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Need-For-Approval and Physical versus Social Reality Effects on Judgemental Shifts

Melvin Ronald Blonsky

University of Omaha

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NEED-FOR-APPROVAL AND PHYSICAL VERSUS SOCIAL REALITY EFFECTS ON JUDGEMENTAL SHIFTS

A Thesis

Presented to the Department of Psychology and the Faculty of the Graduate College University of Omaha In Partial Fulfillment of the Requirements for the Degree Master of Arts by Melvin Ronald Blonsky August, 1967
Accepted for the faculty of the Graduate College of the University of Omaha, in partial fulfillment of the requirements for the degree Master of Arts.

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TRAITS

PRI  Personal Reaction Inventory
I-E  Internal versus External Control Scale
nApp Need-for-Approval

TREATMENTS

P,R.  Physical Reality
S,R.  Social Reality
H,P.  High Pressure
L,P.  Low Pressure

CRITERION

\( \bar{d} \)  Mean difference between high and low pressure in stated conditions
ABSTRACT

Since the recent emergence of conformity research, few investigations have attempted to relate judgmental shifts to both relevant personality dimensions and different psychological situations, i.e., physical and social reality. The E studied the effects of need-for-approval, internal versus external locus of reinforcement, pressure, and physical versus social reality on judgmental shifts. A completely crossed-factorial design with two levels of each factor was used. The criterion was the mean number of judgmental shifts, with the latter being defined as a shift in judgment from an initial position about a stimulus object to an alternative position.

The Ss were 160 female introductory psychology students. Experimental groups (n=5) were tested via a modified Crutchfield apparatus in the presence of the E. Subjects were randomly assigned to one of four treatment conditions: physical reality-high pressure; physical reality-low pressure; social reality-high pressure; and social reality-low pressure. The physical reality task necessitated a judgment as to the larger of two clusters of dots on each of nine trials. The task of social reality required a judgment on each of nine trials as to whether or not pictures of men,
some having been described as convicted murderers, were in fact convicted murderers. High pressure was defined as the apparent disagreement of three and agreement of one member about a judgment, or disagreement by all four members of the group. Low pressure was composed of three agreeing and one disagreeing member of the group or four agreements.

Analysis of variance revealed that I-E and pressure were significant main effects. Analysis of simple main effects showed that pressure was significant for both reality levels, need-for-approval was significant for I-E, and that I-E was significant for high need-for-approval Ss and social reality.

The major findings were:

1. Low need-for-approval Ss do not differ in number of judgmental shifts in either reality.

2. High and low need-for-approval Ss do not differ in mean number of judgmental shifts in physical reality when exposed to high pressure.

3. Social reality does not seem to create a difference between high and low need-for-approval Ss in judgmental shifts under a condition of high pressure.

4. No distinction between the psychological relevance of social and physical reality was found for high need-for-approval Ss.

The investigator concluded that further research is needed to find personality correlates of judgmental shifting behavior, and that there should be more work done in an attempt to delineate the dimension called "social reality".
INTRODUCTION, PROBLEM AND HYPOTHESES

Introduction

A critical area of social psychology open to behavioral investigation is the assessment and prediction of conforming behavior in varying situations, i.e., physical and social reality. Little attempt has been made to deal with the dimensions of task difficulty and/or stimulus ambiguity. Festinger (1950, p. 272) defined physical reality as a continuum along which "...the subjective validity of opinions, attitudes, and beliefs may be said to lie." At the end of the continuum where there is complete dependence on physical reality for the subjective validity of one's beliefs or opinions, the dependence upon other people for the confidence one has in these opinions is very low or zero. When dependence upon physical reality is low, dependence upon social reality is high, i.e., a belief, opinion, or attitude is "correct to the extent that it is anchored in a group of people with similar beliefs, opinions, and attitudes. Newcomb, Turner and Converse (1965) stated that cognitive norms that do not correspond to any physical reality have effects that are just as real as those that do. Such effects differ principally from those corresponding to physical reality in that they depend exclusively
Past work on conformity has dealt with relatively unambiguous stimulus situations. When the judgmental situation is anchored in unambiguous stimulus information, the resistance to conformity pressures will be greater. Conversely, the resistance will be lower the more ambiguous the information. Therefore, stimulus situations anchored only in social reality will exhibit more conforming behavior (Secord and Backman, 1964, p. 329).

The modern impetus to conformity research evolved from Asch's (1951) classic work on conformity. His work was concerned with settings where the stimulus situation, but not the stimulus, was ambiguous. Asch placed a single individual in the position of a minority of one against a wrong and unanimous majority. He used 50 male, college students as Ss. Results indicated that one-third of all the critical Ss' responses were errors similar to the unanimous majority, but that the majority effect was far from complete. Sixty-eight percent of the responses from the critical Ss were correct. Asch found that the effect of the majority grew stronger as the clarity of the situation diminished and became ambiguous.

Both Asch (1961) and Festinger (1957) have suggested that behavior changes be studied in different situations and that psychological qualities of the stimulus situation be taken into account when attempting to assess conformity. According to Festinger (1954), when a discrepancy exists
with respect to opinions or abilities, there are tendencies to change one's own position so as to move closer to others in a group.

Crutchfield (1954) cited four criteria as necessary for measurement of conformity behavior to group pressure: direct behavioral assessment; psychologically relevant situations; standardization of group situations; and economy in test procedure. The typical Asch situation successfully fills only the first two criteria. Several researchers (Crutchfield, 1954, 1955; Olmstead & Blake, 1955) modified the Asch situation to meet the suggested criteria by using a simulated situation which provides a standard social context for all individuals. Subjects are convened in a group situation, in which the experimenter controls and manipulates the situation. The major advantages are standardization and economy.

Crutchfield's (1954) initial studies showed the following: the amount of conforming behavior was large; the kind of stimulus material determined the degree of conformity exhibited; high conformists placed emphasis on external and socially approved values; female college Ss conformed more than male college Ss, and female college alumnae exhibited less conformity than found in all other groups tested.

Olmstead and Blake (1955) attempted to compare the effects of a simulated group with judgments made in a face to face, interacting situation. The modifications in
judgment were somewhat higher in the simulated group than in the face to face group. They concluded there was no difference between a simulated condition and actual, face to face situations.

The work reviewed had demonstrated several findings: females tend to conform more than males (Crutchfield, 1955; Tuddenahm, 1961; Allen & Crutchfield, 1963); judgments can be altered via group pressure (Asch, 1951; Crutchfield, 1954); and stimuli which are ambiguous in nature seem to be more effective than objective stimuli, when attempting to modify attitudes and opinions (Crutchfield, 1954).

According to McGee (1962), to gain meaningful information, data must be collected under controlled conditions via responses on given personality instruments as a basis for predicting behavior in various environmental conditions. He contends a criterion of independently measured behavior is needed, from which one can say a relation exists between response tendencies and basic personality traits. Two such instruments are the Marlowe-Crowne-Social-Desirability-Scale (Crowne & Marlowe, 1960), and the James (1963) Internal versus External Control Scale.

