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THE CLASS EXPERIMENT IN PSYCHOLOGY WITH ADVERTISEMENTS AS MATERIALS.

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What has come to be known as the "class experiment" is proving to be invaluable in the teaching of psychology. The general method has been admirably described in this Journal by Professor Seashore,¹ with whose views concerning it the writer finds himself in hearty accord. It involves, as Professor Seashore has pointed out, three important points: (1) that each student in the class shall take responsible part, as observer, in the experiment; (2) that the work, unlike that of the "demonstration experiment," shall be sufficiently intensive to be vital in the training of the student; and (3) that each step in the experiment, as well as the results, shall be explained and interpreted in the interests of training in observation.

Above all else, the class experiment forces reaction on the part of every student. It demands careful observation and description and the employment of varied methods of dealing with the data of observation. If skillfully used it should serve to arouse interest, and stimulate to serious work students who otherwise would remain passive recipients of psychological information. As a rule the technique of the experiment should be in the hands of the teacher, and it should be the task of each member of the class to observe, record and interpret certain psychological phenomena for the study of which especially favorable conditions are provided by the experiment.

¹Seashore, C. E., "The Class Experiment," *Journal of Educational Psychology*, 1910, 1: 25-30.

For a number of years the writer has used class experiments, with increasing success, in his introductory courses in psychology, and it is his conviction that a profitable series of experiments may be arranged to supplement lectures or recitations with the expenditure of not more than one dollar per student.

Among the ideally inexpensive and highly satisfactory materials which have been used for class experiments are advertisements. Initial experiments were made with half-page magazine advertisements. Subsequently full-page advertisements were selected from magazines and a set of five (or ten)² was prepared for each student. At present our supply is obtained from electro-plates in the Harvard Laboratory. Frequently it is possible to buy for a few dollars a hundred copies of a back number of a popular magazine which contains scores of full-page advertisements that are likely to prove useful for psychological purposes. The necessary cost of providing a set of five or ten is not over ten cents per student.³

The writer's purpose in using advertisements with classes in psychology is three-fold. First, to interest students in mental events, and to aid them in observing them. Second, to develop their powers of introspective observation and to teach them to describe accurately and adequately. Third, to give each individual training in the methods of treating data statistically, and of interpreting and presenting them to readers.

Perhaps somewhere in this list should have been included the purpose of revealing certain of the practical relations of the science of psychology to life, for appeals to the practical will arouse and stir to self-developing effort students who otherwise would not discover either psychology or themselves. But it is important that the teacher emphasize the fact that the experiments are not intended primarily to demonstrate or measure the merit of advertisements.⁴

²A set of five is likely to prove more satisfactory than a set of ten, because of the time requirements of the experiments.

³The writer will gladly supply, at the rate of \$3 per hundred to teachers desiring them, the set of five advertisements which he now employs.

⁴The value of psychological tests for the estimation of the merit of advertisements has been profitably discussed in a recent monograph which should prove of service alike to advertisers and to psychologists. (Strong, E. K., "The Relative Merits of Advertisements." *Archives of Psychology*, 1911, No. 17.)

The experiments with advertisements which have been employed numbered six.⁵ They may be made in class provided a space of at least two square feet on a desk or table is available for each student. The time required is ten to thirty minutes, dependent upon the number of advertisements in the set and the nature of the experiment.

Experiment 1. General Impression Value of Advertisements.

A set of five (or ten) advertisements, numbered at the top from 1 to 5 is delivered in an envelope to each member of the class. Directions are then given to arrange the advertisements in order of diminishing excellence on the basis of a hasty examination of the set, such as one might make in glancing over the pages of a magazine. The procedure should consist in selecting first the advertisement adjudged the best and placing it at the left side of the desk; in selecting second the one adjudged the poorest and placing it at the right side of the desk. Next the second best should be selected and properly placed. Then the second poorest, and so on until the complete set of five, or more has been arranged.

This much having been accomplished, a note-book record of the method, and its results should be made. This may be done by indicating in a vertical column, as in the accompanying table 1, the advertisement (by number), with its place. Briefly and pointedly, the psychological reasons for the given arrangement should be written in the note-book. This should constitute an introspective report of the impression made by each advertisement, and among other things, it should make clear to a reader why a particular order was chosen.

