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**THE EFFECTS OF INQUIRY PARADIGMS  
ON INQUIRERS: A STUDY OF THE IMPACT  
OF DIFFERENT INQUIRY METHODS AND  
TOPICS ON TWO GROUPS OF  
CONSULTING TEAMS**

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**THE EFFECTS OF INQUIRY PARADIGMS ON INQUIRERS:  
A STUDY OF THE IMPACT OF DIFFERENT INQUIRY METHODS  
AND TOPICS ON TWO GROUPS OF CONSULTING TEAMS**

How and what we study in organizations impacts us personally as researchers. Using a cognition coding scheme to compare member's cognitive constructions of the internal dynamics of their teams, this study investigated the impact of two different guiding schemas about organizations and topics of inquiry, on two groups of consulting teams. The teams studying organizational strengths through an appreciative inquiry perspective showed a higher proportion of positive cognitions and lower proportion of negative cognitions towards self, group members, task, authority, and clients than the group studying organizational problems through an action research perspective. A model is proposed to explain how, the way we are affected as inquirers can re-impact our role as effectors of organizational phenomena.

It is quite wrong to try founding a theory on observable magnitudes alone. In reality the very opposite happens. It is the theory which decides what we can observe.

Albert Einstein

Our knowledge of social phenomena is fundamentally shaped by the subjective world views through which we perceive events. The facts constituting our knowledge are primarily theory dependent, since we can perceive nothing except through the knowledge/cognitive structure in which perception is embedded (Astley, 1985). As organizational researchers or consultants, we already harbor conceptions of what is to be perceived and our theories or cognitive schemas determine what will count as fact in the first place. As Feyerbrand (1975) argued there are no bare facts, since the facts that enter our knowledge are already viewed in a certain way.

Further, there is evidence that our theoretical or cognitive schemas not only guide the information we seek but in the process of information seeking can in fact create the phenomenon we purport to seek (Cooperrider & Srivastva, 1987; Kadushin, 1964; Ullman & Krasner, 1975). As Kaplan (1964) noted "A theory must somehow fit God's world, but in an important sense it creates a world of it's own" (1964: 309).

While there is enough support to suggest that as scientists or inquirers, we impact the phenomena under investigation through our theoretical schemas, an interesting counter-question not really addressed is, "Can the phenomena we study in social systems impact us personally as researchers?" Are we, as social scientists objective, value neutral, dispassionate, unbiased observers of facts who passively record events in neutral theoretical descriptions or in reality, are we participants in a social world which we influence and are influenced in turn? Is social inquiry a neutral act or a reactive act, impacting the object of inquiry as well as the inquirer?

To that end, the purpose of this research was highly exploratory in nature, and investigated the impact on two groups of consulting teams, of two different guiding

assumptions (schemas) about organizations and topics of inquiry by comparing their cognitive constructions about their internal group dynamics.

### **COGNITIVE SCHEMAS AND SELF-FULFILLING PROPHECIES**

Schemas are cognitive structures that consist of memorial representation of some defined stimulus domain. Schematas contain general knowledge about a domain, including a specification of the relationships among principal attributes of that domain (Taylor & Crocker, 1981; Bartlett, 1932; Turk & Salovey, 1985a). Schematas enable the perceiver to selectively attend to incoming stimuli, encode, store and ultimately retrieve information in a particular domain (Taylor & Crocker, 1981; Markus, 1977). Schemas serve as frames of reference for action and perception (Weick, 1979) and may provide rules for activating anticipated behavioral sequences for how an individual or others should act in various situations (Abelson, 1981).

There is a growing body of research in cognitive psychology clarifying the links between cognitive schemas and perceptions and actions (Mahoney & Arknoff, 1978; Mahoney, 1977; Turk & Salovey, 1985b). Studies by Cantor, Smith, French, and Mezzich, (1980); Horowitz, Post, French, and Wallis, (1981); Cantor and Mischel, (1979); Snyder, (1981), and Temerlin, (1968) showed that there was consistent evidence that clinical psychologist~ theoretical schemas (organized knowledge structures and expectancies) can influence diagnosis, prediction, and treatment. Temerlin (1968) found that similar behavior of a confederate was evaluated as neurotic or healthy depending on the theoretical orientation of the clinician. A study by Snyder (1981) showed that clinicians sought information from patient that only fitted their theoretical orientation. Thus patients were questioned only about causes believed, by the therapist to be related to different presenting symptoms.

Turk and Salovey (1985a) warn that clinicians's schemas and expectations not only guide the information that they seek, but in effect may become self-fulfilling prophecies and

create the phenomenon they purport to see. A self-fulfilling prophecy, according to Merton (1948), is "a false definition of the situation evoking a new behavior which makes the originally false conception come true" (1948: 195). As Ullman and Kresner (1976) state, "The therapist who expects a person to be unresponsive to psychotherapy and emits cues to this effect, influences his patient. When the client does indeed respond poorly, at least in part as a result of the therapists actions, the therapist's predictions come true (1975: 96). Frank (1974) in similar lines notes that perhaps the major factor in therapeutic success is alteration of the client's assumptive world to be consistent with the assumptive world of the therapist.

Kadushin (1969) demonstrated this effect in his study of four types of clinics in New York, psychoanalytic, psychotherapeutic, religiopsychiatric and hospital-based. He found that over a period of time the patient's conception of his/her problem matched the model or school of therapy to which the person was referred. As Radushin (1969) points out, "Indeed a detailed statistical examination of changes in the way a person (patient) first conceived of his problem and the way he finally presented it to the clinic shows that applicants tend to increase their perception of suitable problems (1969: 106).

## **THE IMPACT OF INQUIRY ON THE INQUIRER**

While the relationship between our theoretical schemas, information seeking patterns and the very creation of the phenomena we purport to seek is established, in this paper we suggest that the flow can assume a reverse direction. We advance the view that as inquirers or consultants we can personally be impacted as much by the phenomenon we study as we impact the phenomenon itself. We cannot assume that we are singularly free from being influenced as much as we influence. Illustratively, if we study "depressive behavior" in organizations there is not only the possibility that we can create depression in organizations by the very act of studying the topic but also that there can be a counter-transference of such depression either at a conscious or sub-conscious level to the personal context of the inquirer or consultant which can manifest itself in many negative ways in his or her perceptions, behaviors, or emotions towards self or others. Alternately, if we study a phenomenon such as "organizational excitement" we could create "excitement" in organizations as well as counter-transfer at a conscious or subconscious level such excitement to our personal contexts which can manifest itself in positive cognitive constructions about self or others.

