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STUDIES IN THE PRINCIPLES OF JUDGMENTS AND ATTITUDES: I. TWO BASIC PRINCIPLES OF JUDGMENT*

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It is reasonable to suppose that, when an individual is responding to a situation, his various judgments concerning it do not exist independently for him, but that they affect each other. We may suppose that underlying each expressed judgment and controlling it, there is a general attitude of friendliness or hostility, of acceptance or of rejection. Or we may suppose that each single judgment, as it occurs, directs and qualifies the character of the succeeding judgments. If either state of affairs holds, we would be justified in speaking of judgments as having organization, and of being related to each other through the pattern of this organization. This study posits the interaction of judgments in accordance with definite principles. It will be the purpose of our investigation to demonstrate the occurrence of such principles, and to analyze the conditions which alter the relationships between judgments.

We have devised experiments in which individuals express a number of judgments concerning several aspects of a single situation. Situations were selected which were objectively ill-structured and vague. This choice was decided upon because it was our main concern in the following experiments to investigate the dependence of judgments upon subjective factors which function when the objective characteristics of the situation are reduced to a minimum.

Human beings frequently judge matters and arrive at decisions concerning them in the face of differing degrees of ignorance of the objective state of affairs. What are the principles which control their judgments in such circumstances? Where objective knowledge is lacking, are the resulting judgments random? If they are not,

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what constitute the criteria of judgment? To study these questions, a number of experiments were performed.

Experimental Series *A*

Experiment 1. Each student in a group of 35[1] was presented with a sheet containing 10 photographs of adolescent boys and girls (1, p. 207). There were six boys and four girls. The subjects were then required to rank the photographs for intelligence. Two days later they were asked to rank the same photographs for honesty.

A distribution of rankings for each photograph with reference to the two variables showed marked group consistency for the judgments involved. The range in average ranking for intelligence was from 3.3 to 8.2, and for honesty, from 3.5 to 7.3. These ranges indicate that there were certain similarities in the group as a whole with reference to the judgments made, since otherwise the averages for the photographs should have been equal to each other.

The rankings made by each individual for intelligence were correlated with his corresponding rankings for honesty. The majority of the obtained correlations are positive with a mean value of .36. Because of factors which will be discussed later, most of the analyses were made using only 9 of the 10 pictures. The mean correlation[2] using only the 9 was .35. This correlation indicates that there are similar factors operating in the subjects' judgment of both honesty and intelligence.

A plausible hypothesis is that, when asked to judge intelligence, the individual has no criteria by which he can satisfactorily distinguish different degrees of intelligence among the faces he examines. But those faces do have some meaning to him in terms of some general favorable or unfavorable impression and the rankings for intelligence are influenced by his general reaction to the pictures. When faced with the problem of ranking the photographs for honesty, the subject is again at a loss for criteria. That being the case, some of the factors that have influenced the ranking for intelligence influence the ranking for honesty. The mean correlation obtained, while it is positive, is none too high. Possible factors

[1]All the subjects in this series of experiments were male students at the College of the City of New York. The experiments were carried out in the Psychology Laboratory Sections.

[2]Unless otherwise stated, reported correlations from here on will refer to the 9 photographs.

contributing to this may be: (*a*) the difficulty subjects experienced in getting any but a neutral impression from some of the photographs, leading to a haphazard arrangement among these photographs; (*b*) preconceptions about the relation of intelligence to honesty; (*c*) responses to different specific features of the photographs for respective judgments of intelligence and honesty.

In the above described experiment, the subject has had only the photographs and his own experiences to influence the judgments. In a certain sense, he has established a scale with characteristics that are general enough to result in his positively relating two traits for which he has no objective criteria. What will happen to his ratings if he is given some information regarding one of the characteristics for which the photographs are ranked and asked to rank them for the other characteristic? What relationship would his rankings have to the new aspect of the situation? To answer these questions, three additional experiments were performed.

Experiment 2. The average intelligence ranking for each photograph was determined from the data of Experiment 1. On the basis of these averages, the photographs were ranked from one to ten. A second group consisting of 37 subjects was presented with the ranking for intelligence thus determined from the rankings of Group I. The subjects in the second group were told that the rankings were correct ones and were instructed to write them in the appropriate places on their test sheets. They were then instructed to rank the photographs for honesty. No further instructions were given and no further mention was made of the "true" intelligence rankings.

The mean of the individual correlations of honesty with the presented ranking for intelligence was obtained. For 10 photographs, this correlation was .45, for 9 it was .39. This average is only negligibly higher than the one reported in the previous experiment.

Experiment 3. The conditions for this experiment were the same as in Experiment 2 except that the ranking for intelligence presented had virtually a zero correlation with the ranking obtained from Group I (the correlation was equal to .12). In this and the subsequent experiment, one of the photographs—unlike any of the others—received responses that were practically constant. Since the reactions to this photograph do not contribute to the total changes of which the correlation coefficient as here used was an indication,

it was eliminated in obtaining the individual correlations so that the means of individual correlations reported henceforth are based on nine photographs. This in no way changes the order of relationships obtained.

The mean correlation between the ranking presented and the rankings for honesty was .20. This value would indicate that this casually introduced reference point, though having a correlation of .12 to one that the group would normally select, influences the judgment of the group to some extent. Each individual's honesty ranking was correlated with the average ranking for intelligence obtained from Group I. The mean of these correlations was .17 as contrasted with a mean of .34 in Group I. Here we have an indication of a change in the way in which honesty has been ranked through the addition of an external reference point. The total situation for individuals in Group III is different from that of the individuals in Group I. Whatever criteria were used for making judgments must have been changed, as shown by the different relationships obtained among the judgments.

A similar change may be observed from studying the individual correlations of honesty ranking with group honesty ranking. Utilizing Group I for purposes of comparison, we find that the mean correlation of individual honesty ranking with group honesty ranking is .38, whereas in Group III the mean is .26.

Experiment 4. The conditions of this experiment were like those of Experiments 2 and 3, with the exception that the subjects were presented with a ranking that correlated —.50 with the intelligence ranking of Group I. The mean correlation of individual honesty rankings with the presented ranking was .09, and with the intelligence ranking of Group I it was .08. These correlations would indicate a marked change in the judgments of the group, which must be attributed to the changed situation. As in the previous experiment, a comparison of the honesty correlations indicates the same state of affairs, the mean correlation with the honesty rating of the first group having dropped to .15. These results may be summarized in Table 1.

We have noted a number of changes in judgment which have occurred in response to changes in the judging situation. Differences among average rankings for different photographs in all of the situations indicate a certain amount of group consistency in the judg-

TABLE 1

AVERAGE CORRELATIONS AMONG THE JUDGMENTS BASED ON THE PHOTOGRAPHS

	Av. corr. of honesty with own or external standard of intelligence	Av. corr. of honesty with ranking for intelligence of control group	Av. corr. of honesty with ranking for honesty of the control group
Group I (control)	.35	.34	.38
Group II (presented with av. ranking for intelligence of Group I)	.39		
Group III (presented with ranking for intelligence correlating .12 with the intelligence ranking of Group I)	.20	.17	.26
Group IV (presented with ranking for intelligence correlating .50 with the intelligence ranking of Group I)	.09	.08	.15

ments made. If group ranks based on average rankings are obtained for each variable under each condition, intercorrelations among these will serve as a useful summary of the relations already described on the basis of means of individual correlations. The relationships will be of the same kind but because of averaging, the absolute magnitude of the correlations will be increased. The variables will be symbolized by H and I, to indicate honesty and intelligence. The subscripts will indicate the experiment from which they have come. Table 2 represents the intercorrelation among

TABLE 2

INTERCORRELATIONS AMONG THE GROUP RANKINGS FOR HONESTY AND INTELLIGENCE*

	H_1	H_2	H_3	H_4	I_1**	I_3	I_4
H_1		.93	.78	.52	.75	.32	.00
H_2	.95		.60	.62	.80	.15	—.10
H_3	.81	.64		.53	.30	.63	.30
H_4	.64	.63	.62		.32	.13	.30
I_1	.81	.85	.42	.50		.12	—.50
I_2	.04	—.08	.38	—.18	—.19		.12
I_4	—.10	—.24	.24	.20	—.52	.12	

*Correlations above the diagonal are for nine photographs; those below are for ten.