For this experiment the writer has frequently used a set of ten full-page advertisements from the July, 1909, number of the Century Magazine. Each advertisement was trimmed after removal from the magazine and numbered at the top of the page. Ten different articles were advertised, each by the use

⁵Certain of these experiments have been described by the writer in his "Introduction to Psychology." New York: Henry Holt & Co., 1911, pp. 170, 187.

of an illustration and text. The list by number, name, and page in magazine follows:

- No. 1. Clicquot Ginger Ale, p. 73.
- No. 2. Mott's Plumbing, p. 41.
- No. 3. American Telephone, p. 39.
- No. 4. Remington Typewriter, p. 65.
- No. 5. Swift's Ham and Bacon, p. 75.
- No. 6. Shawknit Socks, p. 57.
- No. 7. Gold Medal Flour, p. 2.
- No. 8. Ericsson Engine, p. 33.
- No. 9. Eastman Kodak, p. 51.
- No. 10. Winton Six Automobile, p. 61.

TABLE 1.—Arrangement of Set of Ten Advertisements, According to General Impression Value, Made by Miss C.

Place	Advertisements.	Comments
1 (Best)	No. 2.	An effective advertisement; not overdone. Gives information without intrusion of superfluous matter. This advertisement makes by far the strongest appeal to me, and is, I think, the only one of the ten that might influence me to buy.
2	No. 5.	Ingenuous advertisement, with no apparent attempt to mislead. The picture makes so vivid an impression that were I marketing I should remember the basket of hams—but probably should forget they were <i>Swift's</i> .
3	No. 9	Picture suggests out-of-door pleasures; awakens agreeable associations, and might incline me to think a kodak would be a nice thing to have.
4	No. 1.	Picture of bird or of any animal, except rat or mouse, usually excites my interest. Looking at the eagle, I see what is advertised.
5	No. 6	Appeals to my liking for comfortable footwear. "Shawknit," however, conveys to my mind no ideas, and the reading of advertisements not being a very exciting entertainment, I should not, ordinarily, look far enough to learn that "Shawknit" means wonderful socks.
6	No. 8.	No special merit, beyond large print and a testimonial (perhaps spurious) from a satisfied customer.
7	No. 10.	Takes too long to reach the point. Before I discover that "Winton Six" is the automobile to buy, I am weary with the history of artificial lighting.
8	No. 3.	Style is inappropriate. Literature, or an account of the nervous system, not called for in a telephone advertisement. Whole thing reflects on one's intelligence and good taste, while it is too obvious that the purpose of the advertisement is to sell the commodity rather than to give accurate information to a prospective purchaser.
9	No. 7.	I have a strong aversion to the use in this way of pictures of men or women. I see no very logical or necessary connection between the faces of women and a brand of flour.
10	No. 4.	The woman obstructs my view of the machine. Advertisement claims too much; I don't believe this is the <i>only</i> typewriter worthy the name.



Clicquot (Pronounced CLICK-O) Club Ginger Ale

For thirsty folk in hot weather there is no beverage so satisfying, refreshing and cooling as Ginger Ale. *Clicquot Club Ginger Ale* is the one that can be depended upon as being perfectly pure and absolutely free of all preservatives. A healthful, delicious drink. Spicy and snappy in flavor and not too sweet. With just enough sparkle to be beneficial and stimulating to the appetite.

IT IS NON-ASTRINGENT AND KEEPS IN ANY CLIMATE

We also make

Birch Beer Sarsaparilla Blood Orange Root Beer Lemon Soda
all of "Clicquot" quality

CLICQUOT CLUB CO.

Millis, Mass., U.S.A.

FIG. 1 - Advertisement No. 1 - One of the poorest of the ten.

Of this set of ten advertisements No. 1, adjudged by most individuals one of the poorest of all, and No. 9 adjudged one of the best, are reproduced in the accompanying figures 1 and 2.

