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## **A Contingency Approach to Laboratory Learning: Psychological Types Versus Experiential Norms**

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### **ABSTRACT**

This study investigated the psychological dynamics and situational factors that determine whether an individual will experience support and/or confrontation in a laboratory setting. The psychological dynamics were represented by C. G. Jung's psychological types and the situational factors were the experiential norms that manifest these psychic functions. A Contingency framework was derived to suggest the conditions that will lead to the acceptance or rejection of the laboratory experience, or to self-awareness and personal growth. The research data give reasonable evidence to this framework, and the implications of the study are given for: (1) the identification of the rejectors of particular laboratory experiences, (2) the design of different laboratories via alternative experiential norms, and (3) the intervention strategies for staff and trainers according to the laboratory setting and goals.

### **INTRODUCTION**

Since the T-group movement began (Bethel, Maine, 1947), the notion seemed to develop that the laboratory experience was potentially beneficial to just about everyone (Bradford et. al., 1964). That is, if one could experience and learn from the laboratory then one would be a more effective individual in personal and organizational life. Recently, however, there has been some questioning of whether the laboratory method (as currently designed) is a valuable experience for all individuals. From a study of personality and laboratory learnings, Steele

(1968) concludes: 'It may not be realistic to try to change all persons toward a single laboratory style of behavior . . . (but rather) a wider range of training experience better suited to different types of individual participants.'

In this study, we define 'acceptors' as individuals who are apt to be compatible with the current designed laboratory experiences; and define 'rejectors' as those who are likely to be incompatible in current laboratory designs (the dimensions of compatibility will be discussed shortly). The questions that we wish to explore are as follows: 1) can the rejectors of particular laboratory experiences be identified? 2) if current laboratory designs tend to be incompatible with certain individuals (rejectors), can different laboratories be designed where the experiences of the lab *are* compatible with these individuals? 3) what implications do these different laboratories have for staff and trainer interventions?

Furthermore, exploring the dynamics of 'rejectors' is not seen as the exact opposite of investigating 'acceptors'. Our point of reference is not that rejectors have *lessor* qualities of certain characteristics than acceptors, but rather that rejectors have *different* characteristics. However, literature on personality and T-group behavior has suggested that 'rejectors' do have certain lessor qualities which also connote socially undersirable characteristics. For example, individuals who do not function well in the laboratory have been variously called: dependent, highly authoritarian, needing high structure (Steele, 1968), lacking ego strength, flexibility and the need for affiliation (Miles, 1960), and fleeing and dependent (Mathis, 1955). When a group of people favoring high structure did function well they were perceived as dealing with shallow content by the trainer (Stock, 1964).

While we do not doubt the validity of these findings, it seems that classifying the rejector in this manner does not afford the possibility of seeing the 'positive' aspects of the rejector which prevents him from doing well in the laboratory (as presently designed). Perhaps other types of laboratory designs (but still experiential) would better permit different individuals a useful learning environment. In essence, from our experience in groups as participants and trainers, *we feel the need to explore the psychological dynamics of rejectors by a positive and humanistic approach rather than by labeling rejectors as having certain 'negative' characteristics.*

## JUNGIAN THEORY: THE PSYCHOLOGICAL TYPES

For several reasons, we decided that the theory of psychological types developed by C. G. Jung (1923) was a particularly useful framework for exploring these research issues. First, there is an enormous amount of material from Jung (mostly of a theoretical nature) upon which to draw inferences to behavioral situations. Second, the elaborate theory was conceived to facilitate the practice of learning and change in individuals, a goal of applied social scientists who design and conduct laboratories. Third, as will be seen, the theory enables the specification of moderating conditions which as Stock (1964) suggests, permit, translate or block the expression of psychological dynamics. Fourth, the Jungian framework is generally value-free in the sense that everyone can function well in his own particular style in particular situations. Thus, if an individual does not function well in a specific laboratory setting, a Jungian analysis would not classify him as being less effective as other individuals, *in general*. And fifth, important aspects of Jungian theory can be measured by the Myers-Briggs Type Indicator (Myers, 1962), an instrument which has received considerable reliability and validity examinations (Buros, 1970).

