BRIDGING THEORY AND PRACTICE IN LABORATORY EDUCATION:

A HEURISTIC MODEL FOR INTERVENTION

IN HUMAN RELATIONS TRAINING GROUPS

by

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ABSTRACT

An essential basis for all theoretically informed social
practice is the establishment and clarification of relationships
between relevant knowledge and effective action. The development
of a framework outlining the conditions necessary for such
clarification represents an important problem for the student of
communication. This thesis proposes a method of generating such
a model within one area of applied social science, namely
Laboratory Education - a human relations training methodology
based on theories of group dynamics and communication.

It is argued that the conceptual requirements of applied
social science in general differ from those of pure theory, and
that the present development of theory in several fields does
not fulfill practical needs. Abstracting from the work of Jerome
Bruner in Education, we examine the nature of the practitioner's
requirements and propose a method of conceptually linking theory
and practice to meet these requirements. This method is then
used to construct what is termed a 'Model of Intervention' for
the field of Laboratory Education in order to examine the
model-building process entailed in the method.

A three phase process of model construction is followed as
a means of explicating conceptual links between theories of
group dynamics and practices of Laboratory Education. The first
step involves a redevelopment of group theory to specifically

address the laboratory context, including an integration and synthesis of relevant research. The next step draws upon this theoretical formulation and upon a conception of the laboratory learning process to examine significant relationships between these. Finally, specific guidelines are elaborated with respect to practical strategies of program design and intervention suggested by the above steps.

Concluding remarks focus on the question of evaluating the conceptual framework that has been developed, and on the effectiveness of the model building process in fulfilling the practitioner's conceptual requirements. Although no formal procedures of validation are carried out, an informal evaluation suggests the utility of the method, and implications for additional applications within other applied social science fields are discussed.

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Introduction

In virtually every area of scientific enterprise distinctions are drawn between the pure theoretical and applied components of the discipline; every field has its empirical researchers and theoreticians, and its technologists and practitioners. Such distinctions are no less evident in the social and behavioral sciences than they are in the natural sciences. We have for example, experimental psychologists, sociologists, small group researchers, and organizational theorists on the one hand, and clinical psychologists, social workers, group training specialists, and organizational consultants on the other. Although one might suggest that these distinctions are merely a matter of professional emphasis and interest, it is doubtful that such arguments could account for an apparent divergence of theory and practice in many of these fields.

In these and other areas, the techniques and methods used by practitioners to affect change in various social contexts appear to have outgrown their original basis in theory. For

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example, Bruner (1966) argues that the theories of learning and development upon which the teaching profession is based do not adequately inform the instructor about the most effective way of teaching particular subjects; as a result, teaching practices have arisen which often have no explicit basis in theory. Similarly, the fields of psychotherapy and small-group human relations training have both been identified as areas in which "practice has also outrun credible theory" (Schein and Bennis, 1965, p.271). In each of these areas the development of practical strategies for the application of relevant theory and research has moved beyond the boundaries of pure science and has given rise to a separation between theory and practice.

According to Gouldner (1966), a major factor in the separation and differential growth of pure and applied social science is a fundamental difference in the theoretical and conceptual needs of each area. In general, pure research and theory undertakes to identify various forces underlying social phenomena and to account for the impact of those forces; applied social science on the other hand is concerned with improving or changing social functioning rather than describing it. Ultimately, according to Gouldner, the applied scientist is "concerned with identifying those independent variables which can not only account for, but which can remedy...'social problems'" (Ibid. p.84). What is required here are theoretical frameworks which inform the practitioner not only about the

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nature of various social processes, but also about the most

effective means of influencing or _intervening_ in those

processes.

Because the concerns of the practitioner go somewhat beyond

those of the pure theorist, Gouldner argues, the particular

theoretical and conceptual needs of applied social science "are

not well met by the present development of pure theory" (Ibid.

p.84). Bruner exemplifies this argument within an educational

perspective, suggesting that "theories of learning and

development are descriptive rather than prescriptive" and do not

provide a basis for action within a teaching context (Bruner,

1966 p.40). Although Bruner speaks specifically of problems in

education, his argument has force in the larger perspective of

applied social science as a whole. Most social or behavioral

theories are essentially _descriptive_ of the forces and dynamics

underlying processes of human behavior and interaction and do

not _prescribe_ appropriate action for influencing or changing

those processes.