Some understanding, though limited, of these reverse dynamics can be obtained by touching on the concept of Parallel Processes and the social constructionist perspective.

### **Parallel Processes and Countertransference**

The idea of parallel processes has its origin in the psychoanalytic concept of transference and counter-transference (McNeill & Worthen, 1989) and have been reported for different types of situations. When two or more systems, whether they consist of individuals, groups, or organizations, have significant relationships with one another, they tend to develop similar affects, cognitions, and behaviors, which are defined as parallel processes (Smith, Simmons & Thames, 1989; Alderfer, Brown, Kaplan & Smith, 1990). In psychotherapy, there is evidence that the supervisor-therapist (i.e., supervisor of the

therapist in training) relationship often assumes the characteristics of the therapist-patient relationship, and vice versa (McNeill & Worthen, 1989; Searles, 1955; Ekstein & Wallerstein, 1958). In an organizational context, the internal dynamics of action research teams have sometimes become a parallel enactment of the system dynamics which researchers seek to understand (Alderfer et. al., 1990; Smith & Crandell, 1984; Steele, 1975).

Although there is considerable definitional controversy surrounding use of the term countertransference (Singer, Sincoff, & Kolligan, 1989), at a fundamental level countertransference can be viewed as representing all those feelings the analyst experiences towards his or her patient, regardless of the origin of those feelings (Heimann, 1950). While Freud (1915/1958) warned the analyst against any possible countertransference, Wolstein (1959) in his classic work emphasized the ubiquity of countertransference by exploring the idea that countertransference reactions are operant in all treatment situations. Expanding on Wolstein's (1959) observation, Singer (1985/1989) has argued that just as the patient processes information in ways that are uniquely human and that lead to transferences, so does the analyst or therapist. Singer et. al. (1989) extend the view that countertransference reactions are instances of inevitable human cognitive limitations. They suggest that cognitive schemas or scripts are the key mechanisms which contribute to a patient's traits and symptoms being organized into a diagnostic category, or perhaps even into a presumed model of a particular psychodynamic characterization, such as a person with excessive oral needs or a narcissistic personality, and it is such schemas which also guide countertransference reactions either by virtue of the patient's reaction confirming or disconfirming expectations of the analyst, many a times leading to schema perseverance.

## **The Social Constructionist Perspective**

Berger and Luckmann (1967) in their seminal treatise, "The Social Construction of Reality," very emphatically drive home the point that, as participants in a social world we are part of the social context with which we interact influencing and being influenced in turn. As social beings who are part of a social world we are actively engaged both as effectors and the affected in an ongoing social construction of reality by participating in the creation of the world and also re-experiencing our own creation. This is an ongoing dialectical process. As Berger and Luckmann (1967) clarify, "It is important to emphasize that the relationship between man, the producer, and the social world his product, is and remains a dialectical one. That is, man and his social world interact with each other. The product acts back upon the producer. 'Externalization' and 'Objectivation' are moments in a continuing dialectical process. The third moment in this process is 'Internalization' by which the objectivated social world is retrojected into consciousness" (1967: 61). Further, Berger and Luckmann (1967) suggest that the "internalization" reacts and re-impacts the objectivated social world, forming a self-reinforcing loop of internalization, externalization, objectivation, and internalization.

However, we tend to forget that we are part and parcel of this mutually created reality and constantly engage in the process of "reification." As Berger and Luckmann, (1967) so succinctly state it, "Reification is the apprehension of human phenomena as if they were things, that is, non-human or possibly supra-human terms. Another way of saying is that reification is the apprehension of the products of human activity as if they were something else other than human products such as facts of nature. Reification implies that man is capable of forgetting his own authorship of the human world, and further that the dialectic between man, the producer and his product is lost to consciousness" (1967: 89). As inquirers or consultants we tend to reify ourselves as well as our assumptions, methods and inquiry as signifying an objective statement of reality, discovering an objective and real world out there, and are not sensitive to the fact that through our assumptions and



choice of methods we impact human phenomena as well as react to the phenomena we impact. Further, the nature of how we effect organizations can impact how we are affected, and the nature of how we are affected can in turn impact how we effect organizations.

### **RESEARCH QUESTION**

Assuming that our schemas about organizations in fact do impact organizations, this study specifically tested for the reverse dynamics of our assumptions about organizations and the topic of inquiry impacting us personally as researchers, by comparing the cognitive constructions of two groups of consultants with the teams in one group focusing on "organizational problems" which inhibit organizational effectiveness through the use of a traditional "Action Research" paradigm (French & Bell, 1978) and the teams in the other group focusing on "organizational strengths" which facilitate organizational effectiveness through the use of an "Appreciative Inquiry" paradigm (Cooperrider & Srivastva, 1987). Specifically, the emphasis was on comparing the differences in the "cognitive constructions" around the group dynamics between these two groups. The primary research interest was in examining "Whether one group's studying of problems in organizations as opposed to the other group's studying of strengths in organizations would manifest itself differently in the personal contexts of the two consulting groups as revealed by differing cognitive constructions of their group dynamics?"

### **Action Research and Appreciative Inquiry Paradigms**

The traditional action research paradigm approaches "organizing as a problem to be solved" (Cooperrider & Srivastva, 1987). Most definitions of action research equate it with problem identification and problem solving. For example, as French and Bell (1978) define it, "Action research is both an approach to problem solving - a model or paradigm, and a problem-solving process" (1978: 88). Likewise Levinson (1972) emphasizes that

the major focus of action research should be on discovering problems in organizations. As he states...(The researcher) "should look for experiences which appear stressful to people. What kinds of occurrences disrupt or disorganize people" (1972: 37). Other definitions of action research also support this contention (Blake & Mouton, 1976; Bradford, Gibb & Benne, 1964). The typical action research process follows a sequence of 1. identification of problem, 2. analysis of causes, 3. analysis of possible solutions, and 4. action planning (treatment). A recent survey on the origins and status of action research (Peters & Robinson, 1984) led the authors to conclude that there was no unified theory or set of methodological principles characterizing action research but rather a series of disparate definitions. However, there was common agreement among those surveyed that action research starts with a social or practical problem rather than a theoretical question. The underlying assumption for action research is a problem orientation, and the action researcher develops applicable knowledge in the problematic social situation by emphasizing a re-educative or self-critical approach to social problems and practices that the researcher feels arises from and is embedded in the social context.