A fundamental aspect of Jungian theory is the psychological types (Jung, 1923; Marshall, 1967; especially Myers, 1962). These consist of two ways of perceiving, two ways of judging, two attitudes which locate the direction of the individual's energy, and a specification of a dominant and auxiliary process (perceiving or judging). The various combinations of these functions, attitudes, and dominant and auxiliary processes results in an individual's psychological type.

Regarding the perception function, individuals can perceive either by *sensation or intuition*. Sensation occurs when data is taken in directly by the five senses, the actual, specific, details of reality. In contrast, perception via intuition involves 'seeing' the whole, the gestalt, and the associations that the unconscious generates and adds on to the data that is being received. All individuals perceive with both of these functions at different times. But as Jung argues, individuals tend to develop a preferred way of perceiving, and in fact, cannot apply both types of perception at the same exact time.

There are two basic ways of judging, according to Jung: *thinking and feeling*. Thinking is the logical, analytical, reason-

ing process that results in a particular conclusion or 'judgment'. Feeling is the rational process of giving value to any phenomenon or object, and this value determines whatever conclusions are reached. Thus, however one 'takes in' data (either by intuition or sensation) an individual may come to some conclusion about the data either by a logical, impersonal analysis (thinking) or by a subjective, personal, 'adding value to' process.

The two 'attitudes' which direct the individual's energy in his existence are: *extroversion and introversion*. Extroversion is when effort is expended toward the outside of the person in the world of people and things. Introversion is when an individual directs phenomena from outside himself into his inner world of concepts and ideas. People can do both, but just like the other functions, people tend to be either more introverted or extroverted.

While individuals tend to capitalize on one of two ways of perceiving and one of two ways of judging (as directed to introverted or extroverted foci), individuals also develop tendencies to prefer perceiving to judging or judging to perceiving, as entire functions. The person who is oriented mostly to *perceiving*, tends to spend his time taking data in (either by sensation or intuition) and just living his life as it develops. The person oriented mainly to *judging*, is most concerned with coming to conclusions, making decisions, and determining the exact course of his life.

In essence, the perception functions and the judging functions describe the different ways that individuals define and 'make sense' out of their experiences (as they are directed to their inner and outer worlds). Consequently, *it seems that an individual's typology would be exceedingly relevant to experiential situations that emphasize the generation and use of data within the laboratory*. In the remainder of this paper, we will refer to an individual's characteristic and preferred ways of orienting and making sense of experience as his '*learning style*'.

## EXPERIENTIAL NORMS

An 'acceptor's' learning style would, by definition, be congruent or appropriate to the behavior expected from participants in the laboratory. The 'rejector', however, is defined such

that his learning style (as represented by his psychological types) tends to be inappropriate or counter to what is expected in the laboratory situation. A useful way of discussing what is meant by appropriate and expected, is in terms of the *norms* that guide behavior (i.e. the various staff, trainer, and participant expectations, interactions, tasks, etc. which determine acceptable and appropriate behavior in the laboratory situation). Therefore, an approach to considering what learning styles acceptors and rejectors are likely to evidence in a given situation, one can investigate the particular experiential norms that are operating in the laboratory. A definite advantage of utilizing the concept of norms as moderating the relationship between participants' learning styles and the acceptance and rejection of the laboratory experience, is that norms can be influenced by the trainers in the laboratory (Cooper, 1969).

In general, there is wide latitude in the mode of expressing norms. However, since this study is applying the Jungian framework to investigate the dynamics of rejection and acceptance, it is expected that by stating the norms concretely in terms of the Jungian framework, would most facilitate an empirical investigation.

In parallel to the Jungian dimensions, and as based on an understanding of these dimensions (e.g., Marshall, 1967), it is possible to suggest four counter pairs of norms that would seem to reflect the manifestation of an individual's psychic functions in an experiential situation.