**I_1 and I_2 are identical.

the various honesty and intelligence rankings. Those below the diagonal are based on 10 photographs, those above on 9. The detailed discussion concerns the correlations above the diagonal. The relation shown by the ones below the diagonal are similar.

The correlation between H and I was .75. With I_1 introduced as a possible reference point in Group II, we find that the situation is hardly changed at all. The correlation between H_2 and I_1 is .80 and between H_1 and H_2 it is .93. In situation III the correlation between H_3 and I_3 is .63. This is smaller than the comparable correlation of .75 and .80. Since I_1 and I_3 have almost a zero correlation, we would suspect that the relationship between H_3 and I_3 would be different than the relationship between H_3 and I_1. On the average, the effect of I_3 must have been to change the criteria utilized by the subjects in judging honesty. This is most strikingly shown by the correlation between H_3 and I_1 of .30, as compared to the .75 between H_1 and I_1. In situation IV we find a correlation between H and I equal to .30. This would indicate a general lack of acceptance of the imposed criterion, but that it indicates more is shown by the correlation of .32 between H_4 and I_1. I_4 has had the effect of altering the criteria used for judging honesty so that the obtained honesty ranking bears a different relationship to the intelligence ranking of the control group than it would otherwise. Alterations are obtained in the correlation of honesty ratings in situation IV with those obtained in the other three situations, correlations of .52, .62, and .53, as compared with .93 (between H_1 and H_2).

The experiments in this series illustrate: (*a*). The existence of a relationship in the judgment of individuals between two vaguely defined attributes of the same thing. (*b*). That the relationship between these judgments may be altered in response to the introduction of an external standard: *a*) when the standard was inconsistent with one spontaneously selected by a similar group (control group standard), the effect was to decrease the degree of relationship between our subjects' judgments and the group standard; *b*) when the standard was the same as one spontaneously selected by a similar group, the relationship of our subjects' judgments to it was practically unchanged. (*c*). These results indicate that in judging several aspects of a total situation, some general criteria are operative, and that alterations in the judgment of one aspect may affect the total organization.

Experimental Series *B*

The experiments of Series *B* represent a more extensive and systematic investigation of the problems discussed in the preceding sections. A new set of experimental materials is employed, a larger variety of judgments is obtained for analysis, and the experimental groups have been increased in size.

Experiment 1. A group of 96 subjects, including men and women, in four sections of psychology, was presented with a list of 10 professions (accountancy, business, dentistry, engineering, journalism, law, medicine, music, politics, and teaching). The subjects were requested to rank the professions for each of the following five characteristics: intelligence, social usefulness, conscientiousness, stability of character, and idealism. The instructions which appeared on each subject's ranking sheet are reproduced below:

> The following contains a list of ten professions. We desire to obtain an expression of opinion from you concerning some characteristics of these professions, in the form of ranking. Running down the column labeled "Intelligence," place the number (1) next to the profession which, in your opinion, has the most intelligent members. You will place number (2) next to the profession you rank second. Continue in this way until you have ranked each profession with regard to intelligence.
>
> Following the same procedure, rank the professions according to "Social Usefulness" (or the importance of each profession from a social point of view): "Conscientiousness" with which the members of the profession perform their work: "Stability of Character" of the members: and the "Idealism" manifested by each group.

The test was given under group conditions. No time limit was enforced. The subjects required, on the average, approximately 15 minutes to complete the ranking. After a subject returned his scale, he was immediately given a new ranking sheet requiring him to rank the same professions for "general esteem."

This task requires the subject to place the 10 professions on a scale of intelligence, on a scale of social usefulness, etc. It will be generally agreed that some of the differences which the subjects are required to judge are not at all objectively clear. Certainly, the subjects do not possess adequate information concerning such differences. As a result, they are forced to rely upon their sketchy

preconceptions and opinions for the arrangement of the professions on a scale of merit. Under these conditions, will the judgments of an individual concerning a profession tend to resemble each other, or will they be independent of one another?

Results. We first present the *group-results.* The mean ranking

TABLE 3

MEANS OF RANKINGS OF PROFESSIONS UNDER DIFFERENT EXPERIMENTAL CONDITIONS*

Professions	Exp.	Variables I (Int.)	II (Soc.)	III (Cons.)	IV (Stab.)	V (Ideal.)
Accountancy	1	7.4	7.8	6.1	6.1	7.8
	2	*8*	8.3	6.8	6.7	8.1
	3	*3*	8.2	6.4	5.5	7.8
Business	1	6.8	6.4	6.1	7.2	8.3
	2	*7*	5.6	6.3	7.6	7.4
	3	*2*	5.8—	5.5	6.4	7.4—
Dentistry	1	6.4	3.8	4.6	4.2	5.5
	2	*6*	5.0	4.5	4.3	5.8
	3	*1*	4.5	4.1	3.7	4.9
Engineering	1	3.6	4.2	3.7	3.6	5.0
	2	*3*	4.6	3.6	4.2	3.5
	3	*8*	5.5	4.5	4.6	6.5
Journalism	1	4.8	5.2	6.8	6.7	4.9
	2	*5*	6.0	7.2	6.7	5.3
	3	*10*	6.4	7.3	6.8	5.6
Law	1	3.9	4.6	6.9	6.5	6.3
	2	*4*	5.2	6.0	5.8	6.3
	3	*9*	5.1—	5.8—	5.7—	5.4—
Medicine	1	3.2	2.5	2.3	2.2	2.8
	2	*1*	1.4	2.0	1.9	2.6
	3	*6*	1.9	2.8	2.6	3.2
Music	1	7.8	7.2	5.2	6.2	3.8
	2	*9*	8.5	5.8	5.7	3.5
	3	*4*	7.8	2.6	6.3—	2.5
Politics	1	8.1	8.2	9.1	9.2	8.3
	2	*10*	7.4	9.0	9.4	8.0
	3	*5*	6.7	8.6	9.1	7.4
Teaching	1	3.3	3.1	3.9	3.2	2.9
	2	*2*	2.8	3.8	3.0	3.4
	3	*7*	3.1	4.9	3.8	3.7

*The italicized figures in the "Intelligence" column are those presented to the subjects in Experiments 2 and 3.

Those figures in the table followed by a minus sign represent differences in judgment between Experiments 2 and 3 that are inconsistent with the external standards presented in these two experiments. The remaining figures are consistent with the standards.

of each characteristic was calculated. They are presented in Table 3. We note first a striking degree of group consistency in the results, as evidenced by the fact that the mean rankings vary approximately from 2 to 8. This result is obviously the consequence of considerable agreement between the subjects. If such consistency were lacking, the overlapping between the means would have been great, and the values would have tended to approach 5. A second outstanding characteristic of the results is the great agreement between the mean values scored by the same profession in the different characteristics. The results may be restated in the following way: (*a*) the group has established a scale for each characteristic on which most of the professions have a distinctive position; and (*b*) the positions of each profession in the different scales show great uniformity.[3]

The degree of group consistency is more clearly brought out when the means of Table 3 are broken up into their underlying distributions. These distributions portray the operation of powerful group-norms, according to which most subjects rank medicine, teaching, engineering near the "top" in all characteristics and politics at the "bottom." These prevailing norms are to be related to the cultural backgrounds of our subjects, with their favorable emphasis on professional work and negative emphasis on business and politics.

