficients are variable, the personal consistency coefficients of the group of 20 ranging for the most part from +.53 to +.89, with one case as low as +.13. This is however the only case that is below +.53. The average

is $+ .68$ and the median $+ .72$. The coefficient for the same individuals' personal consistency thus stands about midway between that of the consistency of a group average and the agreement of the two diverse groups. (See coefficients 4, 5, 6.)

Another set of measurements of interest is found in the figures which show the approximation of the individual's judgments to the average judgment of his group. Coefficients 7, 8, 9, 10 give these figures for the two groups of 20, and Table III. gives the figure for each individual in both groups. The coefficients for the women range between $- .13$ and $+ .66$ thus giving a total range of $+ .79$, with the average at $+ .48$. For the men the coefficients cover a much narrower range, varying between $+ .40$ and $+ .74$, thus a total range of only $34.$, a range only 43 per cent. as large as that of the women. The average for men is $+ .59$, the median $+ .61$ being thus about 25 per cent. higher than the same for women. Only 4 women exceed the median for men, while all but 4 men exceed the median for women.

Both of these facts, that of higher correlation and that of narrower range, point in the same direction—viz., toward the greater homogeneity of the group of men. The high coefficients indicate that any one man selected at random will be a better example of the characteristics of his group than will a similarly selected woman of her group. And the narrow range again indicates the tendency of the men, not only to depart but slightly from the type but also to depart in approximately equal degrees from it. Whether these facts point to a greater general variability of women as compared with men, or only to the particular composition of the two groups taking part in this experiment one can not say. But the present method seems to indicate a concrete and interesting way of studying this much disputed question of the relative variability of the sexes, in what may be called the higher mental processes.

A question that has frequently been raised in such studies is that concerning what might be called general judicial capacity. Does the individual whose personal consistency is greatest show any closer approximation to the average of

his group than does the individual whose personal consistency is low? The writer has already presented data on this point¹ indicating that the probability of such general capacity is low. The present study points in the same direction. The correlation between personal consistency and approximation to group average (see Table I.) is only $+ .29$ with a P.E. $.12$. It seems fair to conclude that such general judicial capacity, when it does show itself, is either accidental or due to the quality of the material used.²

The averages of the M.V.'s for the 50 appeals as arranged by the separate groups are strikingly constant, being 10.8, and 10.6, 10.5, and 10.9 places for the 20 women, 10 women and 20 men respectively. That is to say, when the total number of possible positions is 50, the average M.V. is 10, or about one fifth the total range. This would mean, as the writer has previously shown in detail,³ that only about four degrees of persuasiveness can be given on which the judgment of the group as conditioned by the probable error, would agree. The result here clearly justifies the conclusion reached in the previous study.

In Table I. (coefficients 18, 19, 20) are given the correlations between the magnitudes of the M.V.'s for the separate appeals as judged by the different groups. These figures show how far there is identity in the appeals over which the various individuals of the separate groups differ. Thus for the two trials of the group of 20 women, this coefficient is $+ .74$, showing that the group disagree over the same cards in both trials, and indicating the permanence of the factors on which the M.V. depends, *i. e.*, the specific individual differences. This point is of course farther shown by the high personal consistency coefficients.

But correlating the group of 20 women with the group of 10 women gives a coefficient of only $+ .31$ indicating that the agreements and differences are not common to the two

¹ See 'Judgments of the Comic.' *PSYCHOL. REVIEW*, March, 1911, pp. 132-156.

² See Wells, 'On the Variability of Individual Judgments.'—*Essays Psychological and Philosophical in Honor of Wm. James*, pp. 511-549.

³ See 'Judgments of the Comic.'

groups. Comparing the 20 women with the 20 men shows an even lower correlation of only $+.13$. This means that the women on the whole tend to disagree over one set of appeals and that these are not the same appeals as those over which the men disagree. Just what the difference between the two sets is will be shown later.

A final point in the study of these records or judgments is the question of closeness of agreement at the top of the list, among the preferences, as compared with that at the bottom of the series, among the dislikes. The evidence here, as presented in Table III., is suggestive. Women seem to agree more closely on their dislikes (M.V. 9.4) than on their preferences (M.V. 9.7), but the difference is not large. It is probably reliable and genuine, however, since the relation holds in all three experiments with women. The men, on the other hand, agree more closely on their preferences (M.V. 9.8 as against 10.8 for dislikes) and the difference is considerable. The averages of men and women show no difference whatever, being 9.76 and 9.80. There seems to be a real sex difference here, which, expressed in general terms would be, that men resemble each other more closely in their preferences, while women are more alike with respect to their aversions. This fact throws some light on the previous finding that there is low correlation between the magnitude of the M.V.'s for the particular cards when the variabilities of the women's judgments are compared with those judgments passed by the men.