To begin with, the norms reflecting extroversion versus introversion are seen by us to result in norms of: *interpersonal* engaging versus *intra-personal* engaging. By 'engaging' is meant the experiential state of being involved, connected with or emotionally attached to some other person or persons. However, the experience can be largely within one person or between two. The former state signifies the intra- aspect, while the latter defines the inter-aspect. Conceivably, an experiential norm might portray either interpersonal or intra-personal engaging, e.g., individuals should engage *interpersonally* in this laboratory.

The norms relating to sensation-intuition would seem to be characterized by *describing* versus *associating*. 'Describing' refers to the concrete, explicit, facts of the situation (as best 'seen' by a sensation person), while 'associating' suggests the possibilities for hunches, inferences, suggestions, etc. that stem

from the current, perhaps global, situation (as best seen by an intuitive person). It would seem that a particular laboratory might develop a norm regarding whether participants should simply be permitted to describe the details of the situation, or be expected to make some extrapolations, or interpolations of what is experienced (e.g., to draw analogies to back-home situations).

Norms that stem from the thinking versus feeling function can be suggested by *conceptualizing* versus *valuing*. 'Conceptualizing' refers to an individual developing or utilizing concepts, classifications, and theories to account for what he is experiencing. 'Valuing' involves the individual in placing subject values and emotional qualities on what is experienced. For example, in a laboratory setting, the norms might indicate that individuals should interpret their experience according to various concepts or theories, or, that they should respond to their experience according to what they like or dislike in the situation, and how things affect them.

The norms that appear to parallel the perceiving-judging dimension can be stated as *processing* versus *closing*. 'Processing' signifies the emphasis on the sequencing of events that produce phenomena, or stated differently, a view towards the 'means' of behavior. 'Closing', on the other hand, concerns the output or 'ends' of social phenomena, or an emphasis on results and the development of conclusions. In a laboratory, the norms could imply that the relevant experience is the particular processes that are going on, or a concentration on generating some 'final' solution or viewpoint.

## A CONTINGENCY APPROACH TO LABORATORY LEARNING

The Jungian theory of psychological types suggests two different kinds of learning that are relevant to the preceding discussion. These possible learnings follow from the notion that an individual becomes more conscious and in control of one way of perceiving, judging, and relating to the inner and outer worlds. For the individual, the alternative ways of perceiving, judging, etc., tend to be more unconscious, less in control, or stated differently, tend to be his 'shadow' side. One learning goal of a laboratory experience might be to allow an individual to do

even better what he already does comfortably. Thus, an individual who perceives via intuition and judges via feeling can learn to utilize these functions with even more control, flexibility, and precision (assuming that the laboratory allows him to utilize this particular learning style). A second learning goal may involve the individual in getting more in touch with his 'shadow' side. Jungian theory suggests that an individual will always be better or more natural with one aspect of a function than the other, but individuals can differ significantly according to how much control they can exert on their weaker side. The more the individual can apply either aspect of a function, the more the individual can be said to be flexible and effective in a variety of situations. The laboratory can thus provide various experiences where an individual can try out his weaker sides and develop more balance (and be less likely to project his shadow side on others). This latter learning seems similar to 'self-awareness' learnings, and getting the individual to see his blind spots as represented by the Johari window.

It is hypothesized that if the experiential norms of a laboratory situation were largely compatible with the individual's learning style, he would be more likely to experience support and develop a confirmation or strengthening of his own learning style. If the norms were mostly incompatible with this learning style, then the individual would likely experience confrontation and he would tend to reject the laboratory and perhaps develop a negative attitude towards the whole experience. However, if some norms are compatible and some norms are incompatible with the individual's learning style (psychic functions), then perhaps the individual will experience both support and confrontation, and be more likely to develop self-awareness and personal growth; the latter general hypothesis being consistent with recent research (e.g., Harrison and Lubin, 1965; Clark et al., 1969). Because this framework specifies the different conditions which produce different laboratory outcomes, we have labeled it: A Contingency Approach to Laboratory Learning.