Crowne and Marlowe in their book, The Approval Motive: Studies in Evaluative Dependence (1964), reviewed several studies pertaining to conformity. Strickland and Crowne (1962) explored the concept of conformity as a function of need-for-approval (nApp). They utilized simulated group
pressure. Conformity was defined as the public statement of a judgment synonymous with that of the majority in the absence of logical justification for the statement. The subjects were 64 females from introductory psychology classes at Ohio State University. The experimental task was to report the number of knocks heard from a tape recording of rapping on a table, which was played for the Ss. Immediately following the recording, three accomplices gave their judgments by announcing a number, assigned 'a priori' by the E. All accomplices expressed a majority opinion and were never in disagreement with one another. The critical S was always told that she was the fourth S to participate in the experiment. Subjects' PRI scores were dichotomized at the mean, 17.83, to form high and low groups. High-PRI scores ranged from 18 to 31 and lows from 2 to 17. Differences in yielding were in the predicted direction \( (t = 3.08, P \leq .01) \). The authors concluded that high nApp persons tend to be characterized by less independence of judgment than lows.

Crowne and Marlowe (1964, pp. 79-84) conducted an experiment relating nApp to conformity. The discrimination problem was the identification of the larger of 2 clusters of dots on each of 20 trials. The stimulus material, 20 slides, was presented with a slide projector for 1 second intervals. To maintain face validity, each slide had a different geometric representation of the dots. Subjects
were 26 females from introductory psychology classes at Ohio State University, who volunteered to participate in an experiment in perceptual speed. Two male and two female confederates were trained to play the role of naive experimental Ss as credibly as possible. Subjects met in a waiting room and were then taken to a room where all Ss filled out the PRI. The Ss were then taken into the experimental room and given instructions. The order of position of responding by Ss was rotated on each trial so that each S responded in each of the five positions on four occasions. Four of the 20 trials were not crucial, i.e., accomplices replied correctly without comment. In 10 of the 16 critical conformity trials, confederates responded incorrectly without comment. On the remaining six trials, labelled "strong pressure" trials, the first confederate answered correctly in a hesitant manner. Immediately he was criticized by the other confederates who responded incorrectly, whereupon the first accomplice changed his reply and responded to the unanimous majority, still before the critical S replied. Subsequent to the experiment each critical S was given an awareness questionnaire. Scores on the PRI were dichotomized at the overall mean of the sample. A Ss' conformity score was the number of trials on which she agreed with the group of confederates' incorrect majority. The mean number of conforming responses for high PRI-scorers was 9.46; for low PRI-scorers the mean was 5.46 (done without regard for trial categories). The
difference was significant ($t = 2.56, p \leq .02$), lending further support to the relation between nApp and conformity. Crowne and Liverant (1963) studied conforming behavior as it is related to Social Learning Theory (Rotter, 1954). Approval motivated Ss were hypothecated to be less able to resist group pressure, hence displaying less confidence in their judgments. The conformity situation was one in which the individual was confronted with conflicting demands. The Ss were 40 male and 70 female introductory psychology students. The experimental task was to distinguish between the larger of 2 clusters of dots on each of 20 trials. Each experimental group was composed of a naive S and four trained confederates. On each trial, Ss answered publicly as to the larger of the cluster of dots. On the critical trials, the confederates announced an incorrect majority judgment. Subjects were administered the PRI and the Rotter (1942) Level of Aspiration Board. Under one set of conditions, normal Asch type instructions were used. In the second set of conditions, Ss were given a certain amount of money and allowed to bet on each of their judgments. The mean amount of conformity of the high nApp group was 57.44 (n=9) while the mean of the low group was 43.69 (n=13). The difference was significant ($t = 3.71, p \leq .01$) as predicted. Amount of yielding did not differ between internals and externals in the normal Asch situation. However, in betting conditions, externals conformed significantly more than the internals.
Odell (1959) used the internal versus external locus of control (I-E) dimension to examine conforming behavior in an Asch type situation. The I-E scale purports to measure the extent to which an individual perceives events as determined by his own capabilities (internally oriented) versus the extent to which he sees events as determined by luck, chance, fate or the manipulations of others (externally oriented). He found that externally oriented Ss showed greater tendencies to conform then did internally oriented Ss. Greene, Lotsof and James (1964) conducted a conformity experiment in the same vein as Asch's, but Ss were allowed to express their confidence in their judgment by betting procedures. Analysis of results for males and females indicated that E's were more conforming than I's on the critical trials (P=.05). Confidence was significant for females only. Nicholson (1967) studied need-for-approval effects in conditions of varying social-evaluation strength. When he manipulated public and private announcement of success or failure results, he found that high PRI-scorers were differentially sensitive to the evaluative situations. Nicholson also suggested that a measure of success and failure expectancies should be used in research of need-for-approval effects.

**Problem**

With few exceptions (Wiener, Carpenter and Carpenter, 1956; McDavid and Sistrunk, 1964), little research has been
concerned with conformity, either within the context of reality or as it relates to certain personality correlates. Could differences in judgmental shifts, defined as shifts in judgment from an initial position about a stimulus object to an alternative position, be explained by need-for-approval, reality, and pressure effects? If differences could be explained, could they be accounted for by a PRI-reality interaction? The experimenter provided an experimental situation to investigate this problem.

The Experimental Situation

To study the relation between nApp and reality, the following situation was created with these characteristics:

1. Two levels of reality were established: physical and social. Physical reality was defined as a situation in which there was a clear physical referent. The experimental condition was one in which a judgment was required as to the larger of two clusters of dots on each of nine trials (Appendix A). Social reality was defined as a condition in which no clear physical referent was available. The experimental situation required a judgment as to whether or not pictures of men, some having been described as convicted murderers, were in fact convicted murderers (Appendix B)\(^1\). In this situation, neither a correct answer or a clear physical referent was available. Consensual validation was a mechanism by which Ss could alter their opinion.

2. Two levels of pressure were created: high and

\(^1\)These pictures taken from the IES test.
low. High pressure was structured as the apparent disagree-
ment of three and agreement of one member about a judgment,
or disagreement by all four members of the group. Low
pressure was composed of three agreeing and one disagreeing
member of the group or four agreements.

3. A simulated group situation. Five Ss were simul-
taneously tested per experimental session via a modified
Crutchfield (1954) apparatus, which allows for individual
booths. Each booth contained an electrical panel with
two rows of signal lights which showed the responses of
the other members of the group (Appendices C-E). The
panels contained switches by which an individual indicated
his response. The apparatus was an electrical communication
system among the five Ss, with no direct, verbal commuника-
tion permitted. The task was the same for all members of
a group, that being judgment of slides shown on a screen
placed in the front of the experimental room. All booths
were actually controlled by the E from the master panel
(Appendices F-G). The E transmitted the same information
to all Ss who believed they were receiving factual infor-
mation from the other members of the group. The order of
responding was the same for each subject continuously.

Hypotheses

Three sets of hypotheses were tested. The dependent
variate was defined as the mean number of judgmental shifts.
Hypothesis 1 Assumptions and Statement

Assumptions. Within physical reality, the stimulus situation is unambiguous and is clearly distinguishable for each subject. This should provide a situation where a comparison between high and low-PRI-scorers can be made in terms of judgmental shifts.

Hypothesis 1. High and low-PRI-scorers do not differ in judgmental shifts in physical reality in high pressure. Specifically,

\[ \mu(\text{High PRI-P.R.-H.P.}) = \mu(\text{Low PRI-P.R.-H.P.}) \]

Hypothesis 2 Assumptions and Statement

Assumptions. Social Reality does not have a continuum or scale of objective belief to which one may refer. An individual's opinion or judgment regarding a matter rests solely on his own cognitions concerning the object in question. The task is structured so that only the consensus of peers can be relied upon. This condition should supply an opportunity for nApp to be operative.