The amount of time required for experiment 1 may be reduced by more than one-half by the employment of five instead of ten advertisements; and the task may be somewhat simplified by the selection of advertisements of the same article. A set of five full-page advertisements of Ingersoll watches, of which two are reproduced in figures 3 and 4, has been used with satisfactory results by the writer.⁹ It is difficult to make up such sets from a single number of a magazine, but frequently advertising firms are able and willing to provide them.

At the end of the class-room exercise of experiment 1 records of the arrangements of the advertisements on a single sheet of paper, bearing the student's name, should be collected and handed to some member of the class for statistical study and report to the class.

In working up the results of the experiment the student may be asked to determine:

(1) The distribution of judgments (occurrences of each advertisement in each place). This is given in table 2 for a class of 20 students and the set of 10 advertisements already described.

(2) The average or class arrangement of the advertisements, as contrasted with the several individual arrangements. There are many ways of determining the average arrangement or order, and the student either may be left to his own devices or given a method, with the suggestion that he improve upon it. Table 2 presents the results obtained by a method of weighting. By this method the first place is given a value of 10; the second place, of 9; the third, of 8, and so on. The value attached to a given advertisement by the class is obtained by getting the sum of the value of each place by the number of occurrences in that place. For example, Adv. No. 9, table 2, was given first place by ten members of a class of 20. Since the weight of this place is 10, the value given to the advertisement by its occurrence in the first place is 10×10 , or 100. It

⁹This set also will be supplied to teachers at the rate of \$3 per hundred.



THEY ALL REMEMBERED THE
KODAK

A vacation *without* a Kodak is a vacation wasted. A Kodak doubles the value of every journey and adds to the pleasure, present and future, of every outing. Take a Kodak with you. *Kodaks*, \$5.00 to \$100; *Brownie Cameras*, (*They work like Kodaks*), \$1.00 to \$12.00.

EASTMAN KODAK COMPANY,

ROCHESTER, N. Y., *The Kodak City.*

*Catalogues free at the
 dealers or by mail.*

FIG. 2.—Advertisement No. 9. One of the best of the ten.

was given second place by 1 individual; therefore an additional value of 1×9 , or 9. Similarly it was placed in third place by four members of the class ($4 \times 8 = 32$). In the fourth place by 3 ($3 \times 7 = 21$); in the fifth place by 2 ($2 \times 6 = 12$). The sum of these several products of the weight of a given place by the number of occurrences in the place is 174. Had the advertisement been given first place by every member of the class, its value would have been 200. Had it been given last place (tenth) by every member, it would have been 10.

TABLE 2.—*Distribution of Judgments for a Class of Twenty (ten men and ten women) in Experiment 1, General Impression Value. The table gives the number of occurrences of each advertisement in each of the ten places, and the value of each as determined by the method of weighting described on page 6.*

Place	1	2	3	4	5	6	7	8	9	10	Value.
Weight	10	9	8	7	6	5	4	3	2	1	
Adv. No. 1	0	0	1	2	2	1	6	4	3	1	
Value	0	0	8	14	12	5	24	12	6	1	82
Adv. No. 2	4	7	2	0	2	2	2	0	1	0	
Value	40	63	16	0	12	10	8	0	2	0	151
Adv. No. 3	1	2	1	3	0	5	3	2	2	1	
Value	10	18	8	21	0	25	12	6	4	1	105
Adv. No. 4	2	1	4	2	8	1	0	0	0	2	
Value	20	9	32	14	48	5	0	0	0	2	130
Adv. No. 5	0	3	2	2	0	6	0	4	2	1	
Value	0	27	16	14	0	30	0	12	4	1	104
Adv. No. 6	2	0	1	1	4	0	1	4	5	2	
Value	20	0	8	7	24	0	4	12	10	2	87
Adv. No. 7	0	4	2	4	1	3	1	1	2	2	
Value	0	36	16	28	6	15	4	3	4	2	114
Adv. No. 8	1	1	1	2	0	1	1	1	2	10	
Value	10	9	8	14	0	5	4	3	4	10	67
Adv. No. 9	10	1	4	3	2	0	0	0	0	0	
Value	100	9	32	21	12	0	0	0	0	0	174
Adv. No. 10	0	1	2	1	1	1	6	4	3	1	
Value	0	9	16	7	6	5	24	12	6	1	86

CLASS, OR AVERAGE, ORDER OR ARRANGEMENT, FROM TABLE 2.