## **METHOD**

A total of 92 graduate students in business administration participated in this study, 85 were male and seven were female. Forty-nine of these students responded to an abridged Myers-



Briggs instrument (containing only the sensation-intuition and thinking-feeling scales) because of time pressures in two classes. The remainder of the sample took the entire Myers-Briggs instrument (Myers, 1962). At the middle of the twelve-week semester all students were administered the Myers-Briggs and a self-report questionnaire assessing the acceptance-rejection of the laboratory experience (internal consistency = .79,  $N = 89$ ). At the end of the term, the student groups responded to a sociometric measure of acceptance-rejection (internal consistency reliability = .90,  $N = 78$ ).

The students in this sample were enrolled in the graduate course: Behavioral Science for Management. As the major activity in the classes, the students were assigned to groups of six to eight members, that retained their composition throughout the semester. The basic purpose of the groups was analogous to the processes and discussions that occur in laboratory situations. Since there were several groups in each class (the sample consisted of 12 groups from three classes), a staff member or trainer could not be assigned to each group. However, the instructors did rotate from group to group throughout the semester. At the same time, the groups participated in exercises designed to help the members get acquainted, practice giving feedback, and develop cohesiveness and trust. In addition, group members were asked to develop and live up to an interpersonal contract. This consisted of goals of openness, risk taking, interpersonal feedback, etc. In general, the classes spent at least two-thirds of their time in the small group activities, with the remainder being devoted to lectures, class discussion, and assignments on the concepts and use of behavioral science material.

#### SPECIFIC HYPOTHESES

As indicated in the theory section of this paper, the experimental norms that develop in the laboratory are expected to moderate which individual psychic functions will lead to support and confrontation, and hence, rejection, acceptance, or self-awareness learnings from the experience. Consequently, in order to stipulate specific hypotheses regarding this process, it is necessary to assess the particular norms that were operating in the 12 groups of this study, since the researchers were not in a position to influence the norms. While there was no attempt to



actually measure participants' perceptions of the norms in their group, by our association with the groups and the instructors who intervened in the groups, we are willing to suggest what these norms were likely to be. However, we recommend that future research designs should attempt the explicit measurement of experiential norms.

It is believed that the experiential norms of the research setting can be stated as: *interpersonal engaging, associating, valuing, and processing* as opposed to intrapersonal engaging, describing, conceptualizing, and closing. *It is also believed that these operating norms reflect, in general, the traditional normative focus of T-groups and sensitivity training* (e.g., Bennis, 1962).

According to the stipulated norms, the following hypotheses are offered:

Hypothesis #1: The more an individual is oriented to psychic functions that are *incompatible* with the experiential norms in the laboratory (for this sample, the psychic functions of introversion, sensation, thinking, and judging), the more the individual will *reject* the laboratory experience.

Hypothesis #2: The more an individual is oriented to psychic functions that are *compatible* with the experiential norms in the laboratory (for this sample, the psychic functions of extroversion, intuition, feeling, and perceiving), the more the individual will *accept* the laboratory experience.

Hypothesis #3: Individuals who are oriented to psychic functions that allow them to experience both support *and* confrontation, will develop greater self-awareness and personal growth than individuals whose psychic functions allow them to experience only support *or* confrontation.

The first and second hypotheses can both be tested by the same data since the two orientations of each psychic function are represented on a continuous scale, the midpoint dividing the two orientations. That is, the more an individual is oriented to

sensation, the less he is oriented to intuition. The third hypotheses, while the current study does not contain direct data measuring self-awareness and personal growth, can be approached by certain assumptions to be presented shortly.