We present below the final evidence relating to "group consistency." The average rankings of this experiment, which are presented in Table 3, were converted into rankings from 1 to 10. The mean ranks so derived for the different characteristics were intercorrelated by means of the Spearman rank-difference. The resulting correlations present us with a measure of group-correspondence between the judgments. These appear in Table 4. The correlations are high, ranging from .92 to .67. They further testify to the presence of powerful group-norms, and fully confirm the findings presented in Table 3.

Results based upon analysis of individual data. All the results thus far presented hold for the group-as-a-whole. The agreements

[3]To this statement there is an interesting exception, found in the ranking of music. The reader will find that this group is ranked relatively high in "idealism" and relatively low in "intelligence." It is obvious that we meet here the operation of a stereotype prevalent in American culture which emphasizes the temperamental characteristics of artists at the expense of their intellectual traits.

TABLE 4

INTERCORRELATION BETWEEN MEAN RANKINGS IN EACH OF THE EXPERIMENTS OF SERIES *B*

		Variables			
	Exp.	II (Soc.)	III (Cons.)	IV (Stab.)	V (Ideal.)
	1	.92	.71	.73	.67
	2	.90	.75	.81	.76
I (Int.)	3	—.19	.27	.14	—.12
	1		.75	.79	.70
II	2		.77	.76	.64
	3		.42	.44	.52
	1			.92	.70
III	2			.95	.80
	3			.88	.76
	1				.74
IV	2				.87
	3				.68

between distributions of different judgments pertaining to an occupational group, the high constancy of group-standing of the different professions (Table 3), as well as the high correlations between the group-means (Table 4) represent quantitative measures of the strength of group-norms. These results fail, however, to furnish direct information concerning the behavior of the individuals in the group. It would be justifiable to infer that, corresponding to the "group-consistency" and underlying it, are consistencies in the judgments of the individual subjects. An analysis of the individual results is presented in the following paragraphs.

The main evidence is based upon the correspondence between the judgments of each individual. The relationship was measured again with Spearman's rank-difference formula. We obtained, for each subject, the measure of correspondence between all sets of rankings. The correlations between rankings were averaged, and are presented in Table 5. As presentation of the distribution of the correlations would be prohibitive, we note here that the range of all distributions was considerable, and that a small proportion of the correlations was negative. The averages of the correlations are all positive and medium, ranging from .36 to .60. We interpret these results as evidence for a significant tendency in most individuals to judge the different aspects of profession similarly.

Another fact evident in the table is that the intercorrelations with the rankings for "general esteem" are, on the whole, the

highest in the distribution. This would suggest that underlying the several judgments, and partially determining them, is the subject's attitude to the profession, and that the separate judgments might be regarded as perspective views of the general attitude. It is our belief that the observer, in the absence of objective criteria, and in the face of the necessity of reaching some conclusion, proceeds to arrange a scale of preference in terms of some generally favorable or unfavorable impression. Further, that the same general impression functions similarly in fixing judgments of more specific characteristics.

One more feature of the data requires an explanation. It might seem plausible to interpret the correlations of Table 5 as approxi-

TABLE 5
MEANS OF INDIVIDUAL INTERCORRELATIONS OF RANKINGS OF 10 PROFESSIONS UNDER DIFFERENT EXPERIMENTAL CONDITIONS*

	Exp.	Variable II	III	IV	V	VI
	1	.44	.37	.43	.36	.66
I	2	*.69*	*.56*	*.63*	*.45*	
(Intelligence)	3	*—.13*	*.11*	*.05*	*—.12*	
	1		.52	.57	.46	.64
II	2		.53	.56	.44	
(Social Usefulness)	3		.31	.38	.37	
	1			.60	.47	**.51**
III	2			.68	**.51**	
(Conscientiousness)	3			.53	.41	
IV	1				.46	.64
(Stability of	2				.53	
character)	3				.37	
	1					.59
V	2					
(Idealism)	3					
VI						
(General esteem)						

*The italicized figures represent correlations obtained in Experiments 2 and 3 with a group-standard.

mations to an objective correspondence between the traits, at which the subjects aimed with greater or less success. Following such a presumption, we would be under obligation to determine the "true" correlations, and to compare them with those obtained from our subjects. Such a view would be highly misleading. It need only be pointed out, in order to disprove it, that two subjects need not at all express similar judgments in order for each one to manifest

internal consistency. Most subjects' responses showed a certain amount of consistency, and in this respect they resembled other subjects with whose specific opinions they differed. The correlational data of Table 5 are evidence for the operation of a principle governing the *patterning* of an individual's judgments. While the previous results have shown the presence of considerable uniformity of opinion among our subjects, it would be erroneous to consider this fact as accounting, in any way, for the obtained correlations.

The reorganization of judgments. Psychologists have long been acquainted with the facts studied in Experiment 1 under the name of the "halo" effect. This term designated a tendency to *color* one's judgments by means of generalized positive and negative attitudes. While the recognition of this highly interesting principle of judgment might have been expected to lead to a study of its determining conditions, such a development failed to materialize. Probably this is due to the fact that the "halo" phenomenon was conceived single-mindedly as a constant error (because of its possibilities for error) rather than as a process to be investigated. Starting out with the dogmatic assumption of an elementaristic theory of personality, psychologists saw in the generalization of judgments an error which interfered with the expected specifistic relationships. The "halo" effect became an annoying illusion, to be eliminated, if possible; its sole importance consisted in the fact that it masked true relationships. As a result, there has been no serious attempt to analyze the "halo" effect.

The preceding considerations have led us to attempt to alter the *patterning of judgments.* Our purpose was to determine the conditions which will bring about a change in the judgments of an individual and in the relationships between them.[4] It is, of course, obvious, that the judgments obtained in Experiment 1 were determined by pre-existing attitudes. They were the end-result of processes of long development which have not themselves been under observation. A closer study of the problem would require that we investigate the process of judging in the course of its formation.

The situations in Experiment 1 dealt with the development of standards which the subjects evolved in the light of their generalized attitudes. What will happen to the subject's judgment, if instead of allowing him to rely entirely on his self-developed criteria, he

[4]Both changes, as will be shown below, occur simultaneously.

is provided with an authoritative frame of reference in the form of the judgments of a large group? Under these conditions, will the subjects proceed as in Experiment 1, or will they react to the group standard in such a way as to modify their judgments? Will they tend to adapt the construction of their standards to the one experimentally introduced? And how will this standard influence the organization of the judgments? To study these problems, a new series of experiments was devised, which will be described below.

Experiment 2. The average rankings for intelligence of each profession were calculated from the data of Experiment 1. On the basis of these averages, the professions were ranked from 1 to 10. A group of 60 subjects (in two sections of psychology) was given the intelligence ranking of Group I and was asked to rank the professions for the other characteristics. The instructions are the same as those of Experiment 1, with the exception of the passage referring to the intelligence rankings. Below is reproduced the form sheet employed in this experiment:

> The following contains a list of ten professions. We desire to obtain an expression of opinion from you concerning some characteristics of these professions, in the form of ranking. In the column labelled "Intelligence" we have already recorded the judgments of a large number of people concerning the relative intelligence of these professions. Thus, medicine is rated first, politics last, etc.
>
> You will proceed similarly in your own ranking. Running down the column labelled "Social Usefulness," place the number (1) next to the profession which, in your opinion, is the most useful socially. You will place number (2) next to the profession you rank second. Continue in this way until you have rated each profession with regard to social usefulness.
>
> Following the same procedure, rank the professions according to "Conscientiousness" with which the members of the profession perform their work; "Stability of Character" of the members; and the "Idealism" manifested by each group.