The "Appreciative Inquiry" paradigm approaches "organizing as a miracle of cooperative human interaction which needs to be affirmed" (Cooperrider & Srivastva, 1987). As a methodology, Appreciative Inquiry seeks to locate and highlight the "life giving properties" of organizations. Life giving forces refer to the unique structure and processes of the organization that makes its very existence possible. An affirmation of these unique structures and processes are most likely to help realize what makes organizing possible and further throw open possibilities of newer and more effective forms of organizing. Appreciative Inquiry, thus, seeks out the very best of "what is" to provide an impetus for imagining "what might be." Appreciative Inquiry follows a process of: 1. Appreciating and valuing the best of "what is," 2. Envisioning "what might be," 3. Dialoguing "what should be," and 4. Innovating "what will be."

## **Cognitive Constructions**

Cognitive constructions is a broad-based concept and includes under its rubric an individual's thoughts, perceptions, behaviors, emotions, beliefs, and attributions as related to self or others (Halpert & Sanders, 1988). Cognitive constructions are typically classified as being of a positive, negative, or neutral nature, and have been used extensively in studying differences between maritally distressed and non-distressed couples (Halford & Sanders, 1988; Eidelson & Epstein, 1982; Floyd & Markman, 1983; Jacobson & Moore, 1981; Camper et. al., 1988), in the areas of assertiveness (Schwartz & Gottman, 1976), Social anxiety (Glass et. al., 1982), and Coping patterns (Kendall et. al., 1979). For example, the study by Halford and Sanders (1988) indicated that maritally distressed couples had significantly higher proportions of negative partnerreferent cognitions and lower proportion of positive-partner referent cognitions, than non-distressed couples while problem solving. Similarly, a review article by Schwartz (1986) indicated that most functional groups were characterized by approximately a 1.7 to 1 ratio of positive to negative thoughts as opposed to mildly dysfunctional groups which were characterized by a 1 to 1 ratio of positive to negative thoughts.

## **METHODS**

### **Subjects**

The subjects for this study were 30 students pursuing their Master's degree in Organization Development. As part of the program requirements these students were required to undertake a consulting project with an organization. The convention was to combine four to five students to form a consulting team which would work with a particular organization. The projects were normally for a duration of four to five months.

## **Procedure**

The subjects were randomly assigned to either the Action Research group or to the Appreciative Inquiry group resulting in 15 students in each group. Then, the two groups were separated and taken to different classrooms. Two instructors each were assigned to the two groups as resource persons. Once in their separate classrooms, the concerned instructors spent approximately six hours educating their group on the concepts of Action Research or Appreciative Inquiry. Each group was asked to break up into teams of five members each, and from the three organizations presented to each group, to choose an organization they would like to work with on the consulting project. Once the choices were made, a system of meetings was set up whereby each team was required to meet at least once a week for the complete duration of the project, for planning and strategizing activities with respect to their client organizations.

Each member was also asked to maintain a detailed diary listing their thoughts, feelings, and observations about these meetings. This technique referred to as "thought listing" is an extensively used method for reporting cognitions (Camper et. al., 1988; Halford & Sanders, 1988).

Methods of reporting cognitions are usually classified into two categories: endorsement categories (e.g., self-statement checklists) and generative strategies. Thought listing falls into the latter category and requires subjects to report their own cognitive constructions of an experience or interaction which are later content-analyzed by trained judges, while the former require endorsement of one or more of a set of experimenter-determined alternatives (Halford & Sanders, 1988; Camper et. al., 1988). Given the exploratory nature of this study and the dearth of knowledge on specific cognitions deriving from different inquiry paradigms, generative strategies seemed most appropriate. Further, this method has been used extensively in the assertion training, social anxiety, and marital literature and has been shown to produce high inter-rater reliability and adequate discriminant validity (Cacioppo & Petty, 1981).

The consulting teams were given the option to schedule their meetings at their own time and the only requirement placed on them was that each person submit each week a copy of their diary recordings of the preceding meeting to their respective instructors. They were also instructed to do a diary recording on their personal reflections and observations after the project was over. Details of the study were not disclosed and the subjects assumed that maintaining the diary was a normal course requirement.

### **Development of the Code**

From the diary recordings a sample was randomly drawn which was content analyzed by five researchers and a coding system was devised. This method of devising a coding system follows the guidelines of a "classical coding strategy" (Russell & Stiles, 1979). Nine categories were developed for positive cognition and thirteen categories for negative cognition and one category for neutral cognition. This followed suggestions in the literature (Clark, 1988; Schwartz & Garomani, 1986) that content and predictive validity of cognitive measures can be improved by making them bi-dimensional, that is, including both positive and negative cognitive measures. A neutral cognition was one which did not fall into either the positive or negative category. Further contexts for the cognitions were also identified in terms of statements referring to self, group members, task, authority, client, and others. The coding scheme is described more thoroughly in Tables 1 and 2.

### **Insert Tables 1 and 2 about here**

The basic unit of measurement was a complete sentence and each sentence was coded only for a single cognition. In cases where a single sentence suggested two different cognitive types, the more dominant cognitive type was coded for. Two raters naive to the experimental questions or treatment conditions were trained for 25 hours in the use of the code. The content for these practice sessions was drawn randomly from the diary

recordings. Training was completed when the coders established an interrater reliability of 85% in the practice sessions. This reliability was calculated according to the following formula:

$$\frac{\text{agreements}}{\text{agreements} + \text{disagreements}} \times 100.$$

Following this, a representative sample of 20% was randomly drawn from each diary and coded individually by both coders. The total number of complete sentences coded were 2806. In order to balance for possible differences in the number of sentences sampled for each group it was decided that instead of comparing the actual frequency of cognitions between the groups, the ratio of a particular type of cognition to the total number of cognitions for each group would be used as dependent measures.

## RESULTS

Overall Interrater reliabilities for coding of cognitions was 85.52% and subsequent discussions on disagreements between the raters established the reliability at 100%. The total number of sentences coded for the Appreciative Inquiry group was 1212 and the number of sentences coded for the Action Research group was 1594.