Hypothesis 2. Shifts in judgment in social reality in high pressure are greater for high than low-PRI-scorers. Specifically,

\[ \mu(\text{High PRI-S.R.-H.P.}) > \mu(\text{Low PRI-S.R.-H.P.}) \]

Hypothesis 3a and 3b Assumptions and Statements

Assumptions. Social reality, having no clear referent, should produce a situation in which nApp is more operative
than physical reality, where a physical referent is available. Social reality should create more discrepancy and uncertainty than physical reality, and therefore, necessitate more restructuring of one's cognitions and belief, which might be achieved by compromising to the majority judgment. Sensitivity of shifts in judgment was defined as the mean difference between high and low pressure with high-PRI-scorers in both realities.

Hypothesis 3a. Low PRI-scorers do not differ in judgment between high and low pressure in either reality. Specifically,

\[ \bar{d}(S.R.,\text{Low PRI}) = \bar{d}(P.R.,\text{Low PRI}). \]

Hypothesis 3b. For high-PRI-scorers, the difference in judgmental shifts between high and low pressure in social reality is significantly greater than high and low pressure in physical reality. Specifically,

\[ \bar{d}(S.R.,\text{High PRI}) > \bar{d}(P.R.,\text{High PRI}). \]
METHOD

Pre-experimental Measures

Two variates were used as classification factors, the PRI and the I-E. These measures were administered during one class period to the fall, 1966-67, introductory psychology class. These data were gathered three months before conduct of the experiment.

Personal Reaction Inventory

Crowne and Marlowe (1960) devised this scale to measure \( n_{\text{App}} \). A person scoring high on the scale is said to have a high need for social approval, whereas a person scoring low is said to have less need for social approval. The model for the PRI is a balanced scale, composed of 33 items, 15 of which are probably true but undesirable statements to make of oneself (e.g., "I sometimes try to get even, rather than forgive and forget") and 18 items which are defined by behaviors which are culturally sanctioned and approved but which are improbable of occurrence (e.g., "I'm always willing to admit it when I make a mistake"). Items were selected to minimize pathological or abnormal implications and to meet the criterion of cultural approval. The internal consistency coefficient for the 33 item scale was .88,
while the test–retest correlation was .89 (Crowne & Marlowe, 1960). This scale is found in Appendix H.

DeKalb Survey Test

The James I–E Scale, disguised as the "DeKalb Survey Test–Form I.E.–1" was developed within the framework of Rotter's Social Learning Theory and is based on past work by Rotter (1954) and Phares (1956). "The I–E scale involves a generalized expectancy that the person's own behavior determines the outcome of events or that the outcome is beyond his control" (Greene, Lotsof and James, 1964). Phares (1955) first attempted to measure the internal–external (I–E) control dimension with a 13 item scale, designed to measure the characteristic of attributing the occurrence of reinforcements to chance rather than oneself. Rotter, Seeman and Liverant (1962) developed an I–E Scale, based on a forced choice format, which offered alternatives between internal and external control interpretations of various events.

James (1963) modified his original scale (James, 1957), making it in the format of a Likert type scale, with four categories of response for each item: Strongly agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD). Items are weighted three, two, one and zero, respectively. A sample item is: "Wars between countries seem inevitable despite efforts to prevent them." The test is composed of 60 items; only the 30 even–numbered items are scored, while
the odd-numbered items are filler items.

The total score can range from 0 to 90 with the original college population mean being 37 and the standard deviation being 12. The scoring of the scale is in the external direction; the higher the score, the more externally oriented the individual. The split half reliability ranged from .84 to .96 and retest reliability ranged from .71 (same year) to .86 (3 month period) (James, 1966). This scale is found in Appendix I.

**Experimental Measure**

Judgment of slides was selected as the experimental task. This type of task seemed advantageous for several reasons. First, time per experimental session could be held to a minimum. This was necessary because experimental time available was only 50 minutes. Second, this allowed for a task that would be comparable between the two conditions of reality. Third, the task made a standard stimulus available to all Ss simultaneously.

Slides for physical and social reality were tested by a series of pilot studies, to insure maximum variability. Variability ranged from zero to seven. The dependent variate was the number of shifts from an initial judgment about the slides after pressure was exerted by peers.

**Post-experimental Awareness Questionnaire**

Informational input regarding Ss' responses was experimentally manipulated. Subjects' awareness of this
deception could affect results. To assess awareness, each subject completed the following:

In your own words, briefly tell me what you think this experiment was about.

Responses to the questionnaire were analyzed by four graduate students, independently, according to the pre-established criteria (Appendix J). Written knowledge of deception or transmission of false information was analyzed, specifically. An open ended questionnaire was utilized to avoid any prompting or cueing of Ss by the E concerning the true nature of the experiment.

**Subjects**

Subjects were female students from an introductory psychology class at Omaha University. The age of Ss was restricted to those who had reached their 17th birthday, but had not reached their 22nd birthday. All Ss must have completed both the PRI and I–E prior to experimentation. No S participated if she had taken introductory sociology within the past academic year, due to the fact that films involving conformity studies had been shown in that particular class. There was a total of 390 females enrolled in the course. All members of introductory psychology courses are required to participate in three hours of psychological experimentation as a course requisite. About three months prior to the experiment all members of the class were premeasured on the PRI and the I–E.

Approximately four weeks after the premeasures were
gathered, E appeared at the start of the class. The inves-
tigator said to the class members:

As you know, a course requisite is that you par-
ticipate in experimental research for a total of
three hours. I am conducting an experiment to
investigate perceptual speed and discrimination.
To assist me, I am asking that the girls par-
ticipate in this study. This will take about
45 minutes of your time. If you participate you
will receive one hour's research credit. You will
not be subjected to personal embarrassment or
discomfort. If you wish to volunteer, I will take
your name now. The following girls are not eli-
gible to participate in this experiment (read names
of those not eligible). I will read to you the
scheduled experimental times. If you cannot appear
for at least three of these times, please do not
volunteer. You will be notified several days in
advance as to the specific time and place. This
experiment will not begin for several weeks.
These announcements will be made in the usual
manner. When the experiment is finished, I will
discuss the results with all of you in class.
Thank you.

Two hundred and twenty-four females volunteered for
the experiment, but only 160 girls participated. Extra
Ss were recruited to insure the required experimental
group size of five Ss. Awareness effects reduced the
sample size; therefore, this was considered in the analy-
sis.

**Conduct of the Experiment**

**Pre-experimental procedure**

The investigator used 16 experimental groups to evaluate
effectiveness of stimulus material, experimental procedures,
and clarity of instructions. Subjects were asked for help
and suggestions by which instructions were modified and
procedures simplified. One classroom was scheduled for a period of eight hours per day for five consecutive days.

Information exchange was held to a minimum by scheduling the experiment for only one week, and requesting that Ss not divulge any information concerning the experiment until the end of the week. Subjects were randomly assigned to all treatment and session combinations.

Initially a seating plan was arranged, but the E decided not to use it, since it could have seemed "rigged". Subjects were allowed to sit at any one of the five seats, about 15 inches apart, which were in front of two tables on which the cubicles and individual panels were placed. The table was 12 feet from a screen, which was in front of the experimental room.

Slide order was randomized prior to arrival for each experimental group. Pressure ratios were randomized in advance for every session. All necessary answer sheets and pencils were placed in each cubicle prior to Ss' arrival.