	Intelligence	Social usefulness	Conscien-tiousness	Stability of character	Idealism
Accountancy	8				
Business	7				
Dentistry	6				
Engineering	3				
Journalism	5				
Law	4				
Medicine	1				
Music	9				
Politics	10				
Teaching	2				

It is to be noted that these group results are presented to the subjects in a matter-of-fact way. No comment was made concerning the correctness of the judgments or the desirability of conforming to them.

As in Experiment 1, the averages of the rankings were calculated and transformed into rankings from 1 to 10. The correlations between the different rankings were determined and appear in Table 4. The results are extremely high, and, what is more important, higher than the set of results of Experiment 1. Confirmation of these results is obtained from an analysis of the averages of the intercorrelations, in Table 5. Reference to the latter will show again that the judgments obtained under the conditions of Experiment 2 are more highly intercorrelated.[5]

It is concluded that presentation of the group standard is responsible for the increase of the correlations. We suggest that a standard, functioning as a frame of reference, may produce organization at a higher level, when it carries with it the sanction of public approval, than when the same or a similar standard is evolved by the individual himself.

Experiment 3. In the last experiment, we studied the effect on the judgments of individuals of a group standard which most of the subjects would have developed themselves. We ask now: how will the judgments of individuals be affected by a group standard which is decidedly at variance with the standard which the subjects would have evolved by themselves?

In the present experiment, we employ the same procedure as in Experiment 2, with the following modification: The group standard which is presented to the subjects is a fictitious one, correlating to the extent of —.50 with the standard presented in Experiment 2 (and empirically obtained in Experiment 1). Our purpose is to find out how the judgments of the subjects are changed by a standard which they accept as characteristic of a large group, but which is

[5]Attention should be called to the fact that, in comparing the results of the two experiments, the group of Experiment 1 is considered a control. We feel justified in making this assumption in view of the fact that the two groups were drawn from the same general population. No adequate reason can be assigned for expecting these groups to differ systematically under similar experimental conditions. Hence we conclude that differences between the two groups are to be referred to differences in experimental conditions.

TABLE 6
GROUP STANDARDS OF INTELLIGENCE PRESENTED TO SUBJECTS IN EXPERIMENTS 2 AND 3

	Accountancy	Business	Dentistry	Engineering	Journalism	Law	Medicine	Music	Politics	Teaching
Exp. 2	8	7	6	3	5	4	1	9	10	2
Exp. 3	3	2	1	8	10	9	6	4	5	7

objectively in conflict with theirs. We reproduce in Table 6 the standard reported in Experiments 2 and 3.

The averages of the correlations obtained in this experiment, which the reader will find in Table 5, show that the "false" standard had a consistent effect. All the intercorrelations are lower than those of Experiment 2; furthermore, they are all lower than the correlations of Experiment 1, the control experiment. It is clear that the introduction of a conflicting standard served to disturb the consistency of the subject's judgments. The group results of Table 4 present the same picture. Excluding the correlations with the fictitious standard, and centering upon the intercorrelations between the judgments expressed by the subjects, they are observed to be consistently lower than those of either Experiment 2 or Experiment 1.

Our correlational findings show that systematic differences in consistency were produced in the judgments of individuals in consequence of objectively definable factors which were introduced in the experimental situations. We should, however, also like to know to what extent the subjects accepted or rejected the experimental standards. To answer this question, we calculated the means of the judgments obtained in each experiment. These are presented in Table 3.

The clearest comparison may be had between Experiments 3 and 2. In both instances, the intelligence rankings were predetermined and constant for each member of the group. Now, if the subjects altered their judgments in accordance with the indicated points of reference, we should expect that the differences between the means of the corresponding judgments in the two experiments would be in

the same direction as the differences between the standards. That this is actually the case is indicated in Table 3 by the fact that out of the 40 differences between the means of Experiments 2 and 3, 33 are in accordance with the assumption that the subjects formulated their judgments in the direction of the presented standard.

Two feaures of the data should be noted. First, that despite divergent directions of the experimental standards, the judgments of the two groups approach each other. It would be misleading to suppose that the subjects simply accepted standards which they were shown. Second, that despite the similarities between the two sets of judgments they differ in a direction set by the standards. In the case of Experiment 2, the standard probably reinforced the judgments which the subjects were themselves inclined to record. On the other hand, in Experiment 3, we might speak of the resulting judgments as a compromise between the standard and those responses which the subjects would presumably have given in the absence of any immediate influence. These results gain more meaning in the light of correlational analysis. We now see, combining both sets of results, that when the subject responded by accepting a standard, he also effected a consolidation in the consistency of his judgments. On the other hand, when an individual accepted only slightly a standard which (without his knowledge) was in opposition to his own judgments, he was led to reduce his consistency, even while reacting positively to the standard.

An additional method of analyzing the operation of the experimental standards (analogous to that employed in Table 2 of Series *A*) will now be attempted. First are to be noted the correlations between the various judgments in each experiment and the intelligence ranking of Experiment 1 (and of the standard of Experiment 2). Differences between the corresponding results will be considered as evidence of the extent to which the judgments were affected by the presence or absence of the intelligence standard, or by the manner of its presentation. Confirming our previous figures, the results of Table 7 show that the correlations of the various group-judgments with the intelligence standard of Experiment 1 tend to be highest for the results of Experiment 2 and lowest for the results of Experiment 3. It is here again apparent that Group 2 accepted more readily a presented standard than did the members of Group 1 who evolved it. And the reduction of the inter-correlations

TABLE 7

INTERCORRELATIONS BETWEEN GROUP-RANKINGS AND INTELLIGENCE RANKING OBTAINED IN EXPERIMENT 1

	Social usefulness	Conscientiousness	Stability of character	Idealism
Experiment 1	.92	.71	.73	.67
Experiment 2	.90	.75	.81	.76
Experiment 3	.84	.33	.68	.43

between the same standard and the rankings of Group 3 offers additional evidence of the alterations produced by the fictitious standard.

The same form of analysis will now be carried through, this time using the fictitious standard of Experiment 3 as the point of reference. We will compare the correlations with the fictitious scores of the judgments obtained in the three experiments. On the basis of the findings already presented, we would expect the correlations to be highest in Experiment 3 and lowest in Experiment 2. Table 8

TABLE 8

ITERCORRELATIONS BETWEEN THE INTELLIGENCE STANDARD OF EXPERIMENT 3 AND GROUP-RANKING

	Social usefulness	Conscientiousness	Stability of character	Idealism
Experiment 1	—.24	.10	—.05	—.36
Experiment 2	—.25	—.04	—.22	—.39
Experiment 3	—.19	.27	.14	—.12

presents the results. They are in complete agreement with expectations.

The experiments of this series have provided clear-cut results.

(1). Significant patternings in the judgments of individuals of single situations have been found.

(2). Evidence was presented of the far-reaching modifications obtained in judgments by the introduction of authoritative standards.

(*a*) It was shown that a standard acceptable to an individual is strengthened in its influence if group representativeness is imputed to it; (*b*) that a standard which is described as representative but which is in conflict with that of the individual, produces disorganization of judgments; and (*c*) that a change in one feature of the judging situation may alter the totality of judgments.

Experimental Series *C*

The relationship between the judgments evoked by a situation vary with the situation, the subjects, and many other factors. In the present experiment, we shall investigate the interdependence of judgments which are held with greater emotional intensity and conviction than those of the preceding experiment. In this experiment, in which 110 subjects were employed, the names of six contemporary political figures are presented, to be ranked in a number of characteristics. Below is reproduced the form presented to the subjects:

> The following contains a list of 6 important figures in public life. We desire to obtain an expression of opinion from you concerning some characteristics of these people. Running down the column labelled "Intellectual Power," place the number (1) next to the name of the person who in your opinion, rates highest in this capacity. You will place the number (2) next to the person you rank second. Continue in this way until you have rated each person with regard to intellectual power.
>
> Following the same procedure, rank the individuals according to courage, honesty, physical attractiveness, stability of character and kindness.

