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Working
Paper

EXCURSION FROM THE PURE TO THE APPLIED

IN EXPERIMENTAL SOCIAL PSYCHOLOGY:

A REAFFIRMATION OF FAITH

By

Sasi Misra

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Abstract

This paper evaluates from the author's points of view, the current status of experimental social psychology as a positive science and a means of solving problems faced by potential users of social psychological knowledge. Furthermore, it describes five different experiments conducted by the author. The first two experiments focussed on theoretical issues. In the remaining three experiments, attention shifted to applications in organizational and consumer behaviour areas. All but the fifth experiment were hypothetico-deductive in nature and explicitly derived from distinctive middle-range theories in social psychology. All but the second experiment dealt with social influence process of one sort or another.

The title hints at the diverse foci of the author's work summarized here. Three criteria have been used to determine inclusion of research findings discussed in this paper: (a) the work must have used the experimental method accepted in psychological research; (b) the hypotheses tested must have been explicitly derived from distinctive theoretical and empirical generalizations in social psychology; and (c) the study must either have been conducted in an applied context or have implications for some practical issues. Thus, applied research built on ahistorical, humanistic perspectives, and using non-experimental methods are outside the scope of the discussion to follow. Consequently, the bulk of this paper draws upon five different experimental studies, two focussing directly on theoretical processes of interest to main-line social psychology with broad implications for practical concern and the remaining three studies dealing with problems of applied nature. Each study (except the fifth[1]), however, is rooted in a distinctive middle-range theory of social psychology. Each of these theories operates in a separate domain focussing on different processes of social behaviour. The objective of each experiment described here was to map out some specific segment of the social behaviour terrain as it occurred consistently among a number of people. One of the primary tasks of this paper is to delineate what this mapping process has produced. What real world significance do they have in addition to yielding hypothesized statistical significance? Apropos of this second question, the author

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[1] The fifth experiment was an exploratory one. Obviously, it could not meet the second criterion stipulated above.

would like to begin by calling attention to the current status of experimental social psychology, prior to considering data from various experiments.

Current Status of Experimental Social Psychology (ESP): A Reaffirmation of Faith

In recent years, experimental social psychology has been under a drumfire of criticisms, mostly from within and to some extent from outside the field. These criticisms are often scathing and pertain to the litany of dangers and disadvantages associated with the ubiquitous experimental method on the one hand, and failure to test new and interesting hypotheses on the other. In a nutshell, social psychology today is attacked for being highly technicized and hyper-operationalized. Most laboratory experiments have limited relevance (Chapanis, 1976) and often lend themselves to erroneous extrapolations (Bouchard, 1976) to solution of practical problems. Social psychological experiments are artificial, contrived, and lack realism. Many experiments have been seriously questioned on ethical grounds (Kelman, 1967). With respect to the value of many experiments in social psychology, wisecracks such as "Bubbapsychology"[2] or "lifting a match-stick by a crane" are well-known. Without delving further, it is tempting to reproduce a delightful comment of Mark Twain and a cartoon from the SASP Newsletter[*] which, I believe, are poignant testimonies to the cynical views highlighting the frailty of the experimental social psychologist.

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[2] Bubba: The Jewish grandmother. In this context, it refers to the common belief that experiments mainly demonstrate the obvious.

[*] Vol.5, No.2, April 1979, p.4.

On Experimental Design (Mark Twain)[3]

I constructed four miniature houses of worship—a Mohammedan mosque, a Hindu temple, a Jewish synagogue, a Christian cathedral—and placed them in a row. I then marked 15 ants with red paint and turned them loose. They made several trips to and fro, glancing in at the places of worship, but not entering.

I then turned loose 15 more painted blue; they acted just as the red ones had done. I now gilded 15 and turned them loose. No change in the result; the 45 traveled back and forth in a hurry persistently and continuously visiting each fane, but never entering. This satisfied me that these ants were without religious prejudices—just what I wished; for under no other conditions would my next and greater experiment be valuable. I now placed a small square of white paper within the door of each fane; and upon the mosque paper I put a pinch of putty, upon the temple paper a dab of tar, upon the synagogue paper a trifle of turpentine, and upon the cathedral paper a small cube of sugar.

First I liberated the red ants. They examined and rejected the putty, the tar and the turpentine, and then took to the sugar with zeal and apparent sincere conviction. I next liberated the blue ants, and they did exactly as the red ones had done. The gilded ants followed. The preceding results were precisely repeated. This seemed to prove that ants destitute of religious prejudice will always prefer Christianity to any other creed.

However, to make sure, I removed the ants and put putty in the cathedral and sugar in the mosque. I now liberated the ants in a body, and they rushed tumultuously to the cathedral. I was very much touched and gratified, and went back in the room to write down the event; but when I came back the ants had all apostatized and had gone over to the Mohammedan communion.

I saw that I had been too hasty in my conclusions, and naturally felt rebuked and humbled. With dimished confidence I went on with the test to the finish. I placed the sugar first in one house of worship, then in another, till I had tried them all.

With this result: whatever Church I put the sugar in, that was the one the ants straightway joined. This was true beyond a shadow of doubt, that in religious matters the ant is the opposite of man, for man cares for but one thing; to find the only true Church; whereas the ant hunts for the one with the sugar in it.