Place.	Adv.	Value.	Place.	Adv.	Value.
1	No. 9	174	6	No. 5	104
2	No. 2	151	7	No. 6	87
3	No. 4	130	8	No. 10	86
4	No. 7	114	9	No. 1	82
5	No. 3	105	10	No. 8	67

(3) The number of departures of the several individual arrangements from the class, or average, arrangement. This may be obtained by comparing each individual arrangement with the average arrangement, noting and taking the sum of the points of disagreement. From table 1 it appears that Miss C. arranged the ten advertisements, according to impression value, from best to poorest as follows: Nos. 2-5-9-1-6-8-10-3-7-4. The average or class order as it is given at the bottom of table 2 reads: Nos. 9-2-4-7-3-5-6-10-1-8. In no instance does Miss C.'s judgment agree with the average. Whereas she placed No. 2 first, the class placed it second. Her judgment may therefore be said to differ from the average by 1 point. She placed No. 5 second, and the class placed it sixth. The departure from the average is 4 points. Comparison of the ten individual judgments with the ten average values gives as the total number of departures from the class order, in the case of Miss C., 34. Another member of the class diverged from the average by only 12 points.

(4) The above statistical results may later, and by another member of the class, be correlated with the introspective reports and with the psychological traits of the members of the class.

Throughout the work it is essential that the instructor emphasize the importance of attending to the psychological phenomena exhibited rather than to the so-called objective values of the advertisements. For the purpose of the experiment is to facilitate introspection, not to reveal or measure the relative values of a number of advertisements.

The writer is in the habit of following experiment 1, either immediately or at intervals determined by the progress of the lectures, by five other experiments which provide for a detailed psychological analysis of the consciousness of the advertisements. Experiment 1, on the general impression value of the materials, serves as a starting point and provides material of interest for comparison with the results of experiments 2 to 6.

The remaining experiments may be described briefly, for they demand procedures very similar to that of experiment 1.



For a Man's Christmas

Is there anything that so delights a man's heart as a fine watch—one that permits him to speak the time with authority? It is dainty and beautiful, as a gift should be, and besides is his most personal and useful possession. For years he carries it wherever he goes. But his satisfaction depends upon it being an exact timer. Among watches there is one, though moderate priced, which has come to be conspicuous for its close timing—accurate as only high-priced watches have been.

The Superior Watch

Ingersoll-Trenton

7 and 15 Jewel Models

\$5 to \$15

No handsomer watch has ever been made. It will keep time for a generation. Your home jeweler can sell you an Ingersoll-Trenton and he will stand behind it. It is sold at our advertised prices by all who handle it and our price ticket is on each watch.

Go to your own jeweler's and examine it before buying any watch. If, by chance, he hasn't the I-T, we will gladly send the name of one nearby who has. Our booklet, "How to Judge a Watch," is the best explanation of a watch ever written, and is free on request. The \$5 Ingersoll-Trenton has 7 genuine jewels and is in a solid nickel case.

The \$15 Ingersoll Trenton has 15 jewels and is in a 25 year guaranteed gold-filled case of the highest quality.

Equally accurate models in a variety of I-T cases at \$7, \$8, \$9, \$10 and \$12.

Robt. H. Ingersoll and Bro.

85 Frankel Bldg., New York

FIG. 3.—Advertisement No. 3 in Ingersoll Watch set. One of the best in the set.

They deal respectively with attention, perception, feeling, judgment, and memory values.

Experiment 2. Attention Value of Advertisements. The class is directed to arrange the advertisements according to their power to "catch and hold attention." Here, again, introspection should be insisted upon, and it should be made to reveal the essential facts of attention. The advertisements should serve merely as means to this psychological end.

Statistically the results of the attention experiment may be dealt with as were those of the impression experiment. Class discussions of the introspections are very important aids.