	Intellectual power	Courage	Honesty	Physical attractiveness	Stability of character	Kindness
A. Landon						
Norman Thomas						
A. Hitler						
F. D. Roosevelt						
John L. Lewis						
Stalin						

Following the completion of the ranking scale and the return of the papers to the experimenter, the subjects were presented with a new scale requiring them to rank the six persons for "general esteem." The instructions for the last ranking were as follows:

> You are asked to rank the following set of 6 people in order of the preference you have for each. Place the number (1) next to the person you esteem most highly. Number (2) should be placed opposite the person you esteem most after the first, and so on until you reach number (6) which will be the ranking of the person you esteem least of those here given.

Table 9 presents the means of the rank-difference correlations. It will be noted that the averages of the intercorrelations are relative-high. They are substantially larger than the correlations ob-

TABLE 9
MEANS OF INTERCORRELATIONS OF JUDGMENTS OF POLITICAL FIGURES

	II	III	IV	V	VI	VII
I	.70	.80	.59	.81	.79	.87
II		.63	.32	.70	.40	.60
III			.56	.81	.85	.86
IV				.50	.78	.74
V					.73	.84
VI						.87

I intellectual power
II courage
III honesty
IV physical attractiveness
V stability of character
VI kindness
VII general esteem

tained in Series *B*, Experiment 1, despite the fact that the number of steps in each ranking is only 6, while in Series *B* it is 10. An analysis of the individual responses shows much more clearly than does the preceding series the operation of a set to judge an individual favorably *or* unfavorably. As a rule, the subjects are not half for Hitler and half for Stalin. The reverse is the case. So strong is this organizing factor that it produces fairly high correlations between the rankings of each trait with physical attractiveness! To put the matter in a slightly different way, if one political leader is judged more intelligent than another, the tendency is also to judge him more attractive physically, and a similar positive relationship obtains between physical attractiveness and all other traits.

EXPERIMENTAL SERIES *D*

As in the preceding parts of the study, a series of experiments was performed, in which college students were presented with stimulus material and required to make judgments concerning several aspects of it. Ten political slogans of contemporary or historical significance to Americans (seven of the slogans originated in 20th century American politics) were used:

	AUTHOR (not indicated to subjects)
A. *Give me liberty or give me death!*	Patrick Henry
B. *America first!*	Theodore Roosevelt
C. *No peace without honor!*	Theodore Roosevelt
D. *Balance the budget!*	? campaign slogan, chiefly used by conservative parties.
E. *United we stand, divided we fall!*	Abraham Lincoln
F. *Preparedness for peace!*	Theodore Roosevelt
G. *Share the wealth!*	Huey Long
H. *Workers of the world, unite!*	Engels Karl Marx- F. Engels
I. *Down with all imperialist wars!*	Communist slogan
J. *America for Americans!*	Theodore Roosevelt

These ten slogans were chosen out of a much larger list compiled from Bartlett's *Familiar Quotations*. With the exception of slogans *A* and *E*, all of them represent pressing issues in current American life.

Experiment 1. Our subjects (men and women students in the Evening Session of Brooklyn College) were required to rank the slogans for a variety of characteristics. In Experiment 1*a*, judgments for I—"compellingness to action," II—"social significance," III—"personal inspiration," IV—"intelligence of the author," and VI—"personal approval," were required. Experiment 1*b*, with a fresh set of subjects, required an additional judgment for "literary value" (V). The subjects were requested to make their judgments in the order indicated, and the papers on which one ranking was recorded were collected before the next characteristic was judged. In this respect, the procedure differs from that employed in Series *B* and *C*.

It was our supposition that this stimulus situation would be somewhat less vague and ambiguous than that obtaining in the "photographs" and "professions" series. Although the individual's responses might still depend on an affective set, something of an historical or political framework within which to respond was offered him. The subjects might, for example, be supposed to use their knowledge of history to help in evaluating the "compellingness to action" and "social significance" of the slogans, while "personal inspiration" and "approval" might depend on equally stable political opinions. The subjects, in other words, are offered a stimulus situation, to part of which they may apply objective knowledge or carefully thought-out opinions. We should expect the correlations between their judgments in this situation to be somewhat lower than that obtaining in the preceding series where a more generalized affective set was at the basis of the subjects' responses. Judgments of "intelligence" and "literary value" should putatively leave the subjects more at a loss of criteria upon which to rely, thus depressing still further the organization of judgments evolved with more objective criteria. The introduction of "literary value" judgments into Experiment 1*b* was, in fact, expressly designed to investigate the effects of an obviously ill-defined characteristic upon the subjects' responses to this situation.

Our first problem was concerned, as previously, with the rela-

tionship existing between judgments made in a stimulus situation which required the subjects to evolve their own scale of values. Mean rankings for each of the slogans in each characteristic were calculated for Experiments 1*a* ($N = 37$) and 1*b* ($N = 48$) and the two sets of results were also combined for the calculation of mean rankings in the combined experiments. These results are presented in Table 10.

TABLE 10

MEAN RANKINGS FOR EACH OF 10 SLOGANS IN SIX CHARACTERISTICS, UNDER DIFFERENT EXPERIMENTAL CONDITIONS

	Slogan										
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	
	5.17	5.67	6.97	7.78	5.69	5.86	6.00	3.50	3.89	5.58	Exp. 1*a*
I (Action)	5.22	5.45	7.02	7.59	4.57	5.73	5.10	3.84	4.20	5.65	1*b*
	5.20	5.54	7.00	7.44	5.04	5.79	5.48	3.70	4.07	5.62	1*a-b*
	5.97	5.53	6.53	7.97	5.57	9.30	5.07	4.00	4.83	4.53	2
	6.69	6.67	7.39	5.36	5.69	4.42	3.92	4.33	3.83	6.86	Exp. 1*a*
II (Soc. Sign.)	8.35	5.98	8.06	4.69	6.29	3.81	4.35	3.69	3.58	6.00	1*b*
	7.65	6.28	7.78	4.98	6.03	4.07	4.22	4.00	3.69	6.37	1*a-b*
	7.07	5.87	8.17	4.83	6.13	4.70	4.63	3.30	3.80	6.10	2
	4.35	6.16	6.24	7.84	3.86	5.54	5.27	3.95	4.08	7.59	Exp. 1*a*
III (Insp.)	4.69	6.16	6.35	6.22	4.22	5.85	5.67	4.37	3.84	7.41	1*b*
	4.54	6.16	6.30	6.92	4.07	5.72	5.50	4.19	3.94	7.49	1*a-b*
	5.03	6.13	6.10	7.20	4.73	6.10	5.20	3.73	3.23	6.73	2
	3.38	7.65	5.54	6.51	2.68	5.46	6.05	4.51	4.76	8.32	Exp. 1*a*
IV (Int.)	3.63	7.63	5.29	7.00	3.04	5.21	6.40	3.79	5.23	7.44	1*b*
	3.52	7.64	5.46	6.79	2.88	5.32	6.25	4.10	5.03	7.82	1*a-b*
	9	*2*	*5*	*4*	*10*	*6*	*3*	*8*	*7*	*1*	2
V (Lt. Val.)	2.06	6.71	3.94	8.08	2.60	6.08	7.71	5.10	6.15	6.52	Exp. 1*b*
	3.28	6.53	4.37	8.07	2.73	6.00	7.20	4.63	7.13	6.70	2
	4.70	6.49	7.38	6.51	4.16	4.59	4.73	4.00	4.05	8.24	Exp. 1*a*
VI (Approv.)	5.02	6.23	6.67	6.51	4.08	6.24	5.77	3.84	3.23	7.46	1*b*
	4.88	6.35	6.98	6.40	4.11	5.53	5.32	3.91	3.59	7.80	1*a-b*
	5.40	6.37	6.60	6.43	4.17	6.23	5.17	4.13	3.40	7.10	2
Av. diff. between	3.08	1.20	3.40	2.16	1.90	1.80	2.20	2.20	2.53	1.73	Exp. 1*a*
rank-orders	2.20	1.60	1.44	1.92	2.04	1.28	2.64	0.96	1.08	1.44	1*b*

A glance at the ranges of mean rankings in both experiments indicates that there is a decided tendency for the group as a whole to agree in its judgment of the individual slogans for any one characteristic. Interesting differences between the slogans appear, how-

ever, when one examines the extent of agreement between the rankings in the five or six characteristics for each slogan individually. A simple measure of agreement between rankings for different characteristics of the same slogan was obtained by averaging the rank-order differences between mean ranks in each characteristic.