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[3]Source unknown as stated in Scott, W.E. & Cummings, L.L. (Eds.), Readings in organizational behavior. Irwin, Inc., 1973.

It is significant to note that most of these criticisms have come from some of the creative methodologists and distinguished theorists of modern social psychology (e.g., McGuire, 1973, Kelman, 1967).

However, experimental social psychology can be doughtily defended on the following grounds:

1. The artificiality of experimental settings has been "unjustly elevated to the status of a fatal flaw" (Fromkin & Streufert, 1976, p.433). Indeed, the content analysis of all empirical articles from 1966, 1970, and 1974 volumes of the Journal of Applied Psychology, Organizational Behavior and Human Performance, and Personnel Psychology has shown field research to be as narrow as laboratory research in the actors, settings, and behaviours sampled (Dipboye & Flanagan, 1979).

2. It can be said beyond a shadow of doubt that the experimental method is greatly responsible for establishing social psychology as a substantial and robust discipline. Inspired by the broad strategic contributions of Kurt Lewin, experimental social psychology has contributed the most to the intellectual framework of the discipline as it exists today. To drive the point home, from among the 70 psychologists who have received the Distinguished Scientific Contribution Awards by the American Psychological Association from 1956 to 1978, 16 are primarily experimental social psychologists. No other field within psychology, not even the field of "learning", has so many "Distinguished Psychologists" in its literal sense. Included among the 16 are some of psychology's Olympian figures, such as F.H. Allport, Muzaffar Sheriff, Fritz Heider, and Leon Festinger.

It might be justified to accuse social psychologists to have gone a bit too far in trying to prove that their is a "scientific" discipline and they are not "softies". But it is also important to note that an integral part of the formal training of the student of experimental social psychology is to grow up to become that kind of intellectual fish which is aware that his environment is wet.

ESP: Academic vs. Applied. As lengthy as this section of the paper has become, I have not cited specific experimental social studies which have been the means to understanding and solving practical problems and promoting human welfare. I shall deal with some of these aspects in the context of the experiments to be described. However, it should be mentioned that there exists a pervasive prejudice against applied research among academically oriented social psychologists, based on the assumption that such research is ephemeral. The merit of this assumption is dubious because generalizations from "pure" research do not generally endure either. Those that endure are more provocative than right.

Summing Up. The preceding comments are intended to emphasize that the advancement of experimental social psychology as a science has been remarkable. In the remainder of the paper, an attempt is made to show how experimental social psychological method and theories have served as stimuli and resource for the author's research in applied areas.

It needs to be stated at the outset that the experiments described in the following pages were conducted by the author(s) with the realization

that experimental situations seldom resemble naturally occurring situations. Experiments only permit us to look more closely at some problems. It is the experimenter's theoretical preference and preconceptions that define the range of problems for his inquiry. It is the purpose of the succeeding discussions to detail how the author's experiments were conceived, set up, and what they did and did not accomplish. The reader is invited to judge their values and limitations.

To cover the experiments and their related research fully in a paper such as this is unnecessary. Each of these experiments has been published as journal articles and the reader is referred to that source for fuller coverage.

Accordingly, the approach taken is to summarize each experiment according to the following outline:

1. Title indicating the general problem area.

2. Basic ideas leading to specific hypotheses.

3. The type of experiment performed and **design**/procedure.

4. Main results.

5. Conclusions **and** implications, if any.

EXPERIMENT I

The Effects of Attributional Instability on Conformity and Affiliation (Misra, 1973)

The experiment summarized below was guided by two convergent approaches to the study of social influence--social comparison theory approach (Festinger,

1954) and attribution theory approach (Kelley, 1967).

Humans have a drive to evaluate themselves. From this simple assumption, Festinger's theory of social comparison processes (1954) derived a coherent theoretical structure which could treat a wide range of phenomena such as, interpersonal attraction and rejection, affiliation and isolation, conformity and deviancy. Festinger reasoned that people's desire to evaluate themselves arises out of a need to know as to where they stand with respect to such personal attributes as abilities and opinions. Central to Festinger's line of reasoning are three assumptions: (1) People seek to satisfy their need for self-evaluation by comparing themselves with other people (when direct physical standards for comparison are absent or meagre). (2) Such social comparison can be perceived as an accurate and stable self-evaluation when people compare themselves with similar others with respect to attributes in question. (3) Therefore, people will seek out others who are similar to themselves; try to change others in order to make them similar to themselves; or change themselves to be closer to others (in terms of the attribute being evaluated) who are perceived as similar along salient dimensions. To this may be added the extension: the drive for self-evaluation is an increasing function of the degree of uncertainty concerning the particular aspect of the self being evaluated and this drive can be reduced by the acquisition of relevant information regarding the attribute (Gerard, 1963). As mentioned above, under certain conditions social comparison becomes the primary means by which relevant information is acquired. Thus, what people really want is is not merely knowledge but certainty. The individual while comparing the

level of his attribute with others takes intraindividual variability into

account. The basic theoretical statement therefore is: (1) relative

uncertainty is the prime mover in social comparison; (2) variability

comparison takes precedence over level comparison; (3) finally, there exists

a rough isomorphism between the concepts of uncertainty and attribution

instability when applied to self-evaluation. The last point needs explana-

tion.