In certain respects, the lack of prescriptive focus in

social theory can be linked to current methods of research and

theory construction. Most efforts to describe or explain social

phenomena are based on methods which "decompose" complex

processes and examine specific relationships between discrete

variables (Richards, 1980). In general, these methods follow a

"covering law" model of explanation: attempting to account for

social behavior by identifying generalized descriptions of relationships that are independent of external influences and which hold for all cases. While such research may provide useful information concerning the internal mechanisms underlying specific phenomena, it omits certain components that are crucial within an applied or prescriptive framework.

One component lost in this type of research is the element of context. In studying relationships between discrete pairs of variables, numerous external influences which are normally active must be experimentally constrained or statistically 'averaged out' as a way of deriving information that can be generalized to an entire class of phenomena. In doing this, we often remove the particular phenomenon from its functional context and ignore factors which might affect its operation in specific cases. In an applied setting however, these contextual elements are of special importance. Practitioners are less concerned with entire classes of phenomena (for example, the class of all small groups) than they are with examples of that class within a particular context (groups in educational settings for example), or with particular cases (such as a particular training group). By removing phenomena from the contexts in which they normally occur, some important prescriptive information is lost.

A second component necessary for prescription but often lacking in current theory is reference to the specific motives

and values underlying research and action. While investigations are often initiated in the context of specific practical problems and value orientations, these are seldom explicitly recognized in the research process; typically, these are replaced by the value of 'knowledge for the sake of knowledge'. The development of theory within this framework tends to ignore the specific context for which knowledge is required, generating instead a body of knowledge relevant to, but not directly addressing, the problems which initiated it. To prescribe action however, it is important to be cognizant of the ultimate goals or values toward which action is directed; and our current 'value free' science tends to ignore this important element.

In these respects then, the current form of most social theory presents a problem with respect to the prescription of practitioner action. Although theory is one of the principal tools used by the applied scientist, in many cases it lacks the contextual and motivational basis for deriving appropriate action. These missing elements deprive the practitioner of an important conceptual link between theory and practice and create a gap that the practitioner must otherwise bridge if practice is to be truly informed by theoretical knowledge. In the absence of these links between theory and practice , a number of specific problems arise for the practitioner. New developments in theory and research for example are not easily translated into practical techniques; and new ways of improving the

effectiveness of interventions that arise from practical
experience are not easily incorporated or accounted for within
theoretical frameworks. In short, the lack of conceptual
connections between theory and practice creates a communication
gap of sorts between pure and aplied scientists - a gap which
leaves many of the practitioner's conceptual needs unmet.

In a broad perspective, the central problem in various
applied fields might be construed as a lack of conceptual
frameworks which provide a heuristic bridge between theories
about particular subject matters (eg. theories of individual
learning and development, group dynamics, or organizational
theory) and the practices which professionals use to facilitate
change and development in specific settings (eg. practices of
teaching, psychotherapy, human relations training, or
organizational consulting). Although there are natural and
inevitable relationships between the two, few attempts appear to
have been made to clarify those relationships within any
particular field, or to propose a framework in which such an
attempt could be made.

This thesis examines the problem of developing a conceptual
framework to bridge theory and practice within one particular
area of applied social/behavioral science. The central focus of
this study is the field of laboratory education, a human
relations training methodology which utilizes theories of group
dynamics and communication as a basis for developing

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interactional effectiveness in individuals and groups. We begin by reviewing a number of general considerations which Bruner (1966) identifies as central requirements for effective practitioner action in relevant applied settings; these are then used to suggest an approach that will facilitate the clarification of relationships between theory and practice in the field of laboratory education. Specific attention is given to the re-casting of current group theory to address more specifically the particular context of laboratory education, and to an elaboration of this theoretical framework in light of the goals and values of this training format. The major part of the thesis involves the actual construction of an appropriate formulation for this field based on the given approach. Our principal purpose is to provide a conceptual framework which laboratory practitioners can use as a basis for designing and conducting effective training programs on the basis of current group theory. While not a central focus of this thesis, we will also informally evaluate the suggested approach in terms of its effectiveness as a guide for constructing such a framework, and will suggest other possible applications. These secondary considerations are discussed in the concluding chapter.