In Experiment 1*a*, where rankings for five characteristics are required, the greatest uniformity of judgment obtains for the slogans *H* and *I: Workers of the world, unite* and *Down with all imperialist wars.* These are ranked high in all aspects presented for judgment. The least agreement obtains for slogan *G: Share the wealth,* which is ranked high in "social significance," about midway in "personal inspiration" and "approval" and low in "compellingness to action" and "intelligence." A somewhat similar situation holds for slogans *A* and *E—Give me liberty or give me death* and *United we stand, divided we fall,* which are judged high in "compellingness to action" and "intelligence" and low in "social significance." The four patriotic slogans: *America first, No peace without honor, Preparedness for Peace* and *America for Americans* (*B, C, F* and *J*) are, on the other hand, judged fairly much alike in all aspects, all rankings being low. These results may be interpreted as an illuminating reflection of the attitudinal stereotypes in this particular group of Brooklyn College students. The "radical" slogans elicit positive response which are fairly stable for all characteristics; the "conservative" slogans elicit almost as stable negative responses. For the two slogans whose historical significance in the Revolutionary and Civil Wars was familiar to the subjects, "author's intelligence" was ranked high (a sort of gesture of deference to our national heroes) while the other characteristics varied *Share the wealth,* a slogan used by a contemporary political figure who was called "potential Fascist" by more than one commentator on the American scene, showed the most conflicting responses.

The introduction of "literary value" judgments in Experiment 1*b* changes these results somewhat. Of the patriotic slogans, *B, F* and *J* still show consistently negative responses (low rankings) but slogan *C: No peace without honor* is ranked high in "literary value" and *now* high in "intelligence," so that it shows the greatest inconsistency in the group's responses. Responses to our two historical slogans—*E* and *A*—have also changed: both are still ranked high in "intelligence" and now take first place in "literary value" but *A* particu-

larly is ranked very low in "social significance." Slogans *H* and *I*, on the other hand, *Workers of the world unite* and *Down with all imperialist wars,* now show only moderate agreement, the result of a tendency for the group to judge these slogans lower in "intelligence" and "literary value" than in any other characteristic. The introduction of a decidedly ambiguous characteristic into the judgment situation tends, then, to reduce the consistency with which slogans are judged in several characteristics. This tendency, further, affects some slogans more than others. We may suppose that requiring the subjects to make a judgment not rooted in stable opinions or facts induces an attitude of scepticism or of confusion which changes their judgments of *other aspects* of the same situation and so reduces the general consistency of judgment. The linkage between rankings for "literary value" and "intelligence"—i.e., the tendency for a change in "intelligence" rankings in Experiment 1*b* to be made in the same direction as the "literary value" ranking—is interesting. Unfortunately, conclusive interpretation of this result is not possible, since our groups of subjects in both experiments were not equated.[6]

If all 10 slogans are combined, the agreement shown by the group of subjects in judging the several characteristics may be more clearly seen. Rank-difference correlations between the mean rankings of all 10 slogans in 5 or 6 characteristics were calculated and the results are presented in Table 11. The correlations in Experiment 1*a* are all positive and fairly high: in general, the correlations of all other variables with II (social significance) and IV (intelligence) are lower than the others, while the correlations with VI (approval) are highest of all (mean rho .74). In Experiment 1*b,* the correlations are also positive in the main, but not so high: in fact, the rhos between "social significance" and "literary value" and between "social significance" and "intelligence" are negative. These results are probably dependent on several factors: (*a*) individual and group differences in responses to the individual slogans, discussed above, (*b*) differences in the kind of task required of the subjects when they rank for "social significance" or "intelligence" as compared to "approval," i.e., differences in the stability of the criteria upon which the subject relies in each situation, and (*c*) individual differences in

[6]Such a minor rearrangement of rankings might be owing to the nature of the groups. Major changes, such as those demonstrated by our correlation tables, are, of course, not subject to this criticism.

TABLE 11

RANK-DIFFERENCE CORRELATIONS BETWEEN GROUP MEAN RANKINGS UNDER CONDITIONS WHERE SUBJECTS EVOLVE THEIR OWN STANDARDS OF JUDGMENT

	II	III	IV	V	VI	Mean**	
I	.21	.59	.37		.58	.44	Exp. 1*a*
	.38	.84	.67	.37	.89	.60	Exp. 1*b*
	.45	.87	.64		.88	.61	Exp. 1*a-b**
II		.47	.30		.70	.42	Exp. 1*a*
		.38	—.08	—.45	.41	.11	Exp. 1*b*
		.61	.21		.65	.33	Exp. 1*a-b*
III			.85		.89	.70	Exp. 1*a*
			.71	.67	.98	.72	Exp. 1*b*
			.83		.98	.73	Exp. 1*a-b*
IV					.78	.58	Exp. 1*a*
				.82	.67	.55	Exp. 1*b*
V					78	.57	Exp. 1*a-b*
					.32	.42	Exp. 1*b*
VI						.74	Exp. 1*a*
						.66	Exp. 1*b*
						.70	Exp. 1*a-b*

*The rhos in Experiments 1*a-b* do not represent an averaging of the rhos for 1*a* and 1*b* derived separately—rather, a new set of mean ranks was derived from the entire group of 85 subjects in Experiments 1*a-b* and correlations then computed between these mean ranks.

**The mean rho for Experiments 1*a-b* was calculated by weighting the rhos for variable V, 4/7, since variable V was judged by 48 subjects in 1*b* only; the other variables, judged by 85 subjects in both experiments were weighted 1.

the criteria utilized for the ranking of all slogans in all characteristics.

Our next problem was concerned, as in the preceding series, with an analysis of the relationship between judgments at the level of the individual subject. Spearman rank-difference correlations were calculated for each subject between his rankings of all slogans in the several characteristics. The mean of the correlations of each variable with every other variable was then calculated; these results appear in Table 12. It will be seen that the same trends apparent in Table 11 are again apparent in this table, in somewhat attenuated form. The mean correlations in Experiment 1*a* are positive and high, in 1*b*, they are positive and somewhat lower. The only negative mean correlation obtains between "social significance" and "literary value" in Experiment 1*b*, while the highest mean correlations are with VI—"approval." Apparently, then, there is a distinct tendency for the subject to judge the several aspects of a set of slogans in a somewhat

TABLE 12

MEANS OF INDIVIDUAL INTERCORRELATIONS OF RANKINGS OF 10 SLOGANS FOR SIX CHARACTERISTICS WHEN SUBJECTS USE THEIR OWN STANDARDS OF JUDGMENT

	II	III	IV	V	VI	Exp.
I	.19	.40	.29		.19	1*a*
	.24	.39	.24	.14	.33	1*b*
	.22	.39	.26		.27	1*a-b*
II		.41	.25		.53	1*a*
		.31	.18	—.21	.35	1*b*
		.35	.21		.43	1*a-b*
III			.51		.68	1*a*
			.39	.29	.65	1*b*
			.44		.66	1*a-b*
IV					.55	1*a*
				.39	.42	1*b*
					.48	1*a-b*
V					.22	1*b*

organized way. What criteria the subjects used in the integration of their judgments is a matter of inference, but there is some evidence that general approval is an important one.