Social Comparison: An ANOVA Cube Analysis. According to Kelley (1967),

the individual validates his inferences corresponding to a particular

attribute by the application of four criteria: (1) distinctiveness of the

entity, (2) consistency of his reactions over time, (3) modality, and

(4) consensus. Kelley assumes that both the person's own direct evidence

of consistency and the evidence supplied through social consensus contribute

to the stability of his own reactions. The greater the consistency, the more

stable his attribution. If, however, the person's own consistency evidence

is meagre and unreliable, i.e., his variability in reaction is high, he will

be rendered uncertain as to the validity of his own reactions. In order to

reduce the discomfort associated with uncertainty, he will be receptive to

relevant information through social consensus. Social comparison may be

viewed as one of the processes whereby information from others is used

in order to make stable attribution. The process is set into motion when

the information the person has from his own direct interaction with the

world (inner or outer) is poor and ambiguous.

Operationally, the greater the variability of an attribute, the greater the attribution instability. In the case of an ability, the performance of a relevant person may be utilized as comparison information. In the event of a sharp discrepancy between the person's performance and the performance of others, he will be more susceptible to influence, since his self-attribution is likely to be unstable. He will tend to exhibit a lack of confidence in his ability and/or longer latency of response. It is also expected that he would show increased dependence upon the others for comparison information. This is likely to manifest both in a tendency to affiliate and to conform to judgments of others that are based upon the ability in question. In a self-evaluation context, it is assumed that both tendencies to conform and affiliate are based on generalized expectation of the positively and negatively re-inforcing quality of interpersonal relationships and have similar reinforcing properties for the individual where uncertainty reduction (or the reduction of attribution instability) is the issue. It was, therefore, decided to use both of these dependent measures in order to triangulate better on the following hypothesized effects of attribution instability.

Hypothesis 1. Given a situation in which a person finds his performance discrepant from that of a comparison group, the tendency toward social comparison will be greater the more variable his own performance on the task. Thus, with ability level held constant, greater variability in performance will lead to : (a) lowered subjective confidence in own judgments; (b) increased latency in judgmental responses; (c) greater conformity to group norms; (d) increased tendency toward affiliation.

Hypothesis 2. The effect of level of ability on tendencies toward social comparison as manifested in conformity and affiliation will be more pronounced when the person's ability is of a medium level, less so when the ability level is either high or low.

Design. Thirteen college women were randomly assigned to each of the six cells of a 2 x 3 factorial design. Three ability levels were induced and counterbalanced against two variability levels. The two main dependent variables were (a) conformity and (b) affiliation.

Procedure. The experiment was run under the guise of "a study of information processing ability". Subjects (UCLA students) run in groups of four were given an elaborate explanation of the importance of information processing ability, with quotations attributed to the Presidential Address of the American Association of Scientists.

Having established the ability-evaluation context, self-attributed level and variability were manipulated by having the subjects first complete a judgmental task over a series of 18 trials and providing each person scores on each trial as well as the mean score. In this manner, each subject's ability was rated "excellent", "average" or "very poor" depending on her ability treatment and the variability in her performance was rated being "extremely consistent" or "extremely inconsistent" depending on the variability treatment to which she was assigned. High variability in ability meant a bogus score distribution that was platokurtic (variance = 5.08). Low variability in ability meant a score distribution that was leptokurtic (variance = 0.36).

Having manipulated the level and variability in attributed ability, the first set of dependent variables (conformity, subjective confidence, and latency of response) was measured in an Asch-type situation. In order to do so, a highly sophisticated electronic device with electronic stooges were used. This has been described in detail elsewhere (Misra, 1973).

Affiliation, the second main dependent variable was measured by the subject's decision to participate in a future group discussion. The ostensible purpose was to "generate some original ideas that could be put to use in teaching methods for both Head Start and deprived children."

Results

Table 1 summarizes mean subjective confidence, latency, conformity, and affiliation tendencies for six experimental groups.

Table 1. Mean subjective confidence,[a] latency of response,[b] conformity,[c] and affiliation tendencies.[d]

Measures	Variability in attributed ability	Level of ability attributed to self		
		Low	Medium	High
Confidence	Low	77.57	81.38	90.72
	High	77.25	74.13	72.03
Latency	Low	32.33	37.47	51.28
	High	53.60	40.19	56.93
Conformity	Low	3.77	4.46	4.07
	High	6.38	6.46	5.46
Affiliation	Low	1.62	2.08	3.23
	High	2.62	2.92	2.62

[a]Scores ranged from "0--least confident" to "100--most confident."

[b]The unit of measurement was millisecond.

[c]Number of times the subject conformed to incorrect group norm in the 13 critical trials.

[d]Higher scores indicate greater interest in joining the discussion group.

Analysis of variance performed on these data supported the major hypothesis that variability within one's own level of ability is an important determinant of conformity. The variability effect is more pronounced in the conformity and confidence data and less so in the latency data. The data did not bear out the predicted higher degree of conformity in the medium level conditions as compared with the high and the low levels. It appears that reference group influence becomes effective only when the intraindividual variability is low.

A significant Variability X Level interaction in the affiliation data showed that affiliation tendencies decreased for low variability conditions only as the level of attributed ability decreased. The maximum tendency to affiliate was shown by subjects in the high ability-low variability (i.e., consistently-excellent) condition. Does this mean that we affiliate with others who could provide us with self-enhancement?