Experimental procedures. The Ss were assembled and seated in the experimental room. Instructions (Appendices K and L) were given, dependent upon which reality condition was being tested. After instructions were read, E, who was located five feet in back of the Ss, turned off the lights in the experimental room, turned on the slide projector and timer, and projected the first slide onto the screen. At the end of five seconds, the slide projector moved automatically by the use of an interval timer connected to an
industrial timer, to a blank space, which allowed sufficient light for Ss to mark the answer sheets and flip the electrical switches. When all five Ss had responded, E first flipped the switch for pressure, then the ratio switch, and finally the individual switch to transmit the assumed responses to the Ss. Then each S flipped the switch on the individual panel to the off position, and replied a second time. When the second response was recorded on the E's master panel, the E flipped the individual light switch to off, so that the lights on the individual Ss' panels would turn off. The investigator then switched to the next slide and this procedure was continued for all nine slides. The experimental time for each group was approximately 15 minutes. At the end of the series of slides, the investigator passed out post-experimental awareness questionnaires and asked Ss to complete the questionnaire. Upon completion, Ss' experimental credit cards were signed, Ss were thanked and dismissed. Data sheets (Appendices M and N) were collected and the experimental room was prepared for the next session.

Preliminary Analytical Considerations

Loss of Subjects

Awareness questionnaires were analyzed for possible awareness of deception and/or manipulation of information. This resulted in a loss of six Ss.
PRI Categorization

The premeasures were scored pre-experimentally, but Ss were recruited without regard for particular scores. The range for the sample (n=154) was from 4 to 28. The sample mean was 15.79 and the standard deviation was 5.20. Norms for the experimental sample and other samples are found in Appendix 0.

Scores of the 154 Ss were dichotomized into high and low categories. The range of scores was from 16 to 28, and 4 to 15, for high and low categories, respectively.

I–E Categorization

Range for the sample was from 15 to 66. The sample mean was 39.58 and the standard deviation was 9.19. Norms for the experimental group and other samples are found in Appendix P.

Scores for the sample were dichotomized into internal and external categories. Scores ranged from 15 to 39, and 40 to 66, for internal and external categories, respectively.

Design

A fixed-effects model was used for the analyses. A completely-crossed, four-factor analysis of variance was used. Since loss of Ss due to awareness seemed to be related to treatment effects, a least-squares solution of the analysis of variance was used. Composition of experimental
groups is shown in Appendix Q.

Planned orthogonal comparisons were used to test hypotheses one and two because they create a more powerful statistical test and reduce redundancy. Hypotheses 3a and 3b were tested via planned comparisons which were not orthogonal. A risk of Type I error (\(\alpha = .10\)) was used.
RESULTS

Correlational Analyses

A correlational analysis (n=154) was computed between the two factors, PRI and I-E, and the criterion, number of judgmental shifts. The results are shown in Table 1. Little direct relation between the predictors and criterion was shown.

Table 1
Pearson-Product-Moment Correlations between PRI, I-E, and Judgmental Shifts

<table>
<thead>
<tr>
<th></th>
<th>PRI</th>
<th>I-E</th>
<th>Shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRI</td>
<td></td>
<td>-.22*</td>
<td>.02</td>
</tr>
<tr>
<td>I-E</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The relation between the PRI and I-E indicated that the two personality instruments account for only four percent of the variance. Multiple correlations between the trait variates and the criterion were computed. The results are shown in Table 2. None of the correlations between the treatment factors and the criterion were significant, indicating that a trait-treatment explanation was in order. Normality of criterion was questionable, consequently these coefficients should be interpreted with caution.
Table 2

Multiple Correlations Between Reality-Pressure and Judgmental Shifts

<table>
<thead>
<tr>
<th>Treatment</th>
<th>n</th>
<th>Judgmental Shifts</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reality-Pressure</td>
<td>154</td>
<td>.072</td>
<td>N.S.</td>
</tr>
<tr>
<td>PR-HP</td>
<td>36</td>
<td>.117</td>
<td>N.S.</td>
</tr>
<tr>
<td>PR-LP</td>
<td>39</td>
<td>.210</td>
<td>N.S.</td>
</tr>
<tr>
<td>SR-HP</td>
<td>39</td>
<td>.065</td>
<td>N.S.</td>
</tr>
<tr>
<td>SR-LP</td>
<td>40</td>
<td>.217</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

Analysis of Variance and Post-Hoc Comparison Results

The summary of means for the analysis is shown in Appendix R. Both a weighted analysis, as Steel and Torrie (1960) recommend, and an ultra conservative F test (Box, 1954) were used in the analysis of variance, since the assumption of homogeneity of variance was not met (P=.10). Winer (1962) states that the F test is robust with respect to the assumption of homogeneity of error variance. Results of the analysis of variance are shown in Table 3. Since some of the interaction effects were significant, a clear interpretation of the main effects was not possible.

The extremely large F ratio for the factor pressure suggests the general notion that the amount of social pressure induced contributes to the number of shifts in judgment.
Table 3

Analysis of Variance Summary (Least Squares) for the Judgmental Shift Criterion

<table>
<thead>
<tr>
<th>Source</th>
<th>d.f.</th>
<th>M.S.</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (PRI)</td>
<td>1</td>
<td>.079</td>
<td>.045</td>
<td>N.S.</td>
</tr>
<tr>
<td>B (I-E)</td>
<td>1</td>
<td>5.815</td>
<td>3.316</td>
<td>≤ .10</td>
</tr>
<tr>
<td>C (Pressure)</td>
<td>1</td>
<td>66.740</td>
<td>38.053</td>
<td>≤ .001</td>
</tr>
<tr>
<td>D (Reality)</td>
<td>1</td>
<td>3.658</td>
<td>2.086</td>
<td>N.S.</td>
</tr>
<tr>
<td>A X B</td>
<td>1</td>
<td>11.873</td>
<td>6.769</td>
<td>≤ .01</td>
</tr>
<tr>
<td>A X C</td>
<td>1</td>
<td>4.290</td>
<td>2.446</td>
<td>N.S.</td>
</tr>
<tr>
<td>A X D</td>
<td>1</td>
<td>2.042</td>
<td>1.164</td>
<td>N.S.</td>
</tr>
<tr>
<td>B X C</td>
<td>1</td>
<td>2.860</td>
<td>1.631</td>
<td>N.S.</td>
</tr>
<tr>
<td>B X D</td>
<td>1</td>
<td>5.209</td>
<td>2.970</td>
<td>≤ .10</td>
</tr>
<tr>
<td>C X D</td>
<td>1</td>
<td>9.561</td>
<td>5.415</td>
<td>≤ .05</td>
</tr>
<tr>
<td>A X B X C</td>
<td>1</td>
<td>4.413</td>
<td>2.516</td>
<td>N.S.</td>
</tr>
<tr>
<td>A X B X D</td>
<td>1</td>
<td>3.096</td>
<td>1.765</td>
<td>N.S.</td>
</tr>
<tr>
<td>A X C X D</td>
<td>1</td>
<td>3.360</td>
<td>1.916</td>
<td>N.S.</td>
</tr>
<tr>
<td>B X C X D</td>
<td>1</td>
<td>2.959</td>
<td>1.687</td>
<td>N.S.</td>
</tr>
<tr>
<td>A X B X C X D</td>
<td>1</td>
<td>7.407</td>
<td>4.223</td>
<td>≤ .05</td>
</tr>
<tr>
<td>Error</td>
<td>138</td>
<td>1.754</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>153</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The significant C X D and A X B X C X D interactions reveal the importance of pressure as a factor in the decision making process. The interactions involving reality, B X D, C X D and A X B X C X D, indicate that reality of the psychological situation plays a relevant role in the
development of attitudes and changing of judgment.