APPLICATIONS

Turning now from the study of the judgments themselves and examining the appeals on which the various judgments are passed, a mass of interesting information results. These results, from the point of view of the applied psychologist, merit discussion in detail. In the present paper, however, we must limit ourselves to giving the various tables of measures and briefly summarizing their meaning.

Table IV. gives a statement of the relative persuasiveness of the different appeals for men and women,—their average values and positions. In this table the various cards which

TABLE IV
RELATIVE PERSUASIVENESS FOR MEN AND WOMEN

Appeal	No.	40 Final		20 Women		20 Men	
		Av.	Pos.	Av.	Pos.	Av.	Pos.
Health	3	4.0	1	5.0	2	3.0	1
Cleanliness	1	4.0	2	5.0	3	3.0	2
Scientific	2	6.5	3	6.5	5	7.0	5
Time saved	1	8.5	4	3.0	1	14.0	10
Appetizing	1	9.0	5	13.0	8	5.0	3
Efficiency	3	9.3	6	5.3	4	13.3	9
Safety	4	10.5	7	15.7	11	5.2	4
Durability	2	11.5	8	8.5	6	14.0	11
Quality	2	14.5	9½	10.0	7	19.0	13
Modernity	2	14.5	9½	16.5	12	12.5	8
Family affection	4	15.2	11	21.8	15	8.7	6
Reputation	5	21.1	12	18.4	13	23.8	15
Guarantee	2	21.2	13	14.5	9	28.0	19
Sympathy	1	23.0	14	37.0	23	9.0	7
Medicinal	3	25.0	15	15.0	10	35.0	22
Imitation	3	25.5	16	30.0	19	21.0	14
Elegance	2	26.0	17	34.0	22	19.5	12
Courtesy	1	26.0	18	27.0	17	25.0	16
Economy	5	26.4	19	27.6	18	25.2	17
Affirmation	2	29.0	20	30.0	20	28.0	20
Sport	2	29.0	21	32.5	21	25.5	18
Hospitality	1	29.0	22	24.0	16	34.0	21
Substitutes	1	34.5	23	21.0	14	48.0	28
Clean feeling	4	41.0	24	40.5	24	41.5	25
Nobby	2	42.5	25	47.5	28	37.5	23
Recommendation	2	43.0	26	48.0	29	38.0	24
Social superiority	4	44.0	27	41.2	25	47.0	27
Imported	1	45.5	28	45.0	27	46.0	26
Beauty	3	45.8	29	43.0	26	48.7	29

might be classed under one general heading, such as health, reputation, economy, etc., have been grouped and their average taken as representing the most probable values, of this type of appeal. The second column in the table gives, for each general type, the number of actual cards averaged to give the result found in the table. Since this number varies from 1 to 5, the reliability of the various measures is not uniform.

Columns 3 and 4 give the final averages and positions for the combined groups of 20 men and 20 women. The values range from 4 to 45.8, these numbers indicating the average positions in the list of 50 possible places. The group of appeals, as a whole, falls into three rather sharply defined sections, the series breaking at values 15.2 and at 29.0 at which

points there are wide gaps, which contrast with the gradual transitions of value within the groups. And these sections, moreover, correspond to qualitatively different groups of appeals.

In the first group, with values ranging from 4.0 to 15.2 fall the appeals to health, cleanliness, scientific construction, economy of time, appetite, increase of efficiency, safety, durability, quality, modernity, and family affection. The general characteristic of these appeals is that they are strictly relevant in tone, describe the article precisely or point out some specific value, quality or 'selling point' which it possesses.

In the second group, with values ranging from 21.0 to 29.0, fall the appeals based on the general reputation, guarantee or assertion of the manufacturer, and on a set of semi-irrelevant and more or less social feelings and interests, such as sympathy for others (not family), courtesy, imitation, elegance, hospitality, sport, cheapness, etc. The characteristic of these appeals is that they do not relevantly describe the article but try to connect it with some specific instinct or effective conception. And these appeals are distinctly less personal, more social, than those of the first group.

In the third section, with values ranging (with one exception) from 41.0 to 45.8, fall the rather vague appeals to avoid substitutes, to civic pride and clan-feeling, social superiority, recommendation, the ideals of fashion, foreign origin and finally the beauty appeal. The chief characteristic of this group seems to be that while, as in the second group the statement is semi-irrelevant or incidental, the feeling appealed to is indeterminate and general.

The only considerable sex differences, cases in which the difference in position is say five places or over, appear in the appeals entitled appetite, safety, 'nobby,' family affection, sympathy, elegance and recommendation, which are placed higher by the men; and on time saved, guarantee, medicinal, substitutes, efficiency, durability, quality and hospitality which are placed higher by the women.