The Nature and Requirements of a Conceptual Bridge

The Concept of a Heuristic Model of Intervention

As suggested, one of the principal differences between pure and applied social science is that, while the pure scientist attempts to describe and explain social processes, the applied scientist seeks to intervene in those processes. In general, the unmet conceptual needs of the practitioner are primarily concerned with the derivation of appropriate interventions from relevant social theory. In constructing a conceptual framework to meet these requirements in the field of laboratory education then, we are in effect constructing what might be termed a 'theory' or 'model' of intervention to act as a bridge between pure theory and practice.

The principal purpose for such a framework would lie, not in the explanation or prediction of laboratory phenomena, but in the provision of guidelines to suggest appropriate modes of practitioner action. In this way, the conceptual model we seek is not a 'theory' or 'model' in the formal sense of an explanatory system, but a framework that is primarily of heuristic value. We are looking for a conceptual system capable of clarifying relationships between pure theory and strategies of intervention and change, and thus of providing a basis from

which to generate new forms of understanding and action. Our use
of the terms 'theory' and 'model' is therefore to be taken in an
informal, heuristic sense. In this light, we can characterize
our conceptual bridge as a "Heuristic Model of Intervention".

The Requirements for a Model of Intervention

Although we have stated in general terms that such a
formulation would have to fulfill certain conceptual
requirements demanded by the practitioner, we have not as yet
identified in detail what those requirements are within the
context of an educational practice such as laboratory education.
The present section will serve to clarify these requirements,
and to outline the principal criteria to be satisfied in the
construction of an intervention model for this context.

A number of clues to the nature of these requirements can
be found in the work of J. Bruner (particularly Bruner, 1966).
Bruner identifies four principal requirements for what he terms
a "Theory of Instruction" - a framework which "sets forth the
most effective way of achieving knowledge or skill" in students
(Ibid. p.40). While Bruner's theory is developed for a specific
teaching context, it explicitly examines the relationship
between theory and practice and attempts to address the unmet
requirements of the practitioner in a more general framework. It
is useful therefore in identifying the nature of various

conceptual 'missing links' in a somewhat wider range of applied
social and behavioral sciences. Several applied fields share
with education the goal of facilitating change and growth in
specific clients through direct professional intervention. In
many of these areas, including those which utilize laboratory
methods, change is enacted by facilitating the development of
new cognitive and behavioral responses in clients on the basis
of interaction between client and practitioner; these form a
class of applied fields which we can characterize as
'educatioral' in a broad sense.[1] Considered within this broader
range of 'educational' practices, many of Bruner's ideas are
suggestive of the overall requirements that a theory of
intervention for any of these areas would usefully fulfill.[2]
These are outlined below:

1. The Re-Contextualization of Theory

In teaching a particular subject, Bruner argues, an
instructor must organize information in a way that recognizes
the specific learning capabilities and needs of a particular set
of students. In doing this, the teacher relies on theories of

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[1] Included in this class of applied fields would be various
forms of psychotherapy, small-group human relations training,
organizational development consulting and social work, as well
as most forms of childhood and adult education.
[2] While it is suggested that these requirements are common to a
broader range of social science applications, this thesis does
not aim to examine these in depth nor to propose a method of
intervention modeling to serve all these areas. Our purpose here
is simply to outline a set of heuristic guidelines relevant to
the set of applied fields in which laboratory education is
located.

learning and development to provide information about the developmental processes characteristic of a given student population and the learning abilities and limitations that these might entail. To fulfill this important function, relevant theory must supply information not only about learning processes in general, but about the specific nature of these processes in a particular setting (for example, within a particular age group). In short, the theories which educators use to organize information for their students must be capable of addressing the specific context in which they are to be used.

Viewing this in the broader context suggested above, we can identify a first general requirement for a model of intervention. Each of the above fields utilizes a particular body of theory as a basis for action within a specific social setting. To be effective however, any actions taken must recognize the nature of ongoing social processes within the particular context and must appeal to those processes, just as the teacher must recognize the students' learning capabilities and structure information appropriately. Theories employed as a basis for practitioner action must provide access to the characteristics and functioning of the particular client context. A first general requirement for the application of theory in these fields then, is that it be capable of addressing the specific setting in which it is to be applied.