## RESULTS

Table I presents the Pearson correlation coefficients between each of the four Jungian dimensions, and five sociometric

Table I

*Correlations of psychic functions (Myers-Briggs) and sociometric measures of the acceptance-rejection of laboratory experience.<sup>1</sup>*

Sociometrics	Psychic functions <sup>2</sup>			
	I-E	S-N	T-F	J-P
the individual's overall effectiveness contributed to group's progress	-.05	-.16	-.23*	-.48***
the individual was willing to be involved in the laboratory experience	-.09	-.07	-.29**	-.18
the individual was able to clarify events and make them understandable	-.03	-.10	-.14	-.20
the individual avoids getting involved in interpersonal issues (-)	-.32*	-.24*	-.34**	-.37*
the individual identifies issues and enlists group's aid in working them through	+.00	-.10	-.24*	-.39**
<i>Sociometric index of acceptance-rejection</i>	-.16	-.15	-.32**	-.43**
Sample size (N)	(43)	(78)	(78)	(43)

<sup>1</sup> All measures are scaled such that hypotheses predict negative relationships for rejection.

<sup>2</sup> I-E: Introversion-Extroversion

S-N: Sensation-Intuition

T-F: Thinking-Feeling

J-P: Judging-Perceiving

(Left side of scale signifies the aspect of the function that is incompatible to the experiential norms).

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

ratings that were developed to represent a general index of acceptance-rejection. All the measures were scaled such that the hypotheses predict negative relationships for rejection (i.e. the sociometrics are scaled in the direction of acceptance, and the psychic functions are in the direction of the experiential norms that are hypothesized to result in *incompatible* matches between functions and norms). Of the 20 relationships shown in *Table I* (excluding the summed index), 19 are in the negative direction signifying that an individual whose psychic functions are incompatible with experiential norms is more likely to reject the experience, and vice versa (significant by the sign test with  $p < .001$ ; Siegel, 1956).

In addition, several of the separate relationships are also statistically significant. For example, the less an individual is described by others in his group as having contributed to the group's progress by his overall effectiveness, the more the individual's psychic functions were oriented to thinking, as incompatible to valuing ( $p < .05$ ) and judging, as incompatible to processing ( $p < .001$ ). Also, the less the individual was described as willing to be involved in the laboratory experience, the more his psychic functions were oriented to thinking, as incompatible with valuing ( $p < .01$ ). The more an individual was rated by his peers as avoiding involvement in interpersonal issues (reverse scaling), the more the individual's psychic functions were incompatible with experiential norms: introversion ( $p < .05$ ), sensation ( $p < .05$ ), thinking ( $p < .01$ ), and judging ( $p < .01$ ). Finally, the summed sociometric index over the five descriptions was statistically significant for thinking ( $p < .01$ ) and judging ( $p < .01$ ), and in the predicted direction for introversion and sensation. (Each of the foregoing results can be conversely stated in terms of the acceptance hypothesis).

*Table II* presents the correlation coefficients between individual psychic functions and self-report measures of acceptance versus rejection of the laboratory experience. Again, all the measures were scaled so that the hypotheses predict negative relationships for rejection (in order to facilitate the interpretation of many relationships). Of the 16 relationships shown in *Table II* (excluding the summed index), 13 are in the predicted direction suggesting that an individual whose psychic functions are incompatible with the experiential norms is more likely to reject the experience, and vice versa (significant by the Sign Test with  $p < .01$ ; Siegel, 1956).

Table II

*Correlations of psychic functions (Myers-Briggs) and self-report measures of the acceptance-rejection of laboratory experience<sup>1</sup>*

<i>Self-report</i>	<i>Psychic functions<sup>2</sup></i>			
	<i>I-E</i>	<i>S-N</i>	<i>T-F</i>	<i>J-P</i>
the laboratory allows me to show my personal strengths	-.51***	-.20	-.28**	+.29
I felt able to exert influence in the group processes	-.37*	-.15	-.36***	+.08
I will definitely take advantage of more labs	-.08	-.23*	-.49***	+.01
my overall attitude toward lab training is negative (-)	-.37*	-.21*	-.35***	-.12
<i>Self-report index of acceptance-rejection</i>	-.42**	-.26**	-.46***	+.13
Sample size	(40)	(89)	(89)	(40)

<sup>1</sup> All measures are scaled such that hypotheses predict negative relationships for rejection.