Table V. gives the ten appeals whose M.V. for women is only 9 places or less in both trials, and Table VI. the 7 on

TABLE V

APPEALS WHOSE M.V. FOR WOMEN IS ONLY 9.0 PLACES OR LESS, FOR BOTH TRIALS

Cards	Appeal	M.V.	
		Women	Men
1B	Style	5.8	7.5
1D	Nobby	7.3	10.3
1F	Sanitary	7.7	10.5
1N	Appetizing	8.9	8.8
1O	Social standing	9.0	12.6
1T	Time saved	8.6	12.2
1V	Safety	8.9	9.9
1W	Durability	8.2	8.0
2O	Necessity	8.2	14.0
2R	Economy	8.0	7.3
Averages		8.0	10.1

TABLE VI

APPEALS WHOSE M.V. FOR MEN IS ONLY 9.0 PLACES OR LESS

Card	Appeal	M.V.	
		Women	Men
1B	Style	5.8	7.5
1K	Scientific	9.1	8.4
1N	Appetite	8.9	8.8
1W	Durability	8.2	8.0
2B	Family affection	13.5	7.7
2L	Evolution	10.9	9.0
2R	Economy	8.0	7.3
Averages		9.2	8.1

which the M.V. for men is 9 places or less. These are the appeals on which the numbers of the respective groups agree closely. These appeals are about the same for both sexes. Both tables give the M.V.'s for both men and women for each card. While the final average M.V. for the 50 appeals is the same for women and men, there is considerable difference in the comparative averages of the cards included in these two tables. The men's M.V. (10.1) for cards on which the women agree is greater than the M.V. (8.0) of the women and also greater than the M.V. (8.1) of the men themselves on the cards where their own agreement is close (9.0 or less). The same holds for the women. Their M.V. (9.2) for cards where men agree most closely is greater than the M.V. (8.1) of the men on these cards and also greater than their own M.V.

(8.0) on cards over which they themselves agree closely (9.0 or under).

Whereas the agreements of the two groups (men and women) fall on much the same appeals, the great disagreements fall on different cards. Table VII. shows the cards on which

TABLE VII

APPEALS WHOSE M.V. FOR WOMEN IS OVER 12 PLACES IN BOTH TRIALS

Cards	Appeal	M.V.	
		Women	Men
1E	Popular.....	13.2	9.9
1H	Patriotism.....	15.6	10.3
1M	Caruso.....	14.0	14.5
1V	Reputation.....	12.8	12.0
2B	Family affection.....	13.5	7.7
2D	Efficiency.....	12.8	13.7
2E	Guarantee.....	12.7	11.4
2G	Union made.....	14.6	11.6
2K	Civic pride.....	15.0	10.3
2Q	Sympathy.....	15.3	9.9
2S.	Enormous.....	14.6	11.4
2T	Growth.....	16.3	11.5
Averages		14.2	11.1

TABLE VIII

APPEALS WHOSE M.V. FOR MEN IS OVER 12 PLACES

Cards	Appeal	M.V.	
		Women	Men
1C	Health.....	10.9	15.6
1L	Royalty.....	8.5	12.1
1M	Recommendation.....	14.0	14.5
1O	Social standing.....	9.0	12.6
1T	Time saved.....	8.6	12.2
2C	Ambition.....	10.9	13.5
2D	Efficiency.....	12.8	13.7
2M	Excel.....	11.7	13.0
2O	Necessary.....	8.2	14.0
2P	Progress.....	11.7	12.3
2F	Youth.....	8.9	13.1
Average		10.4	13.3

the M.V. for women is 12 places or over in both trials, and Table VIII. the same for men. Both tables give the M.V.'s for each card for both sexes. The disagreement of women fall on appeals to rather general *social* feelings,—patriotism,

popularity, family provision, civic pride, sympathy, union made, recommendation, reputation, etc.—feelings and impulses the absence of which would make social solidarity impossible. On these appeals the men agree (M.V. equals 11.1) much more closely than the women (M.V. 14.2).

The men however disagree over more *personal* appeals, such as efficiency, ambition, economy of time, health, social standing, progressiveness, etc., with an average M.V. of 13.3. But here the women agree more closely, M.V. 10.4. Here again women differ less (10.4) than men (13.3) on men's 'disagreement cards' and much less than on their own 'disagreement cards' (14.2). Men differ (11.1) less than women (14.2) on women's 'disagreement cards' and also less than they do on their own agreements (13.3).