Implications. Evidently, my experiment did not consider the larger social context in which the social comparison process operates. I conducted this experiment in a hardcore experimental social department addressing myself to theoretical issues and "similar others"! However, the experiment did succeed to some extent in specifying some of the conditions under which persons are more likely to choose similar others as referents and be influenced by them. Are these conditions not fairly common in everyday life?

EXPERIMENT II

The Meaning of Trust in Prisoner's Dilemma (Misra & Kalro, 1979)

Non-zero sum games, particularly the Prisoner's Dilemma, have spurred hundreds of experiments in the past two decades. A criticism often levelled against them is that conclusions drawn from research with PDG cannot be generalized to conflicts and cooperations in real life settings. However, it is recognized that the PD game simulates the very important class of social interaction setting, which is relatively free from situational constraints of social roles and structure. It is, therefore, rich in person information and the response strategies of subjects in this game reflect the orientations they tend to adopt in a wide variety of their social relationships. Thus, to put the point rather strongly, the little transactions we engage in this interpersonal game have important and far reaching implications for the way we relate to others and share with them. Specifically, it is assumed that by studying behaviour in PDG, we learn something about how one person's perceptions about another determine his own strategies to respond either cooperatively or competitively. It is assumed that the reader is familiar with the structure of PDG in which both players have a simultaneous and independent choice between a "cooperative" and "non-cooperative" alternative. The crucial feature of such a game is that one player can gain the most by choosing to be non-cooperative when the other chooses to be cooperative; he loses most when the reverse is true. However, for each player, mutual cooperation is a better strategy than

mutual non-cooperation. Since a true PD game is a one-play game without repetition, a player's strategy reflects his trust in the other player.

Deutsch (1960) appears to be the first social psychologist to recognize the appealing relevance and implications of this game for studying cooperation-competition and attribution of trust in social situations. Figure 1 presents the matrix exemplifying Deutsch's classical version of the PDG.

Figure 1

Player II

Player I

Note: Player I chooses between rows X and Y, Player II chooses between columns A and B. The lower left values in each cell are for Player I and the upper right values in each cell are for Player II.

The experiment (Misra & Kalro, 1979) described below dealt with the relationship between behaviour of subjects in PD to their perceptions of and beliefs about the "other player". It is a hypothetico-deductive experiment and a cross-cultural one at the same time. The impetus for this experiment stemmed from certain empirical generalizations drawn from Kelley & Stahelski (1970) concerning the basis of cooperators' and competitors' beliefs about others.

Based on evidence derived from the extensive literature employing mixed-motive games, Kelley and Stahelski (1970) have drawn the following empirical generalizations: Basically, there are two stable types of individuals which may be approximately described as cooperative and competitive; these two types have different views of what other people are like with respect to this typology; the different views are indirectly caused by their personalities. Further, Kelley and Stahelski have shown that individuals with competitive orientations to social relationships believe the world to be composed homogeneously of competitive individuals. By contrast, those with cooperative orientation construe the world to be more heterogeneously composed of both competitive and cooperative people. The first purpose of our study was to test the cross-cultural generality of the heterogeneity of expectations by cooperators and homogeneity of expectations by competitors about others, by using the familiar one-trial alternating play procedure with PDG (Deutsch, 1960).

Kelley and Stahelski have represented the relationship between a person's own orientation in the game and his expectations about the other's

orientation by a triangular plot (see Figure 2) termed the triangle hypothesis. The extent to which data conform to the triangle pattern is given by the triangularity index ($\underline{TI}$), which can be computed by the following formula: $\underline{TI} = (\underline{D} - \underline{C}) - |\underline{A} - \underline{B}|$, where $\underline{A}$, $\underline{B}$, $\underline{C}$ and $\underline{D}$ refer to the percentage of subjects falling into various cells in terms of their own behaviour vis-a-vis their expectations of the typical "other player" (see Figure 3).

Figure 2

The Triangle Hypothesis

Expectation as to Others' Orientations

	Trusting (Cooperative)	Suspicious (Competitive)
Trusting	X X X	X X
		X X X X
		X X X
		X X
Suspicious		X

Own Orientation

Figure 3

Expected typical		
	Cooperative	Competitive
Cooperative	A	B
Competitive	C	D

Self

The values of A, B, C and D are in percentages.

The index becomes larger the more $\underline{D}$ exceeds $\underline{C}$ and becomes smaller as there is any difference in either direction between $\underline{A}$ and $\underline{B}$. The index is positive for a triangular pattern oriented in the expected direction. A perfect triangular pattern of the type expected would yield a $\underline{TI}$ of 100 ($\underline{A} = \underline{B} = 50\%$ and $\underline{D} = 100\%$). However, the triangularity indices computed for several Western studies reported by Kelley and Stahelski ranged from 28 to 71.

The triangle hypothesis is valid to the extent that the expectations of cooperative subjects are evenly distributed across the top row and the expectations of competitive subjects pile up at the extreme right side of the bottom row. The implication of the triangle hypothesis is that while trusting $\underline{S}$s will expect the other to be either trustworthy or untrustworthy, most of the suspicious $\underline{S}$s will expect the other to be untrustworthy. Thus, our first hypothesis was:

Hypothesis 1. With respect to the relationship between a player's own choice and his expectation of the other's move, the expectations of trusting (cooperative) $\underline{S}$s about the "typical other" will be substantially more evenly distributed across the top row as compared with the expectations of the suspicious (competitive) $\underline{S}$s, yielding a highly positive triangularity index.