Experiment 3. Perception Value of Advertisements. In this experiment the class is required to arrange the set in accordance with degree of definiteness, completeness and intelligibility of the consciousness induced by each advertisement. Many advertisements of high attention value possess low perception value because they do not induce definite, practically complete and intelligible perceptions. They leave in consciousness a more or less unintelligible fragment of information.

Experiment 4. Feeling Value of Advertisements. The materials are to be considered from the point of view of agreeableness. That advertisement which produces the most pleasing effect belongs first; that which produces the least pleasing effect belongs last.

Experiment 5. Judgment Value of Advertisements. The arrangement, in this exercise, should be made in accordance with the convincingness of the materials. Illustration, text and general make-up should be carefully considered. The introspection of the reasoning (thought) processes is especially important.

Experiment 6. Memory Value of Advertisements. Completeness and accuracy of recall constitute the basis of arrangement. The experiment, in satisfactory performance, demands a somewhat different procedure from that of the others. The writer has followed the method of permitting an interval of one or two weeks to elapse, without consideration of the advertisements by the class, and of then setting, as a class-exercise, the task of writing all that can be recalled, within the lim-

"Let Me See One of Those Ingersoll-Trenton Watches!"

JEWELERS throughout the United States are having this said to them across their show-cases by thousands of discriminating watch-buyers, who demand the best watch for the least money. "INGERSOLL-TRENTON!" is the watch-word of the hour.

The *feel* of a fine watch in your pocket is like the feel of a good coat on your back—it gives you a sort of manful confidence in yourself, and when you take your watch out "to see what time it is" it gives others confidence in you, for a good watch is a badge of thrift. It also indicates the personal trait of punctuality, which goes far to compel business success.

The Ingersoll-Trenton watch is a dignified, dependable and durable timepiece. It is finely jeweled and beautifully cased. It is a credit to the person who carries it, being a watch of quality and worth.

And yet you do not have to "give up" a lot of money to own an Ingersoll-Trenton. \$5, \$7 and \$9, in nickel, 10-year gold-filled or 20-year gold-filled cases—*these are the prices* at which we are able to offer these strictly high-grade watches, timed to the minute and fit for the most critical user. No other watchmaker can sell a watch of similar quality at these prices.

Therefore, go to your jeweler and say to him the words at the top of this page.

We also make *Ingersoll* models at \$1, \$1.50 and \$2 12,000 of them are sold daily, "as time goes on."

Our illustrated fact-book about watchmaking will open your eyes and save you money. Send for a copy. Read it yourself and loan it to your neighbors. It is a good book to have and read and lend.

ROBT. H. INGERSOLL & BRO., 880 Frankel Building
New York

A WATCH THAT IS BETTER THAN ITS ADVERTISING

"I have carried my Ingersoll-Trenton one year. It keeps better time than your advertisement said it would. It is absolutely the best watch I have ever seen."

R. T. Chappell,
Kaufman,
Texas.



You can get an Ingersoll Trenton in any one of 1,000 leading jewelry shops throughout the United States.

RESOLVED

That it isn't necessary for me to pay a big price for an accurate watch when I can get an accurate Ingersoll-Trenton for five, seven or nine dollars.

FIG. 4.—Advertisement No. 2 in the Ingersoll Watch set. One of the poorest in the set.

ited time specified, concerning four aspects of each advertisement.

In this exercise each advertisement is designated, in turn, by the instructor, by its number and a key word. For instance, No. 1, ale; No. 2, plumbing; No. 3, telephone. The directions given are: Recall as accurately and completely as you can, and record the following groups of facts concerning the advertisements.

(1) The exact name of goods and firm. (Time limited to 1 minute.)

(2) Address or source of information or supply. (Time limited to 1 minute.)

(3) Chief points of illustration. (Time limited to 2 minutes.)

(4) Chief points of text. (Time limited to 2 minutes.)

Out of class, the collected results may be evaluated by a member of the class and the rank of each advertisement for the individual, as well as for the class, determined.

Any or all of the detailed analysis experiments, Nos. 2 to 6, may be made either by the method described on page 3, or by the method of systematic comparison now to be described. The latter method is recommended especially for experiment 4, feeling value.