A summary of simple main effects is shown in Table 4.

Table 4
Analysis of Variance Summary for Simple Main Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>d.f.</th>
<th>M.S.</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRI for Internal</td>
<td>1</td>
<td>7.008</td>
<td>3.995</td>
<td>≤.05</td>
</tr>
<tr>
<td>PRI for External</td>
<td>1</td>
<td>14.115</td>
<td>8.047</td>
<td>≤.01</td>
</tr>
<tr>
<td>I-E for high PRI</td>
<td>1</td>
<td>24.067</td>
<td>13.721</td>
<td>≤.001</td>
</tr>
<tr>
<td>I-E for low PRI</td>
<td>1</td>
<td>2.365</td>
<td>1.348</td>
<td>N.S.</td>
</tr>
<tr>
<td>I-E for physical reality</td>
<td>1</td>
<td>.792</td>
<td>.452</td>
<td>N.S.</td>
</tr>
<tr>
<td>I-E for social reality</td>
<td>1</td>
<td>5.013</td>
<td>2.858</td>
<td>≤.10</td>
</tr>
<tr>
<td>Reality for Internal</td>
<td>1</td>
<td>3.938</td>
<td>2.245</td>
<td>N.S.</td>
</tr>
<tr>
<td>Reality for External</td>
<td>1</td>
<td>.387</td>
<td>.221</td>
<td>N.S.</td>
</tr>
<tr>
<td>Pressure for phy reality</td>
<td>1</td>
<td>67.379</td>
<td>38.414</td>
<td>≤.001</td>
</tr>
<tr>
<td>Pressure for soc reality</td>
<td>1</td>
<td>11.375</td>
<td>6.485</td>
<td>≤.05</td>
</tr>
<tr>
<td>Reality for high pressure</td>
<td>1</td>
<td>15.803</td>
<td>9.010</td>
<td>≤.01</td>
</tr>
<tr>
<td>Reality for low pressure</td>
<td>1</td>
<td>.916</td>
<td>.522</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

The mean summary for the PRI X I-E interaction (Appendix S) indicated that high PRI-externally oriented individuals shifted in judgment more than low PRI-externally oriented individuals, which was expected. However, a reversal occurred with internally oriented persons. The internal-low PRI-scorer shifted more than the internal-high PRI-scorer.

No interpretation is readily apparent. The mean summary for the I-E X Reality interaction (Appendix T) revealed that in
physical reality there was no difference between internally and externally oriented individuals. In social reality, the externally oriented person shifted markedly more (1.43) than did the internally oriented individual (.78). The mean summary for the Pressure X Reality interaction (Appendix U) showed that the condition of high pressure produced more judgmental shifting behavior than low pressure did for both realities. Further, under high pressure, more shifts occurred in physical than social reality.

Results for Hypothesis 1

The means used to test hypothesis 1 are shown in Table 5. The investigator hypothesized that high and low PRI-scorers do not differ in mean number of judgmental shifts, in physical reality with high pressure. The test of hypothesis 1 is shown in Table 6. The outcome of the test did not contradict the hypothesis. The results clearly supported the notion that under physical reality, with high pressure exerted, there was no difference created for high and low PRI-scorers, and consequently, the mean number of judgmental shifts did not differ.

Table 5

Means for PRI Categorization in Physical Reality in High Pressure

<table>
<thead>
<tr>
<th>Low PRI</th>
<th>High PRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.21</td>
<td>2.35</td>
</tr>
</tbody>
</table>
Table 6
Orthogonal Planned Comparison Test of Hypothesis 1

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Difference</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>High PRI-P.R.-H.P.</td>
<td>minus</td>
<td>.14</td>
<td>.006</td>
</tr>
<tr>
<td>Low PRI-P.R.-H.P.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results for Hypothesis 2

The means used to test hypothesis 2 are found in Table 7. The E hypothesized that high PRI-scorers shift more in judgment than low PRI-scorers when in the condition of social reality with high pressure exerted. The test of hypothesis 2 is shown in Table 8. The results refuted the hypothesis. The condition of social reality was expected to be a more ambiguous and unclear one, with only consensual validation as a reference point, and was expected to force the Ss to move more to the majority opinion. The researcher expected high PRI-scorers to have shifted more than low PRI-scorers since need-for-approval was expected to be operative, but this was not the case as evidenced by the results.

Table 7
Judgmental Shift Means for PRI Categorization in Social Reality in High Pressure

<table>
<thead>
<tr>
<th>Low PRI</th>
<th>High PRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>.95</td>
<td>1.79</td>
</tr>
</tbody>
</table>
Table 8
Orthogonal Planned Comparison Test of Hypothesis 2

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Difference</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>High PRI – S.R. – H.P. minus Low PRI – S.R. – H.P.</td>
<td>.84</td>
<td>.201</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

Results for Hypotheses 3a and 3b

The means comprising the basis for testing these hypotheses are found in Table 9. The investigator hypothesized that low PRI-scorers are not differentially sensitive in either physical or social reality, while high PRI-scorers would be more sensitive in social than physical reality. Sensitivity was defined as the mean difference between high and low pressure in stated conditions. For convenience, derivation of the sensitivity criterion is shown in Table 10. The results of the planned comparison tests for hypotheses 3a and 3b are found in Table 11. The results supported the hypothesis for low PRI-scorers, but refuted the hypothesis for high PRI-scorers. Thus, low PRI-scorers did not differ in number of judgmental shifts in either reality. It seemed that for high PRI-scorers, the level of reality did not make a difference in shifts in judgment. High PRI-scorers were not more sensitive in social reality than physical reality as had been predicted.
Table 9
Means for Tests of Hypotheses 3a and 3b

<table>
<thead>
<tr>
<th></th>
<th>Social Reality</th>
<th>Physical Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low PRI</td>
<td>High PRI</td>
</tr>
<tr>
<td>H.P.</td>
<td>.95</td>
<td>1.79</td>
</tr>
<tr>
<td>L.P.</td>
<td>.75</td>
<td>.45</td>
</tr>
</tbody>
</table>

Table 10
Derivation of the Sensitivity Criterion

<table>
<thead>
<tr>
<th></th>
<th>Social Reality</th>
<th>Physical Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low PRI</td>
<td>High PRI</td>
</tr>
<tr>
<td>H.P.</td>
<td>.20</td>
<td>1.34</td>
</tr>
</tbody>
</table>

\(\bar{X}_{\text{high pressure}} - \bar{X}_{\text{low pressure}}\)

Table 11
Planned Comparison Tests of Hypotheses 3a and 3b

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Difference(^a)</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low PRI-Scorers</td>
<td>-1.57</td>
<td>.35</td>
<td>N.S.</td>
</tr>
<tr>
<td>(Hypothesis 3a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High PRI-Scorers</td>
<td>-.66</td>
<td>.06</td>
<td>N.S.</td>
</tr>
<tr>
<td>(Hypothesis 3b)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)Social (High - Low Pressure) - Physical (High - Low Pressure)
DISCUSSION AND CONCLUSIONS

Hypothesis 1 stated that low and high PRI-scorers do not differ in number of judgmental shifts, when high pressure was exerted in a condition of physical reality. Hypothesis 2 stated that high nApp Ss (high PRI-scorers) shift more than low nApp Ss (low PRI-scorers) when confronted with high pressure in social reality. Social reality, due to its perceptually ambiguous nature, was expected to be a situation where nApp would have been operative and necessitated that high nApp Ss shift to the majority opinion. Hypothesis 3a stated that low PRI-scorers are not differentially sensitive in either physical or social reality, with sensitivity being measured as the mean difference between high and low pressure. Hypothesis 3b stated that high PRI-scorers are more sensitive in social than physical reality. Hypothesis 1 and 3a were supported, but hypotheses 2 and 3b were not supported.