2. The Relationship Between Theory and a Specific Change Process

The second element of Bruner's 'theory of instruction' is the specification of educational experiences which predispose an individual to learn. Given a formulation of learning and developmental theories relevant to the particular teaching context, the instructor has available a general account of the major dynamics of the teaching context. In order to utilize this information as a basis for instruction however, an additional step must be taken to specify how these dynamics will be brought into play to affect processes of learning in individual students. The instructor must specify, on the basis of general theory and information about the particular context, the specific goals to be addressed within this context and a particular set of educational experiences that will enable students to meet these goals. In essence, this step is accomplished through the specification of relationships between theories of learning and development and a specific learning process deemed important within a particular educational orientation.

Viewing this in a more general context, we can identify a second basic requirement underlying practitioner action within our particular area of concern. The educator defines a set of teaching experiences based on the relationships between relevant theory and specific learning processes suggested by his or her educational values, or in more general terms, establishes

connections between theory and the particular change process
that is desired. Other applied social scientists are also
concerned with affecting specific types of change on the basis
of particular theoretical and philosophical frameworks. In
general, as in the educational example, this is accomplished on
the basis of the <u>particular elements</u> of the overall theory <u>which
specifically relate to the enactment of a particular type of
change process</u> defined as valuable within a particular value
system. The second requirement for a model of intervention for
these settings then is the establishment of specific objectives
and the clarification of relationships between relevant theory
and the specific change process desired for the given context.

<u>3. Guidelines for Action Strategies</u>

The third and fourth features of Bruner's instructional
framework both deal with the specification of particular
activities and processes through which learning is to be
achieved. On the basis of the two previous steps, the teacher is
able to derive a number of guidelines suggesting specific
classroom activities and a specific mode of teacher functioning
to bring learning about. With an understanding of how various
factors of learning and development operate to affect learning
in a particular group of students, the instructor can define,
first, the <u>sequencing of experiences</u> which will most effectively
impart a body of knowledge, and second, a strategy for <u>rewarding</u>

and punishing students at appropriate times to enable specific learnings.[3] Guidelines concerning the sequencing of learning experiences provide an overall design or strategy for this intervention, and those concerning rewards and punishments provide a basis for specific teacher behaviors through which the intervention is realized.

Similar procedures are salient in other social science applications. Given a particular formulation of relevant theory, the practitioner can derive recommendations for action in terms of both the overall strategy of intervention and the particular behavioral tactics used to implement that strategy. A final requirement for a general model of intervention in this area then is the specification of guidelines for particular intervention activities based on the conceptual background supplied by the first two stages.

A Suggested Approach for Intervention Modeling

To summarize briefly, we have argued that the applied social sciences in general have particular conceptual requirements in bridging the gap between pure theory and practice. It was suggested that one means of meeting these

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[3]Bruner's use of "rewards and punishments" emerges from the specific teaching context for which he is writing and from the specific theoretical background (ie. instrumental learning theory) relevant within that context. Considered in a broader framework, these can be taken as examples of practitioner behaviors and interventions appropriate to the given setting.

requirements within a particular range of social science
applications broadly conceived as educational in nature, might
lie in the development of a 'model of intervention' drawing
conceptual links between knowledge and action in specific
educational contexts. Abstracting from the work of Bruner, we
identified three principal requirements for such a model: the
first being the development of theory to suit the particular
context of application, the second involving the establishment
of relationships between the theory and the desired change
process, and the third involving the selection of intervention
strategies and actions on the basis of the previous steps.

Our discussion suggests therefore a three-phase process for
constructing a 'model of intervention' within a given range of
applied fields. The major components outlined above provide
three relatively distinct conceptual stages leading from pure
theory to specific modes of practitioner action in these areas.
By following each of these stages in sequence, it should be
possible to develop a coherent framework providing a heuristic
bridge between theory and practice and thus fulfilling an
important set of requirements for these practitioners. The major
steps in this process are illustrated in Figure 1-1 below.

If this approach does in fact satisfy the practitioner's
requirements, it should be possible to construct, within the
field of laboratory education, a model of intervention for

Figure 1-1: General Procedure for Constructing a Model of Intervention.

Step 1	Step 2	Step 3
Organization of relevant theory to address the specific intervention context.	Establishment of relationships between given theory and the desired change process.	Specification of guidelines concerning overall intervention strategy and specific intervention behaviours.

guiding practitioner action on the basis of relevant theory. If successful, such a model would provide a coherent and conceptually organized basis for the formulation of interventions that would effectively implement particular change processes in particular client contexts. By clearly explicating relationships between the theoretical knowledge of the pure scientist and the practical methods of the applied scientist in this area, such a framework would also be useful in understanding the effectiveness of particular interventions, in evaluating current methods and practices, and in suggesting new forms of intervention.