What will happen to the subject's judgments if, instead of evolving his own scale of reference, he is now, as in the preceding series, presented with an authoritative ranking of the 10 slogans in one characteristic? The two experiments which follow were designed to investigate this problem.

Experiment 2. A fresh group of subjects was presented with a prepared test sheet, on which appeared a ranking of the 10 slogans in "intelligence." This ranking was presented to the subjects as the agreed opinion of the country's leading psychologists, based on test results.[7] Actually the ranking correlated —1.00 with the median group ranking for "intelligence" obtained from the 85 subjects in Experiment 1*a-b*. Our new subjects were now required to rank the slogans in the remaining characteristics: "compellingness to action," "social significance," "personal inspiration," "literary value" and "approval." The subjects were requested to make

[7]It will be noted that the standard here presented is described as the opinion of a group of experts, while the standards presented in Series *A* and *B* were, for obvious reasons, presented as "absolute fact" and "majority opinion" respectively. The similarity of the results obtained in Series *A* and *B* however, leads us to discount these slight differences in the detail of procedure as factors of any functional importance in determining the difference between the results of Series *A-B* and the results of Series *D*.

their judgments in the indicated order, but in this experiment, all judgments were made on the same prepared test sheet.

As in Experiments 1*a-b*, mean rankings for the group of 30 subjects were calculated and these were compared with the means obtained in the preceding situation. Results appear in Table 10. The range of mean ranking is once more from about 3 to 8 in all characteristics, indicating a tendency for group agreement with respect to the individual slogans in the several characteristics. Examination of the shift in means from Experiment 1*a-b* to Experiment 2 shows small shifts to be the general rule. The direction of the shift is by no means always in keeping with the direction indicated by the arbitrary standard. Tabulation of the shifts reveals that 66 per cent of them are in consonance with the introduced standard, compared with 83 per cent expected shift obtained in the "professions" series. The tendency to shift in the expected direction is most pronounced for judgments of "compellingness to action" (90%) and least pronounced (50%) for judgments of "social significance."

A correlational analysis shows the results more strikingly. Rank-difference correlations between group mean rankings were again calculated; these were compared with the rhos obtained in Experiment 1*a-b*, which may now serve as controls. These results are reported in Table 13. The last column of the table shows the

TABLE 13

RANK-DIFFERENCE CORRELATIONS BETWEEN GROUP MEAN RANKINGS OF 10 SLOGANS FOR FIVE CHARACTERISTICS UNDER THE INFLUENCE OF AN ARBITRARY STANDARD, COMPARED WITH CONTROL CONDITIONS (EXP. 1*a-b*)

	II	III	V*	VI	IV**	Mean Rho	
I	.45	.87	.37	.88	.64	.61	Exp. 1*a-b*
	.44	.41	—.13	.37	.12	.24	Exp.2
II		.61	—.45	.65	.21	.33	Exp. 1*a-b*
		.37	—.64	.59	.10	.17	Exp. 2
III			.67	.83	.98	.73	Exp. 1*a-b*
			.39	.92	—.73	.27	Exp. 2
V				.32	.82	.42	Exp. 1*a-b*
				.14	—.67	.18	Exp. 2
VI					.78	.70	Exp. 1*a-b*
					—.67	.27	Exp. 2
IV (Arbitrary standard)						.57	Exp. 1*a-b*
						—.37	Exp. 2

*The correlation for variable V is based on Experiment 1*b*.

**Variable IV becomes the "arbitrary standard" in Experiment 2 (R = —.99).

trend of the results at once. Confirming our analysis of the shift in mean rankings, the subjects, viewed as a group, do not accept the arbitrary standard. The effect of the arbitrary standard, however, on the level of the intercorrelations is apparently slightly depressing. With two exceptions—II-V, III-VI, the rhos show a drop in size; this tendency is most quickly seen in the column of mean rhos, i.e., means of all correlations with each characteristic.

Correlations were also calculated for each subject, as in Experiment 1*a-b*, and averaged. These are presented in Table 14, with

TABLE 14

MEAN INTERCORRELATIONS OF INDIVIDUAL RANKINGS OF SLOGANS UNDER THE INFLUENCE OF AN ARBITRARY STANDARD—COMPARED WITH THE CONTROL CONDITION—EXPERIMENT 1*a-b*

	II	III	V	VI	Mean	(Arbitrary standard) IV	
I	.22	.39	.14	.27	.25	.26	Exp. 1*a-b*
	.30	.31	.05	.23	.22	.03	Exp. 2
	.22	.45	.10	.33	.27	—.06	Exp. 3
II		.35	—.21	.43	.20	.21	Exp. 1*a-b*
		.39	—.13	.49	.26	—.04	Exp. 2
		.27	—.05	.30	.18	—.07	Exp. 3
III			.29	.66	.42	.44	Exp. 1*a-b*
			.26	.69	.41	—.28	Exp. 2
			.17	.54	.36	—.09	Exp. 3
V				.22	.11	.39	Exp. 1*a-b*
				.29	.11	—.43	Exp. 2
				.13	.09	—.08	Exp. 3
VI					.39	.48	Exp. 1*a-b*
					.42	—.29	Exp. 2
					.32	—.04	Exp. 3

Experiment 1*a-b* as control. It should be remembered, of course, that correlations derived from individual rankings rather than group responses are a truer picture of the relationships involved in this experiment. Correlations between group mean rankings are a necessarily crude summary picture, obscuring individual relationships. Once more, the subjects do not accept the arbitrary standard. In this finer analysis, however, the intercorrelations of the judgments for the remaining characteristics, i.e., excluding those with the arbitrary standard, are only negligibly smaller. If the mean intercorrelations obtained for each characteristic are averaged, excluding the mean correlations obtained with the arbitrary standard, the similarity between the remaining intercorrelations and those obtained in the

control experiment may be seen. In two cases (variables II and VI), the mean correlations actually increase. The introduction of a standard correlating —1.00 with one which the subjects would presumably have evolved for themselves results in *no accompanying change* in the consistency with which the subjects judge the slogans in the remaining characteristics. These results are in sharp contrast to those obtained in the "professions" series, where a marked decline in the organization of the remaining judgments was apparent.

Experiment 3. A final series of judgments was obtained from a fresh set of 57 subjects, whose test sheet this time contained a ranking for "intelligence" correlating —.50 with the median group ranking obtained in Experiment 1*a-b*. Again, the "intelligence" ranking was presented as the opinion of leading psychologists, based on test results. Individual intercorrelations were computed and averaged and are presented in Table 14 along with the results of Experiment 2. The level of intercorrelation is, again, quite similar in magnitude to that obtained in the control experiment, in contrast to the results obtained in the "professions" series.

Analysis of the number of negative correlations under our four sets of experimental conditions may serve as a summary of our

TABLE 15

PROPORTION OF NEGATIVE CORRELATIONS UNDER DIFFERENT EXPERIMENTAL CONDITIONS

Variables	Exp. 1*a* %	Exp. 1*b* %	Exp. 2 %	Exp. 3 %
I-II	40	33	23	30
I-III	19	20	26	09
I-IV	22	33	*53*	*54*
I-V	—	35	43	42
I-VI	38	27	26	24
II-III	14	24	13	20
II-IV*	30	40	*26*	*55*
II-V	—	74	63	62
II-VI	11	21	06	24
III-IV	08	14	*73*	*58*
III-V	—	37	20	33
III-VI	05	08	06	07
IV-V	—	17	*86*	*60*
IV-VI	08	15	*73*	45
V-VI	—	31	20	37
Average	19.5	28.6	24.6	28.8

*Variable IV (Intelligence) becomes the arbitrary standard in Experiments 2 and 3.

results (Table 15). The percentage of negative correlations is smallest in Experiment 1*a* and increases in Experiment 1*b*, when "literary value" judgments are introduced. The percentage of negative correlations is as often decreased as increased, on the other hand, in Experiments 2 and 3. So that the proportion of negative correlations in Experiments 2 and 3 is about the same as the average percentage obtained in Experiment 1*a-b*.