The second purpose of the study was to explore whether cooperators and competitors attach qualitatively different meanings to the behaviour of the other player. It was assumed that cooperators and competitors would differ with respect to their definitions of the same objective situation

(in this case, a nonzero-sum situation). Consequently, there will be differences between the two types in perceiving and evaluating the "other player" (in this case the cooperator) in the situation.

Particularly, we expected to find systematic differences between trusting and trustworthy subjects (cooperative choices at both first and second position play) on the one hand and suspicious and untrustworthy subjects (competitive choices at both positions) on the other in terms of their connotative meanings of cooperative behaviour. These differential indices might be sensitive to their different beliefs about others, as suggested by the triangle hypothesis.

Kelley et al (1970), in a transnational study of bargaining, found remarkable site differences with respect to the meanings given to the dimensions of cooperation versus competition which influenced negotiation outcomes and subsequent interactions. As measured by Semantic Differentials, at some sites this cooperation-competition dimension was given an "evaluative" meaning (E), i.e. good versus bad; at other sites it was given a "dynamism" meaning (D), i.e. weak and passive versus strong and active.

It is apparent from the structure of the game used in our experiment that a trusting and trustworthy subject is concerned about joint welfare and is essentially egalitarian in orientation. This could lead him to treat the nonzero-sum game as a setting to demonstrate his basic honesty and fair-mindedness. Perhaps based on this premise, his move on the first trial is a trusting one. On the second trial, those who follow this by a trustworthy

move in response to the other player's trusting move do so presumably because they feel it is wrong not to return the trust placed in them. Consequently, their assessment of the other person is more likely to be in evaluative terms such as moral, honest, peaceful, etc. This is also consistent with their opinion of themselves. Conversely, the player whose first move is suspicious treats the nonzero-sum game setting as a zero-sum game in which he can demonstrate his superiority and one-upmanship by maximising his individual gain. On account of his egoistic and rivalrous orientation, his second move in response to the other player's trusting move is untrustworthy, because this maximises the difference between his pay-off and the other player's pay-off to his own advantage. Accordingly, he perceives the other player as a weakling and a coward; chicken for his plucking. Thus it was hypothesized.

Hypothesis 2. Ss who make trusting and trustworthy choices will rate the other trusting player high on the Evaluative (E) and low on the Dynamism (D) dimension as measured by Semantic Differentials. The reverse trend in ratings of the cooperator will be obtained for suspicious and untrustworthy (competitive) Ss.

Method

The subjects were 249 male postgraduate students of Management at the Indian Institute of Management, Ahmedabad. Each S participated in a two-person, nonzero-sum PD game in which the amount of gains or losses incurred by each player in terms of imaginary money was a function of his move and

that of the "other" player who, in fact, was fictional. The pay-off matrix was identical to the one reported by Deutsch (1960) except that the pay-offs were in rupees instead of dollars.

The Ss participated in two trials. On the first, each S made his choice after first indicating what he expected the other player to choose. On the second trial, each S, presumably playing with a different person from the first, was asked to indicate what he thought the other person expected him to choose. At this point, each S was provided with the choice presumably made by the other person (this always being the trusting or cooperative choice) in a similar game conducted earlier on a sample of similar graduate students and was asked to make his own choice.

Postgame attitude measures. After each S finally made his move, he was asked to guess whether the other person was a male or a female, following which he answered the "first impression" questionnaire which consisted of seven adjective pairs on bipolar scales (the semantic differential). The connotative meanings of three pairs (dishonest-honest, hostile-peaceful, and immoral-moral) were Evaluative and the remaining four (passive-active, weak-strong, cowardly-brave, and foolish-wise) represented the Dynamism factor. The positive pole of the Evaluative factor was represented by honest, peaceful and moral and that of the Dynamism factor by active, strong, brave and wise. Scores on the three evaluative pairs were summed up to form an index of evaluative definition (E) attributed to trust (cooperation) and composite scores on the four dynamism adjective pairs yielded the dynamism definition (D) of trust.

Results

The data concerning the relationship between choices in the two positions showed that Ss who made the "trusting" choice in the first position tended to be "trustworthy" in their second position choice; on the other hand, Ss who were "suspicious" to begin with tended to be "untrustworthy" when they played the second time (X^2 = 29.5 p < .001).

Inferring sex of the other player. Most provocative here was the result that while 36 out of 70 (51%) "trusting" Ss thought that the other player was a female, 145 out of 177 (81%) "suspicious" Ss indicated that the other player was a female.

The Triangle Effect. Hypothesis 1 predicted that with respect to relationship between a player's own choice and his expectation of the other's move, the expectations of "trusting" Ss about "typical other" would be more evenly distributed across the top row as compared with the expectations of the "suspicious" Ss. The TI obtained for our data was as high as 54.

Trust and the connotative meaning of cooperation. The data did clearly bear out this prediction and the reverse trend was obtained in ratings of the other player by the "suspicious" and "untrustworthy" Ss. The difference was statistically significant (F = 11.48, df = 3,245, p < .001; F = 24.12, df = 3,245, p < .001 respectively).