The role of such a model would not be to usurp the place of practical experience in guiding the practitioner's work, but to provide a link between this experience and the organized knowledge of the theorist. Most practitioners rely on extensive practical experience to provide a necessary background for

action; such experience is indispensible in developing a "feel" for appropriate action and in acquiring the "art" of effective intervention. At the same time however, experience must be informed and organized by a coherent conceptual background; relevant theory provides a "scientific" basis on which consistent and effective practice can be grounded. In a sense then, our proposed model seeks to provide a bridge between the science of social theory and the art of social practice, and to help integrate these potentially divergent areas.

In the remainder of this thesis we will follow the suggested approach to construct a heuristic framework for intervention in laboratory education. Following the guidelines outlined, we undertake to construct a relevant model of intervention conceptually linking elements of group theory and research with the practices and methods characteristic of this training format. Our principal concern will be to develop a conceptual framework which practitioners can use as a guide for laboratory intervention. Although we will also comment on the value of the suggested approach as a basis for intervention modeling, this will not be a major focus and is treated only informally. In our evaluation of the modeling procedure, we will focus on the extent to which the implications we derive are consistent with current theory and methods of practice, and on the ability of our framework to provide a coherent bridge between these areas.

Gaps Between Theory and Practice in Laboratory Education

Thus far we have identified a wide-reaching problem within the applied social sciences and have outlined the principal conceptual requirements for a potential solution to that problem in a selected set of applied social science fields. Before we can initiate the development and evaluation of that solution within the specific context of laboratory education however, it is essential to examine the particular ways in which practitioners of this method encounter the overall problem and to suggest a means of approach that will satisfy the above requirements within this specific setting.

Laboratory education can be defined as an experiential form of adult education designed to enhance individual awareness of the cognitive, behavioral, and emotional components of social interaction, and to facilitate the development of human relations skills for collaborative group functioning. While laboratory approaches are found in a variety of teaching contexts, ranging from university education to management training, they share four principal characteristics which set them apart from other training methods: (1) a reliance on the here-and-now, experiential data generated from participation in group interaction, (2) a focus on the integration of cognitive, behavioral, and emotional elements of experience, (3) participation of all members in planning and directing group

activities, and (4) the involvement of resource persons specifically trained in the social and behavioral sciences. As the laboratory group develops from its initial state as an aggregate of independent individuals to an effectively functioning social unit, participants gain first hand experience of various forces affecting individual and collective behavior. Through the interventions of a skilled group leader or 'trainer', these experiences become the basis for an increased understanding of social behavior and for the development of new and more effective social skills.

Although the role of the practitioner or trainer within this context varies somewhat as a result of the particular learning objectives of the client and the particular style of the individual trainer, the performance of that role is commonly recognized as fulfilling a specific set of functions. Figuring highly among these functions are those of facilitating the development of the group as an effective and autonomous collective, providing participative experiences as a basis for generating data about group and member functioning, and raising group awareness of the social forces underlying its own interactional processes (Lippitt and Schindler-Rainman, 1975). In general, the trainer acts as an independent resource person who intervenes in ongoing group activities to provide an optimal environment for laboratory learning.

In fulfilling this role the trainer draws upon an

understanding of group functioning and experiential learning

based partly on theory and research and partly on his or her own

experience and training in the field. Although small groups may

represent a relatively simple arena of social interaction in

comparison to full-scale social systems, they nonetheless

demonstrate a complex interplay of forces and dynamics involving

several levels of human behavior and interaction (Mills, 1979).

As a result, the theoretical background required by the trainer

must include various aspects of individual, interpersonal,

group, and organizational behavior, insofar as these affect the

laboratory context, and must provide an account of how factors

at each of these levels impact the group learning process. The

integration of this information presents a number of major

problems for the laboratory practitioner.

Contextual Problems in Group Theory

The first area where such difficulties arise is in relation

to the nature of current group theory, and is particularly

evident in the initial training of laboratory practitioners. To

the extent that it is currently possible, neophyte trainers are

introduced to various theoretical models which provide a

framework for understanding the nature of group functioning, and

for organizing practical training experiences. In the most

common forms of leader training these models supplement

extensive practical experiences in actual group situations and

provide a basis for integrating these experiential learnings
(Lippitt, et al, 1975). In their current state of development
however, available theoretical models do not adequately fulfill
this important function.