For the method of systematic comparison each student should be provided with a record blank like that which appears, filled in, in table 3.⁷ The instructor should briefly explain the experiment by stating that he will, in turn, display each advertisement with each other for an interval of five seconds, at the same time asking the members of the class to decide which one of each pair is the more agreeable, and to record their judgments immediately on the record sheet.

The experimental procedure consists in displaying conspicuously each advertisement, as a "standard," with each of the others as "compared" advertisement. For the judgments which are recorded in the upper half of the blank the "standard" should always be placed on the right of the observer;

⁷These blanks will be supplied to teachers who desire them at the rate of 50 cents per hundred. Orders should state whether the blanks are to be used with sets of five or of ten advertisements, since both five and ten-place blanks are available.

for those of the second half of the blank, it should be on the left. Beginning with No. 1 as the "standard," the instructor should expose it to view for five seconds (not longer) beside No. 2, as the "compared" advertisement, at the same time asking "Is No. 1 more agreeable or less agreeable than No. 2?"

The judgment "more agreeable" may be conveniently indicated in the table by a plus sign (+); the judgment "less agreeable," by a minus sign (-).

In like manner, and in rapid succession, No. 1 should be displayed with each of the other advertisements, then No. 2 should be substituted for No. 1, as the "standard," and displayed in turn with each of the others.

After the upper half of the record sheet has been filled in, it should be hidden from view by being folded under the lower half, and the experiment should be continued with the position of the "standard" changed from the right of the observer to the left. All other conditions of the experiment should remain unchanged.

Table 3 shows the form of the record sheet and it also presents a typical series of judgments. In this experiment Subject A, of table 3, judged No. 1 when compared with No. 2 as the less agreeable (-); when compared with No. 3, as the more agreeable (+), and so on.

At the conclusion of the experiments the record sheets may be collected and delivered to a member of the class for statistical study and report. Each member of the class should write a full introspective report of the experiment. In order that these reports may be fairly detailed and accurate, it is necessary to limit the number of objects to be compared to five or less. A set of ten advertisements, or other objects, requires too large a number of judgments.

The feeling value of an advertisement is measured, in this experiment, by the number of cases in which it is judged to be the more agreeable. Thus, in the series of comparisons recorded in table 3, each advertisement appears 36 times as a member of a pair, and there are, consequently, 36 judgments concerning its agreeableness. Subject A gave the maximum number of favorable judgments (36) in the case of advertisement No. 2, and the minimum number (0) in the case of advertisement No. 6.

TABLE 3.—*Judgments Obtained by the Comparison of Each of Ten Advertisements with Every Other, with Respect to Agreeableness (Feeling Value). The Resulting Order of Agreeableness Appears at the Bottom of the Table.*

Experiments with Advertisements. Name—Subject A (Woman). Date—October 20, 1911. Topic—Feeling Value of Advertisement—
 "STANDARD" ADVERTISEMENT ON RIGHT OF OBSERVER.

No. of Adv.	1	2	3	4	5	6	7	8	9	10	Totals (+)	Sums of Totals
1.....	/	-	+	+	-	+	-	+	-	+	5	10
2.....	+	/	+	+	+	+	+	+	+	+	9	18
3.....	-	-	/	-	-	+	-	+	-	+	3	6
4.....	-	-	+	/	-	+	-	+	-	+	4	8
5.....	+	-	+	+	/	+	+	+	-	+	7	14
6.....	-	-	-	-	-	/	-	-	-	-	0	0
7.....	+	-	+	+	-	+	/	+	-	+	6	12
8.....	-	-	-	-	-	+	-	/	-	-	1	2
9.....	+	-	+	+	+	+	+	+	/	+	8	16
10.....	-	-	-	-	-	+	-	+	-	/	2	4
Totals (-)	5	9	3	4	7	0	6	1	8	2		90

"STANDARD" ADVERTISEMENT ON LEFT OF OBSERVER.