No hypotheses were specified with regard to the internal versus external control dimension, due to the sparsity of research relating I–E to conformity. The obtained results agree with the literature (Odell, 1959; Greene, Lotsof, and James, 1964) that externally oriented persons tend to conform or shift in judgment more than internally
oriented persons. The simple effects test (Table 4) revealed that I–E was significant for only high need-for-approval (high PRI-scorers); further that I–E was significant only within the realm of social reality, but not physical reality. A person with a need-for-social-approval and who feels that accrual of reinforcement is a function of something other than his own ability, would tend to shift more in a situation where no direct referent or anchorage point was available. In social reality, a reinforcement is dependent on the consensus of others. Therefore, the expectancy of success would be a major variate in the prediction of judgmental shifts. Perhaps the I–E dimension is dependent or varies with the physical-social reality continuum. In physical reality, a situation is maintained where expectancy of success does not become operative and this may be due to the lack of ambiguity of the stimulus.

The result of hypothesis 1, that high nApp Ss do not shift more than low nApp Ss in physical reality is contradictory to past research using the same stimuli (Crowne & Liverant, 1963; Crowne & Marlowe, 1964). However, the cited research did not utilize a simulated interaction process, rather trained confederates were used to convey the manipulated information. Also, smaller samples were used in the past research. The investigator feels that future exploration of need-for-approval and physical reality is in order, to determine if an unambiguous stimulus situation will cause nApp to be operative.
The results of hypothesis 3a are congruous with previous investigation of PRI effects. Low need-for-approval persons do not shift their judgment or opinion, even when presented with a majority opinion contrary to espoused belief.

Hypotheses 2 and 3b are concerned with social reality and the shifts that were hypothesized to be forthcoming, but for unknown reasons, failed to materialize. This contradicts Festinger's (1950, 1954) suggestion that shifting should be greater in social reality conditions. Several tentative explanations will be discussed with the realization that these are only speculative in nature. The investigator feels that social reality is not a unidimensional continuum, but rather is multidimensional in nature. Some of the possible dimensions, not previously delineated by empirical research are: a sex-morality continuum; an aesthetic taste continuum; and a culturally normative continuum. The investigator feels that lack of judgmental shifts may be due to the fact that only one of the possible dimensions was tapped. Another problem was that of the amount of pressure used in the experiment. The present approach to the pressure dimension was used because the investigator felt that complete agreement or complete disagreement of peers over nine trials would have seemed false or would not have been perceived to be a real transmission of peers' judgments. In future research, three additional degrees of
pressure should be attempted: unanimous agreement; total
disagreement, and an even number of agreeing and disagreeing
opinions. When Asch (1951) changed the situation from that
of a unanimous majority opposed to one, solitary individual
to a situation where the individual had one other agreeing
companion, the amount of exhibited conformity decreased
markedly. Thus, future research should investigate the
total continuum of pressure.

The major findings of the present investigation were:

1. High nApp Ss do not differ from low nApp Ss in mean
number of judgmental shifts in physical reality when exposed
to high pressure.

2. Low PRI-scorers do not differ in sensitivity in
either physical or social reality.

3. There seems to be no apparent difference between
high and low PRI-scorers in shifts in judgment in social
reality, under conditions used in the present experiment.

4. A direct comparison of social reality and physical
reality, as defined, failed for high PRI-scorers to reveal
a distinction between their psychological relevance.

The investigator concluded that generalized expectancy
of success is an important personality dimension and should
be utilized alone or in combination with the need-for-
approval dimension in future research attempts to predict
and/or find correlates of judgmental shifting behavior.
Further, there should be a continuation of work in an
attempt to delineate the dimension called 'social reality'
if judgmental shifts are to be explained within a psychological framework.
LIST OF REFERENCES
LIST OF REFERENCES


James, W.H. Personal communication, 1966.


### General References


APPENDICES
APPENDIX A

PHYSICAL REALITY SLIDES
APPENDIX B

SOCIAL REALITY SLIDES

[Images of two slides labeled A and B]
APPENDIX C

SCHEMATIC DRAWING OF AN INDIVIDUAL PANEL

Figure A1
APPENDIX D

SCHEMATIC DRAWING OF THE INDIVIDUAL PANELS CONNECTED

Figure A2
APPENDIX E

SCHEMATIC DRAWING OF THE INDIVIDUAL PANEL RATIO SELECTOR

Figure A3
APPENDIX F

SCHEMATIC DRAWING OF THE MASTER PANEL

Figure A4
APPENDIX G

SCHEMATIC DRAWING OF THE MASTER PANEL CONNECTION TO THE INDIVIDUAL PANELS

Figure A5
APPENDIX H

PERSONAL REACTION INVENTORY

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally. Your answers to the items are to be recorded on a separate answer sheet. Take the answer sheet now, print your name and any other information requested on the answer sheet. Please indicate whether each statement is true or false as it pertains to you in the following manner:

Black-in (1) if the item is true
Black-in (2) if the item is false

Find the number of the item on the answer sheet and black-in the space under the number (1) or (2). Please answer all items.

1. Before voting I thoroughly investigate the qualifications of all the candidates.

2. I never hesitate to go out of my way to help someone in trouble.

3. It is sometimes hard for me to go on with my work if I am not encouraged.

4. I have never intensely disliked anyone.

5. On occasion I have had doubts about my ability to succeed in life.

6. I sometimes feel resentful when I don't get my way.

7. I am always careful about my manner of dress.

8. My table manners at home are as good as when I eat out in a restaurant.

9. If I could get into a movie without paying and be sure I was not seen I would probably do it.
10. On a few occasions, I have given up doing something because I thought too little of my ability.
11. I like to gossip at times.
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.
13. No matter who I'm talking to, I'm always a good listener.
14. I can remember "playing sick" to get out of something.
15. There have been occasions when I took advantage of someone.
16. I'm always willing to admit it when I make a mistake.
17. I always try to practice what I preach.
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
19. I sometimes try to get even rather than forgive and forget.
20. When I don't know something I don't at all mind admitting it.
21. I am always courteous, even to people who are disagreeable.
22. At times I have really insisted on having things my own way.
23. There have been occasions when I felt like smashing things.
24. I would never think of letting someone else be punished for my wrong-doings.
25. I never resent being asked to return a favor.
26. I have never been irked when people expressed ideas very different from my own.
27. I never make a long trip without checking the safety of my car.
28. There have been times when I was quite jealous of the good fortune of others.
29. I have almost never felt the urge to tell someone off.
30. I am sometimes irritated by people who ask favors of me.