<sup>2</sup> I-E: Introversion-Extroversion

S-N: Sensation-Intuition

T-F: Thinking-Feeling

J-P: Judging-Perceiving

(Left side of scale signifies the aspect of the function that is incompatible to the experiential norms).

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

Several of the relationships, when viewed separately, were statistically significant. Specifically, the less an individual stated that the laboratory experience allows him to show his personal strengths (on a Likert scale), the more his psychic functions were oriented to introversion, as incompatible with interpersonal engaging ( $p < .001$ ), and thinking, as incompatible with valuing ( $p < .01$ ). The less the individual felt able to exert influence in the group processes, the more his psychic functions were introversion ( $p < .05$ ) and thinking ( $p < .001$ ). The less an individual indicated that he would definitely take advantage of more laboratory training if the situation presented itself, the more his psychic functions were oriented to sensation, as incompatible to associating ( $p < .05$ ) and thinking, as incompatible with valuing ( $p < .001$ ). Finally, the more an individual

described his attitude toward laboratory training as negative (reverse scaling), the more the individual was oriented to the incompatible functions of introversion ( $p < .05$ ), sensation ( $p < .05$ ), and thinking ( $p < .001$ ). Looking at the summed index over the four self-report items, the following psychic functions were significantly related to rejection: introversion ( $p < .01$ ), sensation ( $p < .01$ ), and thinking ( $p < .001$ ). As before, each of the preceding results can be conversely stated in terms of the acceptance hypothesis.

Hypothesis #3 concerns the case when an individual can experience both support *and* confrontation as opposed to *either* support or confrontation. In particular, it is expected that the former condition will lead to greater self-awareness and personal growth than the latter condition. The present research assessment, however, was not able to obtain direct measurement of these variables (e.g., before and after measures of self-insight, self-ideal congruence, or self-actualization). In addition, because of the small sample size in relation to the possibility of 16 combinations of psychic functions (i.e. taking all four dimensions at one time), it was infeasible to distinguish by total profiles, the extent that an individual is likely to experience both support and confrontation.

With the data of this study, nevertheless, it is possible to approximate a test for the third hypothesis. First, it will be assumed that the self-report responses of the participants reflect their assessment of their personal growth from the experience, besides simply acceptance versus rejection. Consequently, the self-report measure will be applied as an approximation to measuring personal growth directly.

A second approximation is to assume that the closer an individual's psychic functions are to the midpoint of the scale (e.g., where extroversion 'switches' to introversion), the more likely with the individual experience both support and confrontation. The further from the midpoint is an individual's score on a function, the more likely the individual will experience *either* support or confrontation depending on the side of the dimension being considered. The basic assumption is that a score close to the midpoint suggests that the individual is more able to use both aspects of the function than if he had a more extreme score. The Myers-Briggs scores can be transformed to a scale where a high number signifies being close to the midpoint of a function, and a low number represents being further away

from the midpoint (i.e. an inverse scale of absolute differences from the midpoint).

Table III shows the correlations between the transformed psychic functions (in the direction of closeness to the midpoint of the function) and the self-report measure of acceptance-rejection (as an approximation to personal growth). Of the 16 relationships shown in the table (excluding the self-report index), 14 are positive, which is statistically significant by the Sign Test at  $p < .01$  (Siegel, 1956). This suggests that the closer an individual's psychic functions are to the midpoint of the

Table III

*Correlations of the likelihood that an individual experiences both support and confrontation, and self-report measures of acceptance-rejection (as an approximation to personal growth).*