Table 2

Means and Standard Deviations of Responses to

Measures of Meaning of Trust/Cooperation

	Evaluative		Dynamism	
	M	SD	M	SD
Trusting/Trustworthy	18.33	2.62	19.49	4.74
Trusting/Untrustworthy	14.86	2.82	16.23	4.58
Suspicious/Trustworthy	16.93	2.15	16.61	5.07
Suspicious/Untrustworthy	15.62	3.28	12.43	5.26
F	11.48*		24.12*	

*df = 3,245; p < .001

Discussion and implications. The results of our study provided clear support for the triangle hypothesis and hypothesis pertaining to the connotative meaning of trust attributed by the trusting and trustworthy subjects on the one hand and the suspicious and untrustworthy subjects on the other.

Comparing the expectations of trusting and suspicious subjects with respect to the typical other in the first position play, it was clear that the suspicious subjects indeed showed a tendency to be blind towards the

true variability and uniqueness of people and things. They preferred to categorize things as polar opposites: you vs. me; union vs. management; we vs. they. The trusting subjects, on the other hand, tend to reflect greater heterogeneity in outlook with respect to their expectations about others.

Secondly, our results clearly showed that in the estimation of the trusting and trustworthy subjects, the "trusting other" was one who was described as honest, peaceful and moral. In contrast, for the suspicious and untrustworthy subjects, the "trusting other" was passive, weak, cowardly, and foolish. It is, therefore, not surprising that 81% of the suspicious subjects considered the fictional other person in the game as a female. It is entirely consistent with their traditional role expectation for females to be passive, weak, and dependent.

Our subjects being trained to become professional managers, do perform key roles and occupy, in good time, policy-making positions in competitive organizational settings. What attitudes and feelings are our competitive subjects likely to harbour toward a woman in executive position whose formal role may require her to be assertive and directive, which is different from what our subjects expect her to be? How are these people likely to perceive the union point of view across the negotiation table? The detrimental consequences of having managers performing certain categories of functions, such as, personnel and industrial relations, whose beliefs about people are like those of our competitors' are too obvious to elaborate further.

EXPERIMENT III

Organizational Choice: Dissonance Reduction and Self-Perception (Misra & Kalro, 1972)

This study dealt with attitude of members toward an organization induced by their very act of choice for its membership. The study consisted of two separate experiments. The first experiment tested predictions from dissonance theory (Festinger, 1957) and the second experiment tested the self-perception theory (Bem, 1967). Incorporated within the study was a hypothesis relating to the two-factor theory of job satisfaction (Herzberg, Mausner, and Snyderman, 1959).

Rationale. According to dissonance theory, when an individual decides by choice to transact with one object or situation and to forgo the other alternatives that may be available, he must begin to come to terms with his act or to reduce his dissonance. In so doing, he views the chosen alternatives more positively than before and the unchosen alternatives more negatively than before. Dissonance increases as the importance of the decision, the number of cognitions involved, and the proximity of predecisional differences among the attractiveness of alternatives increase. Thus, our first hypothesis was:

After a choice is made between two "equally attractive" alternative organizations, the attractiveness of the chosen organization will increase and the attractiveness of the unchosen organization will decrease.

Secondly, Herzberg et al talk about motivational (advancement,
autonomy, prestige, etc.) and hygiene (salary, security, etc.) job factors
as primary determinants of job satisfaction and dissatisfaction, respectively.
Thus, they argue that these two sets of factors cater to the different needs
of the employees. We reasoned that while it may be reasonable to maintain
the broad distinction between the two sets of factors (motivators and
hygienes) catering to the different needs of the employees, it may be useful
to understand the direction and extent of changes in the attitudes of the
individual toward these factors induced by the very act of choice of one
organization as over some others. In other words, the instrumentality of
chosen and unchosen jobs may undergo changes, so that the cognitive repre-
sentations of outcomes on the job are in line with their subjective expecta-
tions of outcomes. Therefore, based on the premise of the two-factor theory
of job satisfaction, it may be possible to predict postdecisional changes
in job goals in accord with dissonance theory.

The individual as a postdecisional maneuver, will tend to play up the
desirability of the motivators (satisfiers) of the chosen job in order to
compensate for the dissatisfaction arising from the absence of adequate
hygienes (dissatisfiers). Further compensation may take place by playing up
the undesirability of the hygienic factors of the unchosen job. The
expected directions of changes in the instrumentality of the two sets of
job factors, as a consequence of organizational choice, were hypothesized
as follows:

After a choice is made between two equally attractive alternative
organizations, (a) the positive change in the attractiveness of the motivators

associated with the chosen organization will be greater than the corres-
ponding change in the attractiveness of the hygienes associated with the
chosen organization, and (b) the negative change in the attractiveness of
the hygienes associated with the unchosen organization will be greater than
the corresponding change in the attractiveness of the motivators associated
with the unchosen organization.

Design. Two realistic job descriptions were constructed each featuring
12 job factors (goals) in such a manner as to include six motivators and six
hygienes. These job factors were differentially manipulated so that subjects
(MBA students in the final year who were in the job market) perceived
significant differences in their conceptions of the extent to which each
job satisfied each of the 12 job goals; and did not perceive any significant
difference in overall attractiveness of the two jobs. This manipulation was
effective.

Procedure. The experiment was run in two sessions. Session II was
two weeks later than Session I. In the first session under the guise of a
job-analysis study subjects rated the two junior executive job announce-
ments from the point of view of their own career goals. In the second
session, they were to terminate their job-search by selecting one of them.