In order to discriminate statistically significant differences in cognition ratios between the two groups, it was decided to conduct two multivariate analyses of variance (MANOVAs); one for the positive cognitions and another for the negative cognitions. The MANOVA is a robust test since it compensates for variable intercorrelations and provides an omnibus test of any multivariate effect. However, since there is no reason to use the multivariate analysis of variance procedure if the dependent variables are not correlated, a within cells correlation matrix of the dependent variables was generated and a Bartlett's

test of sphericity was applied to test whether the dependent variables were intercorrelated or not (Johnson & Wichern, 1988). The Bartlett's test computes a determinant value of the correlation matrix, followed by a value of the test statistic for sphericity (based on a chi-square transformation of the determinant of the correlation matrix), and an associated significance level. If the value of the test statistic for sphericity is large and the associated significance level is small, it can be inferred that the dependent variables are significantly intercorrelated.

The positive cognition variables showed a determinant value of .654, a Bartlett's test of sphericity statistic of 46.8 with 36 d.f., and a significance of .07 (Table 3). The negative cognition variables showed a determinant value of .23, a Bartlett's test of sphericity statistic of 160.85 with 78 d.f., and a significance of .000. While the intercorrelations for the negative cognition variables (Table 4) was strongly significant, the intercorrelations for the positive cognition variables though statistically not significant within the conventionally accepted level of .05, was close to statistical significance at .07. Thus it was decided to proceed with the MANOVAs.

**Insert Tables 3 & 4 about here**

### **Analysis of the Appreciative Inquiry and Action Research group on the Positive Cognition Variables**

The MANOVA on the positive cognition ratios indicated significant differences between the groups ( $F=2.91$ ,  $d.f.=9,116$ ,  $p < .004$ ). Univariate analysis of variance (ANOVA) were conducted to establish on which particular positive cognition ratios the two groups differed. The Appreciative Inquiry group showed significantly higher ratios of: notice of a skill, competency, action or positive quality about self or others ( $F=6.86$ ,  $p < .01$ ), notice of positive surprise, curiosity or excitement in self or others ( $F=6.23$ ,

$p < .014$ ), and mention of facilitating action or movement towards a real or imagined positive outcome ( $F=4.94$ ,  $p < .028$ ). No significant differences were found between the groups with regard to the other six positive cognition classifications.

In order to confirm the findings from the ANOVA a discriminant analysis was conducted to determine which of the positive cognition variables account for most of the differences between the two groups. The discriminant analysis confirmed the same three positive cognition categories as accounting for significant differences between the two groups. Notice of a skill, competency, action, or positive quality about self or others had a standardized discriminant function coefficient of .55, notice of positive surprise, curiosity, or excitement in self or others had a standardized discriminant function coefficient of .50, and mention of facilitating action or movement towards a real or imagined positive outcome had a standardized discriminant function coefficient of .42.

Further the mean percentage of positive cognition ratios, and standard deviations, were computed to interpret the ANOVA and discriminant analysis results. Table 5 presents the means, standard deviations, results of the ANOVA and the discriminant analysis. It is interesting to note that the overall ratio of positive cognitions between the Appreciative Inquiry and the Action Research groups is 1.51:1, that is for every one positive cognition for the action research group the appreciative inquiry group displays one and one half positive cognition. For the cognitions which accounted for significant differences between the two groups the positive to positive cognition ratios for appreciative inquiry versus action research were as follows: Notice of a skill, competency, action or positive quality about self or others was 1.46:1, Notice of positive surprise, curiosity or excitement in self or others was 2.68:1, and Mention of facilitating action or movement towards a real or imagined positive outcome was 1.7:1.

**Insert Table 5 about here**



## **Analysis of the Appreciative Inquiry and Action Research Group on the Negative Cognition Variables**

The MANOVA on the negative cognition ratios also showed significant differences between the groups ( $F=5.24$ ,  $d.f.=13,116$ ,  $p < .000$ ). ANOVAs indicated that the Appreciative Inquiry group showed lower negative cognition ratios with reference to, mention of lack of receptivity in self or others including lack of collaboration and absence of connection ( $F=14.46$ ,  $p < .000$ ), any noticing of effort or action to disrupt, dominate, or wield control either by self or another ( $F=17.57$ ,  $p < .000$ ), mention of wasted resources such as excessive investment of time, resources or energy without mention of positive reward or outcome ( $F=4.24$ ,  $p < .042$ ).

Subsequent discriminant analyses confirmed the three negative cognition ratios indicated by the ANOVA as contributing to the significant differences between the two groups. Mention of lack of receptivity in self or others including lack of collaboration and absence of connection had a standardized discriminant coefficient of  $-.58$ , noticing of effort or action to disrupt, dominate, or wield control either by self or another had a standardized discriminant function coefficient of  $-.65$ , and, mention of wasted resources such as excessive investment of time, resources, or energy without mention of a positive reward or outcome had a standardized discriminant function coefficient of  $-.54$ .

Table 6 presents the mean percentages of the thirteen negative cognition ratios, standard deviations, and results of the ANOVA and discriminant analysis for the Appreciative Inquiry and the Action Research groups. The overall ratio of negative cognitions between the Appreciative Inquiry and Action Research group interestingly was 1:1.53, almost identical with the overall positive cognition ratio difference, except in the other direction. Thus, for every one negative cognition displayed by the appreciative inquiry group the action research group showed one and one half negative cognition. For the cognitions which accounted for significant differences between the two groups the negative to negative cognition ratios for appreciative inquiry versus action research were

as follows: Mention of lack of receptivity in self or others including lack of collaboration and absence of connection was 1:2.74, Any noticing of effort or action to disrupt, dominate, or wield control either by self or other was 1:4.6, and, mention of wasted resources such as excessive investment of time, resources, or energy without mention of positive reward or outcome was 1:5.4.

**Insert Table 6 about here**

We also compared individually for the Appreciative Inquiry and the Action Research groups the positive to negative cognition ratio. The Appreciative Inquiry group had a positive to negative cognition ratio of 3.33:1, while the Action Research group had a positive to negative ratio of 1.18:1. Though not within the scope of this paper it will be interesting to examine these ratio differences in light of Schwartz's (1986) findings that functional groups are characterized by a positive to negative thought ratio of 1.7:1, while mildly dysfunctional groups are characterized by a positive to negative ratio of 1:1.1. Analysis of Differences between the Appreciative Inquiry and Action Research Group on Demographic, Life Style, Interpersonal and Learning Style Variables.