The difference between these results and those obtained in the "professions" series is interesting and provokes speculation. We are here confronted with a stable organization of judgments which cannot be destroyed even when the subjects are confronted with an arbitrary standard in conflict with their own. There are several possibilities in accounting for the results: (*a*). The subjects may have disregarded or neglected the standard completely. That this is unlikely is demonstrated by the fact that the mean rankings did shift, if compared with the control condition, although not consistently. It is possible that the introduction of the arbitrary standard did change the psychological situation for the subjects, although the results of the change are not clearly apparent. (*b*). Slogans, representing to the subjects issues of much greater significance than the "professions," are judged in accordance with the subject's knowledge, or with his deeply felt political attitudes, or both. Consequently, the subject's judgments are more resistant to change. Internal evidence from the way in which the different slogans were judged in Experiment 1*a-b*, points to the plausibility of this hypothesis. It will be remembered that the historical slogans showed marked inconsistency, while the "radical" and "conservative" slogans did not. And further, that when the subjects were requested to rank the slogans for a characteristic ("literary value") based on few and vague criteria, the organization of judgments was reduced (Experiment 1*b*). (c). Our individual subjects differ in the extent to which slogans represent issues of personal importance. Our present experiments indicate nothing about which subjects changed their judgments and their consistency in response to an arbitrary standard, and which did not. Our results therefore represent a kind of average of all sorts of individual responses. We have definite indications that the subject's political convictions are closely related to the extent to which he changes his judgments in response to an arbitrary standard. Experiments are now in progress in which the

extent and character of these individual differences are being studied.

The following statements summarize the findings of this series:

1. The judgments of the several aspects of the slogan material are related to each other.

2. Consistency in judging the several aspects of the slogans varies, in our group of subjects, with the particular slogan: "radical" slogans elicit stable positive responses, "patriotic" slogans elicit stable negative responses, "historical" slogans show inconsistencies.

3. Our introduction of an authoritative standard which was in conflict with that spontaneously evolved by the subjects was not sufficiently effective to change the organization of judgments.

Discussion

In the foregoing experiments we have asked our subjects to make certain judgments concerning a number of the characteristics of photographs, political figures, professions, and slogans. The number of judgments obtained in a given situation varied from two to six; the intervals between successive judgments varied from no delay to two days; and the details of the presentation of standards differed from one experimental series to the other.

Despite the differences in experimental conditions, certain uniformities emerge from the data. In all experiments a tendency appears to relate the different judgments of a situation to each other. Basic to this relationship is a tendency to be on the whole favorable, or, on the whole unfavorable, to an object or situation, and hence to different aspects of it. All the experiments may be regarded as evidence for the following principle: *The judgments of a single situation are related to each other by a person in accordance with an underlying attitude of acceptance or rejection.*

The strength of this tendency varies from subject to subject and with the situation to be judged. In our experiments it was strongest for political persons, followed in decreasing degrees of strength by the professions, photographs, and slogans, the latter two being about equal. It is possible that one factor determining the extent of the relationships is the emotional value of the stimulus. The fact that the relations between the judgments of political figures were considerably higher than those found in the other experiments would seem to support this assumption. So definite were the political opinions expressed that we did not deem it feasible to attempt to

alter them by the introduction of authoritative standards. However, the influence of the emotional value of the stimulus has not been systematically studied.

We found that judgments were significantly shifted in relation to authoritative standards. The subjects reacted to such standards by shifting their judgments in the direction of the former. Further, the standards were influential even when they were strongly at variance with those of the subjects. The results just stated permit us to formulate the second principle of judgment: *A standard having an authoritative source tends to alter an individual's judgments in its direction.*

The following facts relating to the change of judgments seem to us deserving of attention. One is the finding that judgments are shifted in relation to group standards, whether the latter are in agreement or in disagreement with the subject's position. The subject's evaluations are strengthened by the one and weakened by the other.

Another fact to be noted is that changes produced in the judgments of an individual affect the total set of relations. Thus, a standard which is acceptable is not simply followed; it also consolidates the person's judgments into a more organized system (see Experiment 2, series *B*). On the other hand, a less desirable standard is not simply acceptable to a lesser extent; it also tends to produce a certain amount of disorganization in the judgments (see series *B*, Experiment 3).

The conditions employed had the effect of altering *the extent of individual differences.* Thus, the ranges of the correlation distributions of Experiment 2, Series *B*, were all narrower than the ranges of Experiment 3 of the same series. We have thus varied the degree of uniformity of group opinion under experimentally controlled conditions. In the light of these findings it would be a misconception to suppose that we are dealing with a constant quantity of individual differences. These interpretations are confirmed by the data of Table 16, reporting the proportions of negative correlations in the different experiments of series *B*.

A comparison of the slogan experiments with the other experiments raises several questions of interpretation. In general, the relations between the slogan-judgments were the lowest obtained in any of the series. Further, the effectiveness of the standard in

TABLE 16

PROPORTION OF NEGATIVE CORRELATIONS OBTAINED UNDER DIFFERENT EXPERIMENTAL CONDITIONS IN SERIES *B*

Variables	Exp. 1 %	Exp. 2 %	Exp. 3 %
I-II	16	00	*63*
I-III	18	00	41
I-IV	12	00	*41*
I-V	13	11	*61*
II-III	06	07	24
II-IV	05	03	20
II-V	09	07	16
III-IV	05	03	08
III-V	08	10	14
IV- V	12	10	20

shifting slogan-judgments was the lowest obtained. It might therefore appear as if the results and conclusions of the different experiments were not confirmed with the slogans. Before we subscribe to this interpretation it will be necessary, however, to subject the slogan situation to a closer analysis.

In responding to the slogans the subject is being influenced by a background of historical and political knowledge, as well as by certain psychological tendencies of judgment. We cannot maintain, as we have done with the photographs, and to some extent with the professions, that the subject is practically in the dark about the true state of affairs. Now, as soon as we introduce a definite objective factor into the situation, the judgments become a function of it. And if, as in the present instance, the objective organization is not known to us, the interpretation of the judgment-relationships becomes somewhat vague.

The judgments of slogans were not markedly influenced by an authoritative standard. We offer the interpretation that when the objection situation is relatively well-structured, or the attitude strongly fixed, that changes of judgments will meet with resistance. It is highly probable that the attitudes toward slogans are more fixed than attitudes toward photographs, and that the factor of fixity accounts for the differences in results. We venture to assert that the results of the slogan experiments have been produced by the greater definiteness of the attitudes involved, and that they do not constitute an exception to the findings of the previous experiments.

Summary of Conclusions

1. Judgments made in response to different aspects of the same situation become related to each other. The subject establishes these relationships even when they do not correspond to objective conditions. These findings are most clearly established for situations which are not well-defined objectively.

2. An individual's judgments of a situation tend to be all in the favorable or in the unfavorable direction.

3. A standard having an authoritative source tends to alter an individual's judgment in its direction.

4. A change in one aspect of an attitude changes every other aspect of the attitude.

(*a*). A standard exercises more influence on the consolidation of judgments when it carries the authority of group-approval than when it functions as the individual's own.

(*b*). When a group-standard is presented to a subject which is at variance with his own standard, it produces a disorganization of judgments.

5. When the subject has some objective knowledge of a situation, his judgments are partly determined by it. It is likely that the factor of knowledge produces a more stable attitude and one more resistant to change.

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