Having performed this experience, a second experiment was conducted
on a different sample of similar students as an "interpersonal replication"
a la Bem (1967). The derivation from Bem's self-perception model tested
was: observer subjects should be able to discriminate the circumstances

controlling the behaviour of involved subjects in "real" dissonance experiments and to estimate accurately the attitude of involved subjects at the end of the experimental procedure.

Results. Tables 3 and 4 give results of the dissonance experiment and Table 5 gives the results of the "interpersonal replication".

Table 3

Mean Attractiveness Ratings for Chosen and Unchosen Organizations
Before and After Choice[a]

Organization	Before Choice	After Choice	Change	t[b]
Accepted	7.56	8.03	+ .59	1.39*
Rejected	7.32	6.32	-1.00	3.05**

[a]N = 34.
[b]All significance levels are based on one-tailed tests.

*$p < .10$

**$p < .001$

Table 4

Mean Postdecisional Changes in the Instrumentality of Motivational and
Hygienic Factors for Chosen and Unchosen Organizations[a]

Organization	Mean changes in factors		Difference[b]	t[c]
	Motivators	Hygienics		
Chosen	3.29	- .62	3.91	2.39*
Unchosen	-2.44	-2.12	-.32	.20

[a]N = 34.
[b]Refers to mean change in motivators- mean change in hygienics.

[c]All significance level are based on one-tailed tests.

*$p < .01$.

Table 5

Mean Displacement in Attractiveness Ratings from Control Group Means

for Chosen and Unchosen Organizations in Each Condition[a]

Organiza-tion	Chosen		t[b]	Unchosen		t
	Control	Displace-ment		Control	Displace-ment	
HEPL	7.25	+1.45	3.81**	7.25	-.46	1.14*
IEC	7.00	+1.38	3.36**	7.00	-.19	.53

[a]N = 16 in the control and 28 in each experimental conditions. Scores range from 1 to 11, where higher number indicates greater attractiveness; positive and negative displacements indicate increased and decreased attractiveness, respectively.

[b]All significance levels are based on one-tailed tests.

*$p < .10$

**$p < .001$

EXPERIMENT IV

Choosing a Name and Preparing a Slogan for Your Product for Increasing Brand Awareness (Misra & Jain, 1971).

This experiment addressed itself to the questions: (1) In order to create better brand awareness, how should the advertiser go about choosing a brand name and a slogan? (2) Are there differences in naming different types of products so far as brand awareness is concerned?

Our work primarily drew upon two sources: Kanungo (1968) and postwar experiments in mass communication at Yale (Hovland, Lumsdain, & Sheffield, 1949).

We argued that brand awareness is essentially learning of brand-product association. Among multi-brand products, the successful ones are those which have great awareness among consumers. Indeed, the near omnipresence of certain brands of consumer products has led to effective monopoly and reduced the concept of "perfect competition" to the status of a myth.

Various factors seemed affect the learning of brand-product association. For the purpose of this experiment we chose three. First, appropriate brand names are likely to be more meaningful to the consumers. Hence, easier to learn and recall. This is the well tested and time honoured principle of learning. Second, the strength of brand-product association might be differentially influenced by the nature of product. Because, advertisements of relatively high priced and infrequently purchased consumer durables (shopping goods: radio, crockery, etc.) would be more salient and important than the advertisements of low priced, frequently purchased convenience goods (e.g. soap, talcum powder, etc.). Third, we examined the so-called delayed action effects of two types of slogans, unqualified vs. qualified, on brand awareness. In attitude change literature, the former refers to one-sided communication and the latter to two-sided communication. Simply put, an unqualified persuasive communication contained arguments that only favoured its conclusion, whereas a qualified communication added

some secondary qualifications and reservations against the main argument. We hypothesized that products described by unqualified slogans would show greater brand awareness immediately after their exposure as compared to products described by qualified slogans. However, the net impact of the two types of slogans might be the same after a delayed time interval of appreciable length.

In sum, the experiment examined the effect of: (a) fitting vs. non-fitting brand names, (b) shopping vs. convenience goods, and (c) qualified vs. unqualified slogans on immediate brand awareness and its persistence over time.

Hypotheses. (1) Fitting brand names would produce greater brand awareness than nonfitting brand names; (2) brand awareness would be superior for shopping goods than for convenience goods; and (3) an unqualified slogan describing a particular product would show better brand awareness than a qualified slogan describing the same product, although the superiority of unqualified slogans with respect to brand recall would tend to dissipate over time.

Design and Procedure. Seventytwo male Ss were run in a factorial experiment testing the above hypotheses. Construction of brand names, slogans and choice of products were done by following an elaborate procedure with a variety of operational criteria. This has been described in detail elsewhere (Misra & Jain, 1971).

Results. Table 6 gives the results of the experiment in a nutshell. It can be seen that the results confirm hypotheses 1 and 2 and fail to support hypothesis 3.

Table 6

Analysis of Variance of Recall Scores

Source of variation	df	MS	F
Fittingness (F)	1	340.01	31.69**
Type of Slogan (Q)	1	35.03	3.26*
Time (T)	2	1.56	.15
F x Q	1	18.37	1.71
F x T	2	1.24	.09
Q x T	2	1.05	.12
F x Q x T	2	6.16	.57
Within cell (error)	204	10.73	
Total	215		

*$p < .10$

**$p < .001$

EXPERIMENT V

What Makes an Effective Salesman? (Rao & Misra, 1976)

Salesmen by and large have a negative public image. Stereotype views about them such as glib-tongued, deceitful, lying, etc. are widespread.