In light of the fact that the sample size was very restricted in number (30 subjects) and the probability for a randomization process to achieve equivalence is lower with a small sample, we compared the two groups on some demographic, life style, interpersonal, and learning style measures the subjects had responded to as part of another study conducted six months prior to the current study (N=26). Specifically the demographic measures were: Age, Sex, Occupation, Population of city of residence, Number of siblings, Birth order, Religion born into, and current religion. The life style variables were measured using the Life Style Questionnaire (Friedlander, 1975) which includes three life style dimensions of Formalistic, Sociocentric, and Personalistic. The Interpersonal variables were measured through the FIRO-B Questionnaire (Schutz, 1958) which

measures Expressed and Wanted Inclusion, Expressed and Wanted Control, and Expressed and Wanted Affection. The Learning style variables were measured by the Learning Style Inventory (Kolb, 1984) which assesses an individual's scores on learning dimensions of Concrete Experiences, Reflective Observation, Abstract Conceptualization, and Active Experimentation.

Table 7 shows the intercorrelations among these variables. The determinant value was .0000, the Bartlett test of sphericity value was 494.63 with 210 d.f., and a significance of .000 suggesting that the variables were significantly intercorrelated. The results of the MANOVA showed no significant differences between the two groups ( $F=.836$ ,  $d.f.= 21, 24$ ,  $p <.658$ ) indicating that the groups were equivalent before the study.

**Insert Table 7 about here**

## **DISCUSSION**

The results of the study strongly support the proposition that as organizational inquirers or consultants our guiding assumptions about organizations and our topics of inquiry does impact us personally. Focusing on "organizational problems" by one group fostered lack of receptivity, lack of collaboration, domination and control, and expending resources and energy without any positive reward or outcome among members of the consulting teams. While focusing on "organizational strengths" allowed noticing of skill, competency, or positive quality about self or others, feelings of curiosity and excitement, and identifying facilitating action towards a positive outcome. Indeed as researchers or Inquirers the nature of how we effect organizations through our methods and topics of inquiry definitely does impact how we are affected.

We also considered some alternative explanations for the observed differences in the cognitive constructions between the two groups. One question is to what extent were

the differential effects experimenter induced? Experimenter induced demand characteristics could have played up while the two groups were being educated on the two different modes of inquiry. While, the subjects did not have any knowledge of the study, there is a possibility that the instructors who were aware of the study could have in many subtle ways communicated to the groups what to experience or expect from using a particular inquiry methodology.

Further, since one of the principal researchers is very convinced about the Appreciative Inquiry paradigm, he could have unwittingly instituted a "Hawthorne effect" by giving special attention to the Appreciative Inquiry group, and in the act set up a process of "resentful demoralization" (Cook & Campbell, 1979) among the Action Research group due to a perception of a less desirable treatment, which might explain the differing cognitive constructions. However many of the group meetings did not have the presence of the researchers/instructors and further, when we did explore the context variables we found that there were very few references to authority either positive or negative by any of the two groups (Mean for reference to authority for Appreciative Inquiry group = 1.80, s.d. = 4.28; Mean for reference to authority for Action Research group = 2.01, s.d. = 4.94) and also the ANOVA procedure indicated that there were no significant differences between the two groups in terms number of times authority was mentioned ( $F=.0602$ ,  $d.f.=1,114$ ,  $p < .807$ ). References to authority in one sense could be interpreted as a surrogate measure of how "present" the instructors were in the minds of the two groups, which could be deduced to be the case if strong experimenter induced demand characteristics/expectancy effects were operating.

We would also like to draw on an alternate argument gaining increasing attention that experimenter effects should not be considered as nuisance variables to be controlled but in fact are an integral part of the treatment (Eden, 1986). Even if we do assume that experimenter effects did play a significant part in creating the differences between the groups, we feel that it adds more strength to our argument that as researchers our

preconceived notions and assumptions direct our actions and in the process can make our notions to come true.

### **A Relational model of the effects of inquiry paradigms on inquirers and the consequent reimpact on their role as effectors of organizational phenomena**

Though we do not have empirical proof, it will be interesting to speculate on how, the way we are affected as inquirers can in turn impact how we effect organizations. Essentially, borrowing from Berger and Luckmann (1967), this discourse tries to understand how the process of "internalization" reacts and re-impacts the "objectivated" social world. Specifically, the question is in examining how as inquirers the nature of our reactions can reimpact the nature of our Inquiry and what are the possible consequences?

An interesting contextual framework to draw upon, to further explore this question is Weick's (1979) notions on the underlying processes of organizing and sense making in organizations. Weick suggests that organizations by nature are highly equivocal, are composed of streams of experiences and a swarm of events. Organizational sense making involves decomposing the chaos and trying to sort "this chaos into items, events, and parts which are then connected, threaded into sequences, serially ordered, and related" (1979: 148). This sense making activity entails a three stage process of enactment, selection, and retention. "Enactment" can be viewed as bracketing some experience from the stream to pay further attention and give meaning to. In fact the essence of enactment is that organizations often impose that which subsequently imposes on them, and the environments organizations face are acts of invention rather than acts of discovery. Weick argues that the basis of such bracketing rests in the schemas/cognitive maps of organizational members. "Selection" is the process by which the enacted meaning is made sensible by producing occurrences which correspond to the enacted meaning. In other words, selection is a process of choosing information which can validate the enacted meaning system. "Retention" is a process of

storage of the products of successful sense making, or successful enacted environments. Retention is strongly connected to "believing" the enacted environment and "believing" is conditioned by "seeing" information which validates the enactment, while "believing" in turn controls "seeing," resulting in a mutually reinforcing cyclical process of imposing a reality which subsequently imposes.

Weick raises some propositions about the relational nature of the enactment-selection-retention format;

1. Enactment is linked to selection by a direct relationship, indicating that the volume (intensity) of enactment will have a direct effect on the volume (intensity) of the selection activity that occurs.
2. Selection has a direct effect on retention, whereby an increase in the amount of selection activity will trigger a corresponding increase in the amount of retention activity.
3. Retention affects both selection and enactment and these effects can be either direct or inverse, depending on whether the person decides to trust his/her past experience or disbelieve it.

Drawing on some of Weick's expositions we would like to extend a possible model to examine the relationship between how we choose to effect organizations impacts the way we are affected as inquirers, and the nature of how we are affected reimpacts our role as effectors of organizational phenomena. The model is depicted in Figure 1.