The development of conceptual models of group functioning
has taken place largely within an experimental and descriptive
theoretical framework (Bednar and Kaul, 1979). On the whole,
group theorists have been concerned with the forces and dynamics
underlying groups in general, and not with specific types of
groups such as those in laboratory training. In addition, it
appears that most theorists have concentrated their attention
toward specific elements of group behavior rather than overall
functioning, by abstracting particular levels of bahavior (eg.
dyadic interaction, group-level dynamics, or organizational
behavior), or focusing on particular types of group activity
(eg. decision making or conflict resolution) within the dynamic
whole. As a result, group theory is often presented in the form
of several interrelated, though not necessarily integrated,
models.

While the use of several models in conjunction may provide
an adequate conceptual basis for introducing practitioners to
various elements of the whole, it is largely inadequate as a way
of integrating experiential learning. Practitioners experience
group situations not as discrete and isolated events and
activities, but as flowing, dynamic processes. If theory is to

help integrate this experience, it should address the dynamics of group functioning, not in piecemeal fashion as current models do, but in a coherent and unified manner. While present theory does not preclude the integration of experiential learning by the trainer, its present form does little to facilitate this process. As a result, the training of laboratory practitioners is often piecemeal and lacking in conceptual integration and coherence.

A second problem arising here concerns the lack of specific focus on laboratory group functioning within group theory. Because most current models focus on the dynamics thought to underlie groups in general, they provide no statements of those factors which are particularly salient within the laboratory setting, and perhaps more importantly, provide no information about the specific manifestation of those dynamics within this context. By addressing these dynamics in an indirect and generalized fashion, current theory fails the practitioner by not providing a necessary body of background information.

Relating these specific problems to our earlier discussion of 'educational' practices in a broad sense, we can see that current group theory does not fulfill the first requirement of the proposed approach. As it is presently available, group theory and research does not address group functioning in a coherent fashion, nor does it provide information specific to the laboratory context. As a result, current theory does not provide

practitioners with direct access to the information they require, and leaves the trainer dependent on continued practical experience to provide the necessary conceptual integration.

To overcome these problems, our proposed model suggests a redevelopment of current group theory and research to specifically address the nature of laboratory group functioning. This can be accomplished by reviewing current group dynamics literature and by providing a synthesis of material that is specifically relevant to the laboratory context. This will be a first area of concern in the development of an intervention model for laboratory education.

The Relationship Between Group Functioning and Laboratory Learning

A second problem area arises with respect to the relationships between various elements of group functioning and the specific process of individual and group change that the trainer attempts to facilitate. Laboratory training aims to engender changes in individual and collective social behavior through the involvement of participants in a variety of experiential learning activities and through an examination of the forces and dynamics affecting group and member performance within these activities.* These learning experiences depend on the dynamic functioning of the group to provide both the data on

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*The specific system of educational goals and values which underlie this method is outlined in detail in Chapter Two.

which an examination of social functioning is based, and the process through which individual and group changes can be brought about; in this context, elements of group functioning provide both the content and the process of learning. As a result, the practitioner utilizes group theory in two interrelated ways: (1) as a basis for understanding phenomena within the laboratory and attributing meaning to various group events; and (2) as a basis for setting up specific activities to function as learning experiences.

In its current form however, group theory is inadequate, particularly for the latter function. Presently formulated as a generalized accunt of group dynamics, current theory does not clearly specify the role that various group factors play regarding processes of learning and change taking place in the laboratory setting. Although several authors have outlined the specific conditions and activities through which laboratory education is enacted (eg. Bradford, et al, 1964; Benne, et al, 1975), the relationships between these elements of laboratory education and the dynamics of group functioning have not been made explicit. As a result, the role that such factors play in the facilitation of learning is often obscure and misunderstood. For the inexperienced trainer, there may be no apparent rationale for many of these important elements, and a number of critical design errors may be made in setting up laboratory programs; even for veteran trainers, many of these components

may be taken for granted and not given adequate attention as a
result of poor conceptual integration. Thus, as a basis for
setting up effective laboratory conditions and activities,
current group theory does not fulfill another of the
practitioner's major requirements.