Nevertheless, effective salesmen are of enormous value to any organization.

Many decision makers in commercial organizations tend to believe that a good salesman must be of a "certain type" thereby implying that individual differences variables underlie the success of a salesman. The emphasis here is on what salesmen _are_. We reasoned, another profitable approach might be to examine what salesmen _do_ rather than what they _are_. In order to do so, our attention had to be focussed not on particular people as unique individuals with idiosyncratic characteristics, but on the particular _process_ of interest (in this case, the patterns of interaction between the salesman and the buyer).

To test some of our ideas in this regard, we designed an _exploratory experiment_ in the following manner.

Our line of reasoning was, in any sales situation primarily two parties are involved: the salesperson and the customer. The salesperson generally tries to influence the customer's attitude towards his product and presumably his choice behaviour through various ways and means. This may be called his sales style. We thought of four different sales styles: _product centred_ style wherein he emphasizes the superiority of his product over others; _company centred_ style wherein his company's name and fame (image) is the unique selling proposition; _consumer centred_ style where he attempts to influence the perspective customer by highlighting the benefits the latter might derive by acquiring the product; _self-centred_ style wherein the salesperson emphasizes how many of the given product has been sold by him and how well he was received by others.

Against these four sales styles we introduced four levels of consumer needs such as, strong need, marginal need, no need, and negative need. Thus, the experiment was designed to examine the relative impact of four different sales styles on four categories of consumers with varying need strengths for the product.

Design. A salesperson-customer interaction exercise developed earlier was used in this experiment. It was administered on two different samples: student and actual salespersonnel. In each sample the salesperson-customer roles were played in three groups. Each group had 12 members: four playing the four different salesperson role, another four playing the roles of four categories of customers, and the remain four were observers (one observer per dyad of salesperson-customer). Each salesperson had to interact with each of the four categories of customers, one after the other, for a duration of 10 minutes. Thus, there were 16 interaction patterns in each group. Each salesperson was to sell a radio manufactured by a fictitious company to the customers.

Procedure. Salespersons and customers were given thorough role briefings verbally as well as in writing before the experiment began. All through the exercise, neither the customer nor the salesperson knew about each other's orientation.

The observers were trained to judge whether the dyads played their respective roles satisfactorily. The main dependent variables were: (1) customer tendencies to buy the radio, and (2) liking for the salesperson.

Results. Data from the student sample and the actual salesperson sample were similar and therefore were combined for analysis purposes. Results showed that product-centred salespersons made a more positive impact on consumers followed by the customer-centred and the company-centred salespersons. Self-centred salespersons made a relatively low impact. Furthermore, product-centred salespersons made a greater impact on low need customers while company-centred salespersons made a greater impact on low need customers while company-centred salespersons made a greater impact on high-need customers. Customer-centred salespersons showed more consistency in the impact they made than the other three types of salespersons, indicating that they are likely to be consistently effective irrespective of the need patterns or customers.

Implications for Marketing. This experiment dealt with one product only, viz., the radio. Also it was conducted under controlled conditions. It is agreed that the type of the product, the levels of prior contact between the buying and selling establishments, prior experience of the client with the brand, product, and company, company image, etc., are significant in influencing the client and determining the outcome of the transaction. The authors found this exercise pedagogically useful for training salespersons. New variables like those suggested above could be incorporated while using this exercise as a training device. Clearer conclusions can be drawn when results of the differential effects of sales styles are available under a variety of selling situations and market conditions.

In sum, the results suggest that no single strategy of influencing t. customer is uniformly effective. Different types of customers are recepti to different sales styles although customer-centredness is generally harm-less. The success of a salesperson lies in his skill in making a correct diagnosis of client-orientations and then using responsive sales styles. A combination of sales styles may be more effective than mutually exclusive styles like those presented in this exercise. Results of experiments of this kind are likely to provide useful clues for marketing, advertising, and sales strategies.

CONCLUSION

Out of the five experiments described in this paper, the first two dealt primarily with conceptual issues. Direct applicability of results was of secondary importance. It is realized that leaps between the laboratory and the real world are always loose and tentative. But the central contentions of various theories hold and alert us to look for clearer statements and propositions underlying behaviour. In the remaining three experiments, users of knowledge, in addition to our professional colleagues, were kept in mind. These experiments may be evaluated with respect to their perceived functionality.

In general, my experimental work conforms to the set pattern of the hypothetico-deductive approach slavishly followed by psychologists. The fifth experiment was an exception. But, would the _Journal of Applied Psychology_ have accepted it? What might be considered a contribution

in the wider context is not necessarily ego-enhancing from the point of view of my profession. However, rigorous research is not enough.

Finally, although experimental social psychology is responsible for many celebrated insights into the complexities of human behaviour, I cannot help feeling that many social psychologists assume, they are superior to the subjects they study. This is apparent in the social psychology vocabulary. We "manipulate" and then check on its "effectiveness"; we recruit "subjects" and "run" them; we first "deceive" and "debrief" them about the true nature of our experiment after the experiment is over. This last aspect of our experiment is disposed of in not more than one or two short sentences in our erudite publications!!

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