**Insert Figure 1 about here**

We approach organizations with our predetermined cognitive schemas, for example we can "enact" organizing as problem to be solved or as a miracle to be embraced. Based on our enactment schemas we "select"/seek either organizational problems or organizational strengths/excitements to validate our principal enactment. In our process of selecting/seeking problems or excitements we number of times uncover problems or generate excitement. While we are impacting this dynamic in the organizational system we

as researchers are also influenced by the topic of our inquiry, and internalize such reality and tend to develop similar affect and cognitions, as we generate in the system of our inquiry, be it depression or excitement. In other words we "secondarily enact" in a personal context the "principal enactment" we impose on the organizational system. This "secondary enactment" of the inquirer transfers on to the organizational system, either in terms of generating more excitement or an extended consideration of problems. In essence, the "principal enactment" and "secondary enactment" intensify the "volume of enactment" and proportionally work to intensify the "selection"/search activity to validate the principal enactment, whether it is problems or more strengths/excitement, in line with the proposition that enactment is linked to selection by a direct relationship, where the volume (intensity) of enactment will have a direct effect on the volume (intensity) of the selection activity that occurs. The intensification of selection/search activity in fact amplifies the nature of the phenomena one creates, (excitements or more problems) which is in turn uncovered by the inquirer as an objective state of reality, thus setting in motion the second proposition that selection has a direct effect on belief and retention, whereby an increase in the amount of selection activity will trigger a corresponding increase in the amount of retention activity. This supposed "discovery" in turn acts to reinforce the inquirer's predetermined cognitive schema or "principal enactment" of organizing as a problem to be solved or a miracle of cooperative human interaction thus leading to schema perseverance and this retention/perseverance in turn affects both selection and enactment.

### **Implications**

At this stage we would like to examine the differing implications for organizational systems of an "affirmative, positive" enactment of organizational life versus a "critical, problem-focused, deficiency oriented" enactment of organizational life.

There is a growing body of research in diverse fields such as medicine, cognitive psychotherapy, psychoneuro-immunology, social psychology, cultural sociology, and athletics affirming the links between positive cognition and positive action. Cooperrider

(1990) draws extensively on findings from these diverse fields to understand the implications for organizational systems the links between positive imagery and positive action. He argues that human systems are largely "heliotropic" in character meaning that they exhibit an observable and largely automatic tendency to evolve in the direction of positive imagery. Just as plants of many varieties exhibit a tendency to grow in the direction of sunlight, he suggests that there is an analogous process going on in all human systems. He further posits "that the artful creation of positive imagery may well be the most prolific activity that individuals and organizations can engage in if their aim is to help bring to a fruition a positive and humanly significant future" (1990: 3).

There is scattered, but consistent evidence that positive cognitions and image can contribute to organizational effectiveness. Eden and Shani (1982) reported that some 75 percent of the variance in achievement among military trainees could be explained solely on the basis of induced positive expectation on the part of those in positions of authority. Likewise a strong correlation was found between positive cognitions and a tendency to perceive ambiguous situations for their positive possibilities rather than negative ones (Darley & Gross, 1983).

Of more relevance to organizations are a series of studies conducted by Isen and colleagues. For example, positive affectivity has been associated with: 1. Increased capacity for creative problem solving (Isen, 1984), 2. More effective decision making and judgment (Isen & Means, 1983), 3. Optimism and increased risk-taking (Isen & Patrick, 1983), and 4. Increased learning capacity, in particular, a sharpened capacity for perceiving and understanding mood-congruent or positive things (Clark & Isen, 1982; Bower, 1981).

In similar vein, there have been a series of studies examining the implications of predominantly a negative cognitive/affective state. Reciprocal connections have been found between negative affectivity and 1. experiences of life stress, 2. deficiency cognition, 3. the phenomenon of "learned helplessness," 4. the development of depression,



5. the breakdown of social bonds, and 6. the triggering of possible physiological responses like the depletion of brain catecholamine, and the release of corticosteroids, the suppression of immune functioning and ultimately the development of disease (Watson & Clark, 1984; Seligman, 1975. Brewin, 1985; Peterson & Seligman, 1984; Beck, 1967; Schultz, 1984; Ley & Freedman, 1984).

## **Conclusion**

We propose that, as social scientists, we can play a major role in shaping the social reality of organizations. Especially, as consultants we have the power to shape reality by offering organizations different frameworks for make sense out of equivocality or in other words providing them with "enactment schemas." Accordingly, depending on our assumptions about organizations (cognitive schemas) what we study (topics of inquiry) and how we study (methods of inquiry), we can institute in organizations either self-reinforcing vicious cycles which impede system viability or virtuous cycles which increase system viability.

Eden (1986) stresses this very point in his characterization of consultant's as prophets. He suggests that the effectiveness of OD can be strongly influenced based on a consultant's assumptions and expectations about a client system potential to improve. "An OD consultant expecting success may wittingly or unwittingly exhibit contagious enthusiasm for the intervention, increase the amount and kind of feedback given to clients, establish warm and more supportive relationships, instill higher self-expectations in the client, and invest more time and energy in the project...A consultant with a dim view of the client's capacity for change might behave ineffectively in the consultant role" (1986: 10-11). We could not agree with Eden more, and would like to extend Eden's notion by stressing that our expectations regarding a client system's potential to improve or not improve is inevitably guided by our schema's about organizations, our topics of inquiry, and our methods of inquiry.

In the final analysis, as researchers or consultants we have to be very conscious of the choices we make, "because the conduct of inquiry cannot be separated from the everyday negotiation of reality, social research is always a moral concern, a normative process of social reconstruction and direction. The choice of what to study, how to study it, and what to report, all have consequences on social existence. And, it is precisely this, the reactive nature of social inquiry, that provides social theory with its unique purpose, its potential importance, and ultimately, its *raison de etre*" (Pasmore & Cooperrider, 1990: 30).