The group of men and the group of women are thus seen to be homogeneous, but the basis of this homogeneity in the two groups is not the same. The men tend to be homogeneous on the basis of social, solidarity appeals, the women on the basis of personal appeals. The greatest individual differences among the men, that is to say, are on the *personal* appeals, the greatest differences among the women on the *social* appeals. Here again is an interesting suggestion, but whether it bears in the direction of selection and sex experience, or toward the temporary motives which operate in such an experiment, cannot be known at this point.

Turn now from the M.V.'s of the separate groups and consider the cases in which the final average judgments of the two groups (men and women) agree closely (within 5 places or less). Table IX. gives the 15 appeals in which this is the case, the + sign indicating that the card was placed higher by the men. These cards fall sharply into two groups, —A, a group of eight which both men and women place high, in the upper third of the range, varying from 1 to 15 with median at 6.5, and B, a group of seven, falling for the most part in the lower third, all but two (25 and 26) being beyond 30 for both men and women, and the median being at 46.0. Which is to say, just as the M.V.'s of a given group tend, in such an order of merit experiment, to be smaller at the

top and bottom of the series than in the middle range, so these two groups agree closely on the strongest and weakest appeals.

TABLE IX

CARDS SHOWING A DIFFERENCE OF ONLY 5 PLACES OR LESS IN THE FINAL ORDERS FOR MEN AND WOMEN. MEN HIGHER = +

Card	Av. Pos.	Appeal	
1K	1	Scientific.	
1W	2	Durability.	
1F	3	Sanity.....	+
2D	4	Efficiency.	
2L	9	Evolution.	
2R	14	Economy.	
2F	11	Safety.....	+
1Q	15	Child love.....	+
2W	25	Middlemen.	
2Z	26	Courtesy.....	+
2V	31	Hunting.....	+
2N	46	Admiration.	
2H	47	Imported.	
2A	49	Personality.	
2Y	50	Youth.	

TABLE X

CARDS SHOWING A DIFFERENCE OF 15 OR MORE PLACES IN THE FINAL ORDERS FOR MEN AND WOMEN. MEN HIGHER = +

Card	Av. Pos.	Appeal	
1C	20	Health.	
1P	27	Stimulating.	
2B	6	Family affection.....	+
2T	28	Growth.	
2J	36	Genuine.	
1V	16	Safety.....	+
1E	17	Popular.....	+
1A	21	Elegance.....	+
2Q	23	Sympathy.....	+
2G	41	Union made.....	+
22 =		Median.	

Do the two groups then differ considerably on their estimates of the cards which tend to fall into the central range as shown by the average judgment of both groups? Table X. shows the ten cards on which this difference is 15 places or more. The median of these cards is at 22 ± 7.5 , which means that these cards occupy the middle section of the range.

Just as the repeated judgments of the same individual, and the judgments of the individuals of a group, are more variable in the middle of the scale, so we find that the large differences in the final order for the two groups fall in the middle section.

Column four of Table X. indicates by the + sign the appeal for the "15 or more" cards placed higher by the men than by the women, and by the absence of any mark, the cards placed correspondingly higher by women. We have already seen (Table VIII.) that the men agree most closely on appeals to interests making for social solidarity. The present table shows that the men not only *agree more closely* on these appeals than do the women, but agree also in *placing them higher* in the scale of persuasiveness.

SUMMARY

By way of summary we may say briefly:

1. The judgment of persuasiveness lends itself to concrete measurement and shows certain characteristic constancies and tendencies from individual to individual and from group to group.

2. Such measurements tally with the actual keyed results of the appeals when used as advertising copy.

3. The final orders of strength of appeal as judged by various random groups of observers, correlate with each other with a quite constant coefficient of + .60.

4. The median coefficient indicating the personal consistency of an individual stands about midway between the consistency of a group average and the agreement of two diverse groups.

5. Men correlate with their group average about 25 per cent. more closely than women.

6. The range of variability in the above coefficient is for men only 43 per cent. as large as for women.

7. The correlation between personal consistency and approximation to group average, or what may be called the measure of general judicial capacity, is in such an experiment low, $r = .29$, with P.E. = .12.

8. The average M.V. for all four groups is in this, as in most order of merit experiments in which the judgment is based on general impression, about one fifth the total possible number of positions.

9. A sex difference shows itself in the experiment with respect to the appeals concerning which group judgments agree or disagree. Men agree more closely in their preferences while women are more alike in their dislikes.

10. Generally speaking, the most persuasive appeals are reported to be those presenting strictly relevant descriptions, specific values, qualities or 'selling points.' Next come appeals to specific interests, instincts, feelings and effective conceptions, and finally appeals of a general, incidental or semi-irrelevant kind.

11. Women as a group are more homogeneous when judging the strength of *personal* appeals, but show considerable individual differences in judging appeals made to the instincts or impulses underlying *social* solidarity.

12. Men tend to reverse this relation, being homogeneous where women differ and disagreeing most where women agree.