31. I have never felt that I was punished without cause.

32. I sometimes think when people have a misfortune they only got what they deserved.

33. I have never deliberately said something that hurt someone's feelings.
APPENDIX I

DE KALB SURVEY TESTS

Student Opinion Survey - Form I-E, 1

Instructions

Below are a number of statements about various topics. They have been collected from different groups of people and represent a variety of opinions. There are no right or wrong answers to this questionnaire. For every statement there are large numbers of people who agree and disagree. Your answers to the items on this survey are to be recorded on a separate answer sheet which is loosely inserted in the booklet. REMOVE THIS ANSWER SHEET NOW. Print your name and any other information requested by the examiner on the answer sheet, then finish reading these directions. Do not open the survey until you are told to do so. Please indicate whether you agree or disagree with each statement as follows:

- Blacken in (1) SA if you strongly agree
- Blacken in (2) A if you agree
- Blacken in (3) D if you disagree
- Blacken in (4) SD if you strongly disagree

Please read each item carefully and be sure that you indicate the response which most closely corresponds to the way which you personally feel by finding the number of the item on the answer sheet and blacking in the space under the number 1, 2, 3 or 4.

(1) (2) (3) (4)
SA  A  D  SD  1. I like to read newspaper editorials whether I agree with them or not.
SA  A  D  SD  2. Wars between countries seem inevitable despite efforts to prevent them.
SA  A  D  SA  3. I believe the government should encourage more young people to make science a career.
4. It is usually true of successful people that their good breaks far outweighed their bad breaks.

5. I believe that moderation in all things is the key to happiness.

6. Many times I feel that we might just as well make many of our decisions by flipping a coin.

7. I disapprove of girls who smoke cigarettes in public places.

8. The actions of other people toward me many times have me baffled.

9. I believe it is more important for a person to like his work than to make money at it.

10. Getting a good job seems to be largely a matter of being lucky enough to be in the right place at the right time.

11. It's not what you know but who you know that really counts in getting ahead.

12. A great deal that happens to me is probably just a matter of chance.

13. I don't believe that the presidents of our country should serve for more than two terms.

14. I feel that I have little influence over the way people behave.

15. It is difficult for me to keep well-informed about foreign affairs.

16. Much of the time the future seems uncertain to me.

17. I think the world is much more unsettled now than it was in our grandfathers' times.
18. Some people seem born to fail while others seem born for success no matter what they do.

19. I believe there should be less emphasis on spectator sports and more on athletic participation.

20. It is difficult for ordinary people to have much control over what politicians do in office.

21. I enjoy reading a good book more than watching television.

22. I feel that many people could be described as victims of circumstances beyond their control.

23. Hollywood movies do not seem as good as they used to be.

24. It seems many times that the grades one gets in school are more dependent on the teachers' whims than on what the student can really do.

25. Money shouldn't be a person's main consideration in choosing a job.

26. It isn't wise to plan too far ahead because most things turn out to be a matter of good or bad fortune anyhow.

27. At one time I wanted to become a newspaper reporter.

28. I can't understand how it is possible to predict other people's behavior.

29. I believe that the U.S. needs a more conservative foreign policy.

30. When things are going well for me, I consider it due to a run of good luck.
SA  A  D  SD  31. I believe the government has been taking over too many of the affairs of private industrial management.

SA  A  D  SD  32. There's not much use in trying to predict which questions a teacher is going to ask on an examination.

SA  A  D  SD  33. I get more ideas from talking about things than reading about them.

SA  A  D  SD  34. Most people don't realize the extent to which their lives are controlled by accidental happenings.

SA  A  D  SD  35. At one time I wanted to be an actor (or actress).

SA  A  D  SD  36. I have usually found that what is going to happen will happen, regardless of my actions.

SA  A  D  SD  37. Life in a small town offers more real satisfactions than life in a large city.

SA  A  D  SD  38. Most of the disappointing things in my life have contained a large element of chance.

SA  A  D  SD  39. I would rather be a successful teacher than a successful business man.

SA  A  D  SD  40. I don't believe that a person can really be a master of his fate.

SA  A  D  SD  41. I find mathematics easier to study than literature.

SA  A  D  SD  42. Success is mostly a matter of getting good breaks.

SA  A  D  SD  43. I think it is more important to be respected by people than to be liked by them.

SA  A  D  SD  44. Events in the world seem to be beyond the control of most people.

SA  A  D  SD  45. I think that states should be allowed to handle racial problems without federal interference.
58

(1)  (2)  (3)  (4)
SA   A   D   SD  46. I feel that most people can't really be held responsible for themselves since no one has much choice about where he was born or raised.
SA   A   D   SD  47. I like to figure out problems and puzzles that other people have trouble with.
SA   A   D   SD  48. Many times the reactions of people seem haphazard to me.
SA   A   D   SD  49. I rarely lose when playing card games.
SA   A   D   SD  50. There's not much use in worrying about things...what will be, will be.
SA   A   D   SD  51. I think that everyone should belong to some kind of church.
SA   A   D   SD  52. Success in dealing with people seems to be more a matter of the other person's moods and feelings at the time rather than one's own actions.
SA   A   D   SD  53. One should not place too much faith in newspaper reports.
SA   A   D   SD  54. I think that life is mostly a gamble.
SA   A   D   SD  55. I am very stubborn when my mind is made up about something.
SA   A   D   SD  56. Many times I feel that I have little influence over the things that happen to me.
SA   A   D   SD  57. I like popular music better than classical music.
SA   A   D   SD  58. Sometimes I feel that I don't have enough control over the direction my life is taking.
SA   A   D   SD  59. I sometimes stick to difficult things too long even when I know they are hopeless.
SA   A   D   SD  60. Life is too full of uncertainties.
APPENDIX J

AWARENESS CRITERIA

CRITERIA: Ss' knowledge of deception. Knowledge of misinformation. Information not truthfully reported by E. Suspected peer's reactions were contrived. Suspicion that fellow Ss were not the source of agreement or disagreement.

EXAMPLES OF NON AWARENESS:

"Not everyone could agree or disagree with my opinion."

"I know I wasn't wrong that many times."

"You were studying conformity."

"You were checking the influence of the group on an individual's perception."

EXAMPLES OF AWARENESS:

"I knew you were falsifying the data."

"I wasn't receiving the true responses of the other Ss; the E was controlling what I saw."

"What I saw was always created to try and force me to change my mind."

"The lights I saw did not represent the responses of the other Ss."

"You were controlling the lights."
APPENDIX K

PHYSICAL REALITY INSTRUCTIONS

Hello, I am Mr. Blonsky, a graduate student in Psychology. Please turn the form in front of you over and fill out the required information.

This is an experiment in perceptual speed and discrimination. I am going to show you some slides for a short exposure. On these slides you will see two groups of dots. Your task is to indicate which of the two groups of dots contains the larger number of dots. You will not be allowed to talk at any time. The means of communication is the electrical panel which is before you. The switch on the right side of the panel is the way you indicate to me that you have made a choice. If you feel the group of dots at the left side of the slide is larger, flip the switch to the up position. (Please try this now.) If you feel the group of dots on the right side of the slide is larger, flip the switch to the down position. Try it. The 4 pair of lights you see on the panel will allow you to see how many people agree with your choice and how many people disagree with your choice.