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**Table 1. Positive Cognition Categories**

<u>Cognitive Type</u>	<u>Description</u>	<u>Example</u>
1. Positive valence	Any mention of positive valence past or present	"I like the meeting."
2. Hope towards future	Any mention of hope, optimism, positive anticipation towards future.	"We were looking forward to a good meeting."
3. Skill or competency	Any mention of a skill, competency, action, positive quality about self or others.	"The group worked very well together, task-oriented and highly pragmatic."
4. Openness, receptivity learning	Any mention of receptivity in self or others accompanied by a positive valence or outcome. Also any noticing of self or other's learning, or interests.	"By listening to her explanations, we came closer to a group understanding."
5. Active connection, effort to include or cooperate	Any noticing of efforts to include, cooperate, connect, or relate to others, that may be accompanied by at least inferred positive valence or outcome.	"Hal and Joe began to seek consensus for their proposal."
6. Mention of positive surprise, curiosity, or excitement	Any mention of curiosity, positive surprise, excitement in self or others.	"We were excited about the presentation and anticipating the unknown."
7. Notice of facilitating action or movement towards a positive outcome	Any mention of a facilitating action or movement towards a real or imagined positive outcome, or any mention of a facilitating object or circumstance. Also noticing of any event that enhances another event, effective state, or a person. Noticing facilitating or positive cause and effect.	"Having a computer for us to type the questions we formulated was very helpful." "There was a lot of energy that helped us get the session completed in good time."
8. Effort to reframe in positive terms	Any mention of a negative emotion or action accompanied by the possibility of a positive desired outcome. Also, any mention of a change in mood from negative to positive, including any mention of an obstacle that is temporary, getting over a negative static state, or reframing of a negative situation in more positive terms.	"We experienced a lot of conflict, but I realized that this was an appropriate time for us to learn how to constructively manage conflict."
9. Prediction, image of a positive future	Any explicit description of a vision, or valued end state, articulation of a positive outcome envisioned for the future which is either speculative (i.e. what might be) or normative (i.e. what should be).	"My hope for the group's development was that we would operate openly with one another as partners under egalitarian norms."

**Table 2. Negative Cognition Categories**

<u>Cognitive Type</u>	<u>Description</u>	<u>Example</u>
1. Negative valence	Any mention of negative valence, such as fatalism, apathy, or dislike. Any mention or identification of person, groups, circumstance or event as a problem or obstacle.	"We hoped that it would not be a problem that they wanted two groups."
2. Concern, worry, preoccupation, doubt	Any mention of concern, worry, preoccupation without mention of possibility of a facilitating model to alleviate concern or to enhance understanding. Any mention of doubt, suspicion, lack of confidence in future outcome.	"I'm concerned whether the new appointee will work out."
3. Unfulfilled expectation	Any mention of an event, action, state or person that does not match intention, wish, desire, goal or other unfulfilled expectation.	"My first preference was the Art Museum, but the group filled up so quickly."
4. Lack of receptivity, absence of connection	Any mention of a lack of receptivity in self or others, including a lack of collaboration, lack of understanding, failure to listen, or failure to agree, noticing of inequality, or otherwise any explicit mention of an absence of connection, interest or collaboration.	"There was no commonality between the members."
5. Deficiency in self or others	Any mention of a sense that something is missing, such as, deficiency in self or others, lack of motivation, appropriate effort, skill, competence, or absence of resources such as time and money.	"Thus, from a scouting standpoint, initially little though was given to the aspect of how the potential client's influence within an organization might affect the acceptance of an OD intervention."
6. Negative affect	Any mention of feelings of dissatisfaction, selfishness, sadness, defensiveness, irritation, anger without mentioning a possible antidote, relief or effort to understand.	"I was irritated by her lack of concern."
7. Withdrawal or suppression	Any mention of avoiding, ignoring, withdrawing energy, surrendering, suppressing self or others.	"I retreated from the discussion."

**Table 2. Negative Cognition Categories (cont.)**

8. Control or domination	Any noticing of effort or action to disrupt, dominate, wield control, impact mood or activity, in self or others.	"Tony controlled consensus by belaboring each item."
9. Wasted effort	Any mention of excessive investment of time, resources, or energy without mention of reward or positive outcome.	"The vast majority of the five hour meeting was spent on a few trivial issues, what a waste of time."
10. Prediction, image of a negative future	Any explicit prediction or description of a vision, image or expectation of a negative future which is either speculative (i.e., what might be) or normative (i.e., what should be).	"The way this meeting is going on right now in another ten minutes we will be at each other's throats."
11. Attribution of control in other(s) in combination with self-deprecation	Any notice of effort or action in other(s) to disrupt dominate, or wield control in combination with attribution of helplessness to self, self-pity or self-depreciation.	"Every one else knew more than I did and were dominating the discussion and I could contribute nothing."
12. Negative cause and effect relation	Any explicit notice of cause and effect relationship leading to a negative valence or outcome.	"The tension and the rivalry in the group arose because of all the undisclosed problems."
13. Reframing a situation in negative terms	Any mention of a positive emotion accompanied by the possibility of a negative outcome. Also, any mention of a change in mood from positive to negative, or getting into a negative state, focusing on possible obstacles, or reframing a positive situation in more negative terms.	"The team member's were so participative, but underneath there was a tendency to outsmart one another."

**Table 3. Intercorrelations Among Positive Cognition Variables**

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
1. Positive valence								
2. Hope towards future	-.18							
3. Skill or competency	-.15	.01						
4. Openness, receptivity, learning	.02	.11	.11					
5. Active connection, effort to include, cooperate	.03	-.05	.08	-.17				
6. Mention of positive surprise, curiosity or excitement	.17	.04	-.06	.01	.01			
7. Mention of facilitating action or movement towards a positive outcome	-.08	.14	-.03	.24	-.01	-.02		
8. Effort to reframe in positive terms	-.13	-.03	.16	.05	-.09	-.02	-.08	
9. Prediction, image of a positive future	.19	-.02	-.09	.18	-.05	.22	.08	-.10

Determinant = .65

Bartlett test of Sphericity = 46.82 with 36 d.f

Significance = .07

N = 30

**Table 4. Intercorrelations Among Negative Cognition Variables**

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
1. Negative valence												
2. Concern. worry, preoccupation, doubt	-.05											
3. Unfulfilled, expectation	-.08	.38										
4. Lack of receptivity, absence of connection	-.18	-.04	.08									
5. Deficiency in self or others	-.10	-.14	-.02	.12								
6. Negative affect	-.16	-.05	.04	.22	.20							
7. Withdrawal or suppression	-.07	-.10	.02	.40	.08	.09						
8. Control or domination	.05	-.09	-.06	-.01	-.16	.10	-.05					
9. Wasted effort	.05	-.06	.26	-.06	-.05	.03	-.04	-.13				
10. Prediction, image of a negative future	.01	-.01	-.05	-.05	-.01	.02	.07	-.04	.12			
11. Attribution of control in others combined with self-deprecation	.01	.06	-.02	-.04	-.06	.01	-.05	-.01	.02	.63		
12. Negative cause and effect relation	-.13	.14	.15	-.01	-.03	-.03	-.05	-.02	-.02	.08	.07	
13. Reframing in negative terms	-.05	-.07	-.09	-.12	.03	.14	-.08	.06	-.10	.01	.05	.17