<i>Self-report</i>	<i>Transformed Psychic functions<sup>1</sup> (support and confrontation)</i>			
	<i>IE-X</i>	<i>SN-X</i>	<i>TF-X</i>	<i>JP-X</i>
the laboratory allows me to show my personal strengths	-.05	+.21**	+.21**	+.06
I felt able to exert influence in the group processes	+.26*	+.13	+.15	+.28*
I will definitely take advantage of more labs	-.07	+.10	+.20*	+.19
my overall attitude toward lab training is negative (-)	+.07	+.26**	+.24**	+.15
<i>Self-report index of personal growth (approx.)</i>	-.00	+.22**	+.25**	+.22
Sample size (N)	(40)	(89)	(89)	(40)

<sup>1</sup>IE-X: Introversion-extroversion transformed to X scale.

SN-X: Sensation-intuition transformed to X scale.

TF-X: Thinking-feeling transformed to X scale.

JP-X: Judging-perceiving transformed to X scale.

X = 100 - Absolute value (Myers-Briggs score - 100)

The closer the individual's Myers-Briggs score on any function is to the mid-point of the dimension (scores of 100), the higher is the X score; the further the Myers-Briggs from the mid-point, the lower the X score. High X score is expected to signify the likelihood of support and confrontation.

\* $p < .10$  \*\* $p < .05$

dimension (i.e. where one aspect of the function switches to the other aspect), the more the individual reports the laboratory experience in an accepting manner. To the extent that the two assumptions are not 'far off', this overall finding favors Hypothesis #3. That is, individuals who experience both support and confrontation (because their particular psychic functions are such that they *can* experience both in the same laboratory) are more likely to report an accepting stance towards the experience which presumably is related to personal growth.

Besides the significant overall results, several of the relationships were also statistically significant. In particular, the more an individual reported that the laboratory allows him to show his personal strengths, the closer he was to the midpoint on the sensation-intuition dimension ( $p < .05$ ) and on the thinking-feeling dimension ( $p < .05$ ). The more an individual indicated that his overall attitude toward laboratory training was not negative (reverse scaling), the closer he was to the midpoint of sensation-intuition ( $p < .05$ ) and thinking-feeling ( $p < .05$ ). The summed index over the four self-report items was also significant for these two dimensions ( $p < .05$ ). In addition, there was a tendency for an individual's being close to the midpoint of introversion-extroversion and judging-perceiving to be related to his feeling able to exert influence in the group processes ( $p < .10$ ). There was also a tendency that the more an individual indicated that he would definitely take advantage of more laboratory training, the closer he was to the midpoint of thinking-feeling ( $p < .10$ ).

## DISCUSSION AND CONCLUSIONS

The results of this study give some evidence to the hypotheses which were proposed. In particular, it was found that the Jungian framework could be applied to link individual psychological dynamics (psychic functions) through moderating conditions (experiential norms) to self-report and sociometric measures of rejection and acceptance of a laboratory experience. Also there was some suggestion that the experience of both support and confrontation of an individual's learning style would lead to greater acceptance (and perhaps greater personal growth), than the experience of either support or confrontation (although based on several assumptions). Consequently, the



Contingency Approach to Laboratory Learning may be quite useful to explore further issues of laboratory behavior.

At this time, we return to the initial questions posed at the beginning of this paper: 1) can the rejectors of particular laboratory experiences be identified? 2) if current laboratory designs tend to be incompatible with certain individuals, can different laboratories be designed where the experience of the lab *are* compatible with these individuals? 3) what implications do these different laboratories have for staff and trainer interventions?

Once the norms of a laboratory can be specified or anticipated, the Jungian framework vis à vis these norms can propose the typological characteristics of the rejector. Since the Myers-Briggs instrument is quite valid and reliable, one can assess the particular population that may be registering for the laboratory. If the experiential norms of the laboratories can be stipulated and estimated with the same precision, then certain feasible alternatives are available. First, consistent with the suggestions of Yalom and Lieberman (1971) with regards to lowering the casualty rate of laboratory participants, the individuals who are classified as 'rejectors' could be given information as to what they may expect in the laboratory in terms of the norms, expected behaviors, and areas of confrontation. This could certainly help individuals make more meaningful choices about their participation in a laboratory.