Upon my showing a slide, you will respond with the electrical switch; then please mark your choice in the appropriate column, labelled Trial 1, on the answer sheet before you, marking the letter which is larger beside the number of the slide being shown. When all five of you have replied, you will see how many others agree or disagree with your choice. The upper row of green lights indicates how many people agree with your choice and the lower row of red lights indicates how many people disagree with your choice. After seeing the choices of the others, you will have an opportunity to make a second decision. This choice is to be entered in the column labelled Trial 2. Flip the switch to indicate your second choice. This process will be continued for all the slides. After you have marked your second decision in Column 2, please flip the switch to the middle position, which is the off position. Please remember to mark your choice down on the answer sheet in the appropriate position after every slide is shown, as well as by flipping the switch on the panel. The slides will be shown on the screen in the front of the room, one at a time. Please
do not communicate with anyone or attempt to do so.

Upon completion of the series of slides, E passed out a questionnaire and said:

Please fill out this questionnaire.

Name ____________________________

In your own words, briefly tell me what you think this experiment was about.

The nature of the present experiment does not allow a detailed explanation at this time, but you will be completely informed of the nature and purpose of this experiment at a future date. Please do not discuss this experiment with anyone. Thank you for your cooperation and participation.
APPENDIX L

SOCIAL REALITY INSTRUCTIONS

Hello, I am Mr. Blonsky, a graduate student in Psychology. Please turn the form in front of you over and fill out the required information.

This is an experiment in ability to discriminate. I am going to show some slides for a short exposure. On these slides you will see pictures of men, some of whom have been convicted of murder. Your task is to decide which is a murderer. You will not be allowed to talk at any time. The means of communication is the electrical panel which is before you. The switch on the right side of the panel is the way you indicate to me that you have made a choice. If you believe the man is a murderer, flip the switch to the up position. (Please try this now). If you do not feel the man is a murderer, flip the switch to the down position. Try it. The four pair of lights you see on the panel will allow you to see how many of the other people agree with your choice and how many of the other people disagree with your choice.

When you see the pictures, you will respond with the electrical switch, then mark your response in the appropriate column, labelled Trial 1, on the answer sheet before you, writing either a "yes" or a "no" beside the number of the slide being shown. When all five of you have replied, you will see how many others agree or disagree with your choice. The upper row of green lights will indicate how many people agree with your choice and the lower row of red lights will indicate how many people disagree with your decision. After seeing the choices of the others, you will have an opportunity to make another decision. This choice is to be entered in the column labelled "Trial 2" on your answer sheet. Flip the switch after your second choice. This process will be continued for all the slides. After you have marked each response and flipped the electrical switch, turn the switch to the middle position, which is the off position. Try this. Please remember to mark your choices down on the answer sheet in the appropriate position after every slide is shown, as well as flipping the switch on the panel. The slides will be shown on the screen in the front of the room, one at a time. Please do not
communicate with anyone or attempt to do so.

Upon completion of the series of slides, E passed out a questionnaire and said:

Please fill out this questionnaire.

Name__________________________

In your own words, briefly tell me what you think this experiment was about.

The nature of the present experiment does not allow a detailed explanation at this time, but you will be completely informed of the nature and purpose of this experiment at a future date. Please do not discuss this experiment with anyone. Thank you for your cooperation and participation.
APPENDIX M

PHYSICAL REALITY ANSWER SHEETS

DAY______________________

TIME______________________ Name:____________________

Please mark which cluster of dots on each slide is larger. Write the letter of the larger cluster in the appropriate column below. After seeing the responses of the other members of the group, you will be allowed to reply a second time. Please reply the second time in the column marked "Column 2".

<table>
<thead>
<tr>
<th>SLIDES</th>
<th>TRIAL 1</th>
<th>TRIAL 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX N

SOCIAL REALITY ANSWER SHEETS

DAY __________________

TIME____________________   Name ________________

Please indicate if you feel the following men are convicted murderers or not. Mark "yes" or "no" in the appropriate column below. After seeing the responses of the other members of the group, you will be allowed to reply a second time. Please reply the second time in the column marked "Column 2".

<table>
<thead>
<tr>
<th>SLIDES</th>
<th>TRIAL 1</th>
<th>TRIAL 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tr>
<tr>
<td>2.</td>
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</tr>
<tr>
<td>3.</td>
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<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
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</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
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</tr>
<tr>
<td>8.</td>
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</tr>
<tr>
<td>9.</td>
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### APPENDIX O

**Table Al**

**Personal Reaction Inventory Scale Norms**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Sex</th>
<th>Number of Cases</th>
<th>Mean</th>
<th>S.D.</th>
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</thead>
<tbody>
<tr>
<td>University of Omaha Introductory Psychology</td>
<td>Males</td>
<td>433</td>
<td>13.53</td>
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<tr>
<td>students (1964)</td>
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<tr>
<td>students (1964)</td>
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<td></td>
<td></td>
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<tr>
<td>students (1966)</td>
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<tr>
<td>students (1966)</td>
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<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Sample</td>
<td>Sex</td>
<td>Number of Cases</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>-----------</td>
<td>-----------------</td>
<td>-------</td>
<td>-------</td>
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<tr>
<td>University of Omaha (a) Introductory Psychology students (1966-67)</td>
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<td>Industrial Executives Tested at University of Omaha 1964-66</td>
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<td>16.31</td>
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(a) Used in experiment.
# APPENDIX P

Table A2

James (1963) I-E Scale Norms

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<tr>
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<th>Number of Cases</th>
<th>Mean</th>
<th>S.D.</th>
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(a) Used in experiment.
### APPENDIX Q

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<td>Internal</td>
<td>External</td>
<td>Internal</td>
<td>External</td>
</tr>
<tr>
<td>Physical Reality</td>
<td>7 14</td>
<td>10 9</td>
<td>9 7</td>
<td>10 9</td>
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<tr>
<td>Social Reality</td>
<td>13 14</td>
<td>6 6</td>
<td>10 6</td>
<td>10 14</td>
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Figure A6. Composition of Experimental Groups.
APPENDIX R

Table A3

Mean Summaries of Judgmental Shifts Across Nine Trials

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<td>External</td>
<td>Internal</td>
<td>External</td>
</tr>
<tr>
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<td>H.P.</td>
<td>L.P.</td>
<td>H.P.</td>
<td>L.P.</td>
</tr>
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<td>.29</td>
<td>3.10</td>
<td>.44</td>
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<td>1.40</td>
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</tr>
<tr>
<td></td>
<td>.50</td>
<td>1.00</td>
<td>1.40</td>
<td>.64</td>
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</table>
APPENDIX S

Table A4

Simple Effect Mean Summary for PRI X I-E

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<td>.79</td>
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<tr>
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<td>n=32</td>
</tr>
<tr>
<td>External</td>
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<td>.97</td>
</tr>
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<td>n=31</td>
<td>n=43</td>
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</tbody>
</table>
### APPENDIX T

**Table A5**

**Simple Effect Mean Summary for I–E X Reality**

<table>
<thead>
<tr>
<th>Reality Type</th>
<th>Internal</th>
<th>External</th>
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</thead>
<tbody>
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<td>Physical Reality</td>
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<td>1.35</td>
</tr>
<tr>
<td></td>
<td>n=37</td>
<td>n=38</td>
</tr>
<tr>
<td>Social Reality</td>
<td>.78</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>n=43</td>
<td>n=36</td>
</tr>
</tbody>
</table>
APPENDIX U

Table A6
Simple Effect Mean Summary for Pressure X Reality

<table>
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<tr>
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<th>High Pressure</th>
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<td>.40</td>
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<td>n=36</td>
<td>n=39</td>
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<tr>
<td>Social Reality</td>
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<td>.69</td>
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<tr>
<td></td>
<td>n=39</td>
<td>n=40</td>
</tr>
</tbody>
</table>