Determinant = .23  
 Bartlett test of sphericity = 160.85 with 78 d.f  
 Significance = .000  
 N = 30

**Table 5. Means, Standards Deviations, Analysis of Variance <sup>a</sup> and Discriminant Analysis for Positive Cognition Variables**

<u>Variables</u>	<u>Appreciative Inquiry</u>		<u>Action Research</u>		<u>Anova F</u>	<u>Standardized Discriminant Function Coefficients</u>
	<u>Means</u>	<u>s.d.</u>	<u>Means</u>	<u>s.d.</u>		
1. Positive valence	3.19	3.97	2.23	3.55	1.89	.41
2. Hope towards future	3.14	4.55	1.83	4.14	2.69	.35
3. Skill or competency	12.53	9.61	8.58	6.53	6.86**	.55
4. Openness, receptivity or learning in self or learning	7.48	9.37	4.94	7.01	2.79	.21
5. Active connections, effort to include or cooperate	5.06	7.44	4.54	4.96	.20	.08
6. Mention of notice of positive surprise, curiosity or excitement	2.60	4.50	.97	2.29	6.23**	.50
7. Mention of facilitating action or movement towards a positive outcome	7.86	8.81	4.64	6.84	4.94*	.42
8. Effort to reframe in positive terms	6.28	6.94	6.27	6.50	.001	-.03
9. Prediction, image of a positive future	.18	.63	.18	1.29	.281	-.30

<sup>a</sup>-F - statistics with df = 1,116 are reported in the table

\* p < .05

\*\* p < .01

\*\*\* p < .001

n = 30

**Table 6. Standards Deviations, Analysis of Variance <sup>a</sup> and Discriminant Analysis of Negative Cognition Variables**

<u>Variables</u>	<u>Appreciative Inquiry</u>		<u>Action Research</u>		<u>Anova F</u>	<u>Standardized Discriminant Function Coefficients</u>
	<u>Means</u>	<u>s.d.</u>	<u>Means</u>	<u>s.d.</u>		
1. Negative valence	1.23	2.72	.90	2.26	.53	.06
2. Concern, worry, pre-occupation	5.03	9.29	5.87	6.59	.32	-.37
3. Unfulfilled expectation	1.65	3.41	.68	1.74	3.89	.47
4. Lack of receptivity, absence of connection	2.38	4.07	6.51	7.22	14.45***	-.59
5. Deficiency in self or others	3.50	5.39	5.48	5.98	3.55	-.41
6. Negative affect	3.08	5.38	2.33	3.78	.80	.35
7. Withdrawal or suppression	.84	2.57	1.19	2.64	.52	.11
8. Control or domination	1.65	3.34	7.59	10.27	17.57***	-.65
9. Wasted effort	.17	.94	.92	2.60	4.23*	-.55
10. Prediction, image of a negative future	.05	.38	.21	.91	7.40	.03
11. Attribution of control in others combined with self-deprecation	.05	.38	.13	.61	2.39	-.20
12. Negative cause and effect relation	2.46	3.85	3.19	5.00	.77	-.13
13. Reframing in negative terms	3.06	5.71	2.66	4.57	.18	-.01

<sup>a</sup>-F - statistics with df = 1,116 are reported in the table

\* p < .05

\*\* p < .01

\*\*\* p < .001

n = 30

**Table 7. Intercorrelations among Demographic, Lifestyle, Interpersonal and Learning Style Variables**

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b><u>Demographic Variables</u></b>																				
1. Age																				
2. Sex	-.22																			
3. Occupation	.16	.12																		
4. City Population	-.06	.46	-.31																	
5. Number of Siblings	-.10		-.11	-.17																
6. Birth Order	-.14	.03	.04	-.30	.45															
7. Religion Born Into	-.11	-.51	-.23	-.41	.25															
8. Current Religion	-.35	-.15	-.01	-.09	-.11	-.18	.40													
<b><u>Lifestyle Variables</u></b>																				
9. Formalistic	.01	.17	.06	.07	.23	.28	.07	-.28												
10. Sociocentric	-.09	.12	-.03	-.17	.13	.36	-.04	-.14	.92											
11. Personalistic	-.05	.08	.03	-.12	-.22	.34	-.09	-.17	.93	.94										
<b><u>Interpersonal Variables</u></b>																				
12. Expressed Inclusion	-.03	-.17	.25	.09	-.08	.02	.16	-.02	-.21	.26	.21									
13. Expressed Control	.04	.45	-.22	-.12	-.14	-.05	-.16	-.35	.31	.27	.25	-.06								
14. Expressed Affection	.10	-.29	.12	-.12	-.14	-.11	-.23	-.16	-.06	-.02	-.03	.69	-.20							
15. Wanted Inclusion	-.06	-.33	-.03	-.14	-.27	-.24	.57	.06	-.02	.05	-.01	.56	.05	.53						
16. Wanted Control	-.03	-.03	.16	.11	-.35	.02	.04	.20	-.24	-.12	-.28	.39	-.34	.27	.31					
17. Wanted Affection	-.03	-.37	.05	-.22	-.07	.16	.26	-.20	-.05	-.03	.04	.50	-.17	.88	.61	.18				
<b><u>Learning Style Variables</u></b>																				
18. LSI Concrete Experience	.02	-.43	.09	-.08	.22	-.04	.41	.10	.05	.06	.03	.65	-.38	.50	.47	.15	.44			
19. LSI Reflective Observation	.01	-.49	.05	-.09	.31	-.11	.49	.17	-.11	-.11	-.13	-.57	-.44	.94	.50	.14	.38	.96		
20. LSI Abstract Conceptualizing	-.04	-.48	-.03	-.10	.26	-.13	.48	.19	-.01	-.02	-.04	.57	-.41	.44	.50	.14	.37	.96	.98	
21. LSI Active Experimentation	-.01	-.47	.03	-.12	.22	-.05	.44	.15	-.02	-.03	-.07	.56	-.45	.51	.45	.17	.95	.97	.96	.96

Determinant = .0000

Bartlett Test of Sphericity = 494.63 with 210 D.F.

Significance = .000

N = 26



**Figure 1**  
**A Relational Model of the Effects of Inquiry Paradigms on Inquirers and the Consequent Reimpact on Their Role as Effectors of Organizational Phenomena**