No. of Adv.	1	2	3	4	5	6	7	8	9	10	Totals (+)	Sums of Totals
1.....	/	-	+	+	-	+	-	+	-	+	5	10
2.....	+	/	+	+	+	+	+	+	+	+	9	18
3.....	-	-	/	+	-	+	-	+	-	+	4	6
4.....	-	-	+	/	-	+	-	+	-	+	4	6
5.....	+	-	+	+	/	+	+	+	-	+	7	15
6.....	-	-	-	-	-	/	-	-	-	-	0	0
7.....	+	-	+	+	-	+	/	+	-	+	6	12
8.....	-	-	-	-	-	+	-	/	-	-	1	2
9.....	+	-	+	+	-	+	+	+	/	+	7	15
10.....	-	-	+	+	-	+	-	+	-	/	4	6
Totals (-)	5	9	2	2	8	0	6	1	8	2		90

GENERAL RESULTS.

No. of Advertisement.....	1	2	3	4	5	6	7	8	9	10
No. of Judg. in favor.....	20	36	12	14	29	0	24	4	31	10
Order of merit.....	5	1	7	6	3	10	4	9	2	8

Following the table appears the number of judgments in favor of each advertisement, and the arrangement of the set of advertisements in order of diminishing feeling value for Subject A.

The employment of the systematic comparison method in experiment 4 has the advantage of introducing novelty of procedure, of yielding results which are likely to be more reliable than those obtained by means of the "better-worse method" described on page 3, and of permitting comparison of the results of the two methods, in case the instructor finds opportunity to repeat the experiment.

Upon the completion of the six experiments and the filing of the reports by those members of the class selected to make special study of the materials, the instructor may assign to some student the task of determining from the several special reports, the class or average order of the advertisements which results from the combining of the arrangements of experiments 2 to 6. This is readily done by adding the values given to each advertisement in the five experiments. Finally, the class order as obtained in the first, or general impression value, experiment should be compared with the order yielded by the detailed study of the set of advertisements made in experiments 2 to 6.

Throughout these, and similar class experiments, it is necessary that the instructor insist upon faithful introspection, allow much time for the presentation and discussion of introspective reports, and constantly make use of opportunities to illustrate the facts and laws of mental life. The instructor necessarily is a more important factor in the success of such experiments than is the advertisement.

It has been the writer's purpose in this paper to describe briefly certain experimental procedures in class work, not to present the results of the experiments which he has made with his classes. The opportunity is accepted, however, to present the general statistical result of the "impression value" and "detailed analysis" experiments as carried out with three classes, with the same materials and practically identical procedures. The agreement in the three arrangements as given in tables 4 and 5 is marked.

TABLE 4.—*Order of Excellence of Set of Ten Advertisements as Given by the General Impression Value Experiment for Three Classes.*

Class 1. 7 Women. 13 Men.		Class 2. 10 Women. 10 Men.		Class 3. 15 Women. 10 Men.	
Advertisement.	Value.	Advertisement.	Value.	Advertisement.	Value.
No. 4	151	No. 9	174	No. 9	201
" 2	147	" 2	151	" 4	181
" 7	146	" 4	130	" 2	178
" 9	138	" 7	114	" 7	168
" 5	125	" 3	105	" 5	154
" 3	118	" 5	104	" 3	152
" 1	93	" 6	87	" 1	110
" 10	71	" 10	86	" 10	109
" 6	59	" 1	82	" 6	73
" 8	52	" 8	67	" 8	49

TABLE 5.—*Order of Excellence of Set of Ten Advertisements as Given by the Averaging of the Arrangements Secured in the Experiments on Attention, Perception, Feeling, Judgment and Memory for the Three Classes of Table 4. The Data of Tables 4 and 5 Are Strictly Comparable.*

Class 1. 7 Women. 13 Men.		Class 2. 10 Women. 10 Men.		Class 3. 15 Women. 10 Men.	
Advertisement.	Value.	Advertisement.	Value.	Advertisement.	Value.
No. 4	170	No. 9	158	No. 9	220
" 9	149	" 4	135	" 7	186
" 7	148+	" 2	132	" 2	179
" 2	148	" 7	118	" 4	176
" 5	135	" 5	117	" 5	171
" 3	124	" 3	113	" 3	142
" 1	83	" 10	98	" 10	126
" 6	73	" 6	83	" 1	124
" 10	69	" 1	77	" 6	119
" 8	58	" 8	60	" 8	82