Second, if the expected 'rejectors' are aware of their relationship to the experiential norms in the laboratory, then they can better appreciate their resulting behavior in the situation. For example, if a laboratory member is able to make an accurate attribution to his uncomfortable behavior (i.e. applying his 'shadow' or 'inferior' functions) he can say: 'The reasons I am now behaving incompetently is because I am using my inferior functions. I know that you've got inferior functions too and I might be able to identify them for you. There's an equality, because you're going to be a resource for me, you're going to be picking up things that I systematically overlook and perhaps I can do the same thing for you.' The ability to make these attributions seems essential to a meaningful participation of everybody in the laboratory. Also, in this way, the rejector is not likely to be seen in a negative or undesirable manner, but as a potential source for his own and others' learnings.

We have suggested that the laboratory groups in this study

could be characterized by the experiential norms: interpersonal engaging, associating, valuing, and processing, which seem to us to reflect the typical normative stance of T-groups and sensitivity training. For each of these norms, we have indicated counter norms: intra-personal engaging, describing, conceptualizing, and closing (parallel to the Jungian dimensions). When different combinations of these norms are taken together, one can generate 16 different sets of four experiential norms. These different sets can represent a variety of different foci of laboratory situations. The common ingredient being that they all involve the use of 'here and now' versus 'there and then' data as the major emphasis, i.e. the defining characteristic of laboratory situations (Dyer, 1972).

The third question of this study concerns the staff and trainer interventions that are relevant to this view of laboratory learning. Although the laboratory groups in the present study did not contain active trainers in each group, the instructors of the laboratory presented the groups with specific directions to tasks and guidelines for participant behaviors. It is our belief that those who design and train the laboratory have a fundamental influence on the norms that develop. Even if participants come to the laboratory with definite expectations and goals, the authoritative position of the laboratory staff can typically override participant influences. The literature on trainer behavior confirms this viewpoint (e.g., Cooper, 1969).

*The basic implication, then, is that staff and trainers of laboratories should be consciously aware of the norms they establish and the consequences of these norms to participant experiences of support and confrontation, and the possibilities for personal growth.* To operationalize this requires knowledge of how norms get developed in general, and how to develop the specific norms that may be desired in a given laboratory. For example, a trainer behaving consistently with a particular set of norms may be central to having those norms adopted in the laboratory.

In addition, there is a special issue of helping trainers themselves become more sensitive to the kinds of support and confrontation that can be given to the various psychological types. An example: the feeler being asked to attend to his thinking, the intuitive person being expected to describe the concrete data that led to his inference, or asking the judging person to transfer the process of learning from the laboratory

instead of substantive material. A trainer might have made these suggestions without realizing that he was confronting the person. We believe that this is the way confrontation usually occurs and that many trainers have attempted to provide support and confrontation at appropriate times without having any particular theory to explain why one intervention is appropriate and another is inappropriate. *What we are doing is suggesting a powerful way of making those differentiations for the trainer, via a Jungian analysis of the psychological types of the participants in relation to normative interventions.*

The foregoing suggests two trainer strategies in helping participants to personal growth. The first is to design the laboratory for a special kind of support and confrontation and to choose carefully participants who can experience these conditions in the normative structure of the laboratory. The second strategy is *to broaden the normative structure of any given laboratory to allow for a wider range of support and confrontation.* Interventions as those suggested in the previous paragraph could be consciously directed to provide some support and confrontation to all participants at different times. The first case involves choosing one of the '16 laboratories' and developing the norms accordingly, while the second case involves the complex appreciation and development of a broad normative experience.

In order to appreciate the different possibilities and outcomes of these different strategies requires considerable experimentation and research. It is believed that the contingency model of laboratory learning developed in this paper offers a viable framework for further work in this area.

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