Following earlier discussions we can identify this
inadequacy as a failure to specify relationships between
theories of group functioning and the learning process that is
enacted in the laboratory setting. In overcoming this problem it
will be necessary to outline the ways in which various elements
and factors of group functioning affect the learning process. We
will require not only the specific development of group theory
discussed above, but an account of the particular processes of
learning and change characteristic of laboratory education.
Considering these two components in relation to one another, and
in relation to the value orientation of the laboratory approach,
we will be able to specify relationships between group theory
and a particular change process, and thus to fulfill the second
component of the intervention model suggested above. This will
comprise a second major focus of the thesis.

The Role and Behavior of the Trainer

A third area of difficulty arises with respect to the role
of the laboratory trainer and the particular behaviors through
which that role is enacted. In providing an environment which
meets the learning needs of a specific client group, the trainer

must facilitate particular kinds of interaction within the group and must also engage in particular kinds of interaction between him/her-self and the group. The role of the trainer has traditionally been construed as that of observer and facilitator of group interaction; however, this formulation leaves unanswered a number of questions concerning the most effective way of performing these functions and the impact that various behaviors will have on the group's learning.

Some theories of laboratory group dynamics and learning recognize trainer behavior as an important factor in laboratory effectiveness (eg. Bradford, et al, 1964; Schein and Bennis, 1965), and considerable research has been done to examine the impact of this factor (eg. Lundgren, 1979; Smith, 1980a); however, much of this information remains unavailable to the trainer in a usable form. On the whole, current models fail to provide a clear integration of this material, and more importantly, fail to demonstrate how trainer behavior acts as an influence on the laboratory learning process. As a result, the trainer has no coherent means of understanding the impact of his or her behavior, and no means of formulating appropriate interventions on the basis of theory.

Again, we can identify this problem as a failure to meet the conceptual requirements of the practitioner as suggested above. The lack of theoretical frameworks which outline those factors specifically affecting laboratory group dynamics, and

the lack of explicit relationships between these factors and the specific learning process, makes it virtually impossible for practitioners to derive coherent guidelines for action. As a result, trainers must rely entirely on their own experiential learning to discover effective intervention strategies, and gain little guidance from theory in this process.[5]

Given an adequate formulation of these factors and relationships, trainers could derive a number of guidelines concerning the design of effective laboratory programs and could specify particular kinds of intervention that would facilitate the learning process. While this would not set out a 'cookbook' of specific interventions, it would provide a coherent basis on which the effectiveness of interventions could be understood, and new forms of trainer behavior could be derived. In the construction of our intervention model then it will be essential to incorporate various factors concerning the role and behavior of the trainer and to link these with processes of learning and change. On this basis we will then be able to fulfill the third requirement of the model by deriving specific recommendations for trainer behavior in terms of overall laboratory design and specific interventions. The specification of such recommendations will be a third major focus for this thesis.

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[5] This is not to suggest that experiential learning is inadequate or wrong, but that it can be usefully suplemented by the use of coherent conceptual frameworks to organize and integrate experience. The central aim of this thesis is to provide such a framework.

Toward A Model of Intervention For Laboratory Education

The above discussion demonstrates the particular ways in which laboratory practitioners experience the conceptual problems outlined earlier. We have seen how current group theory fails to meet the general requirements of the practitioner within a broad conception of 'educational' practice, and how various difficulties are created by these inadequacies. In turn, we have suggested a means by which a conceptual bridge, in the form of a model of intervention, could be constructed to provide a link between theories of group functioning and the specific methods of laboratory practice.

The suggested approach is a specific application of the three-phase modeling procedure outlined earlier. Our examination of theory and practice within the specific perspective of laboratory education thus identifies more concretely the nature of the steps required for the construction of an intervention model for this context. These steps, outlined in Figure 1-2 below, provide a general characterization of the approach to be used in this thesis to construct such a model. As we begin to develop that model in the chapters to follow, these steps will also serve as a basis for organizing and structuring our conceptual framework.

Before undertaking construction of the intervention model per se, it will be useful to review some of the relevant

Figure 1-2: Procedure for Intervention Modelling for Laboratory Education.

Step 1	Step 2	Step 3
Review and synthesis of theory and research related to the laboratory group context.	Specification and clarification of relationships between laboratory group dynamics and the laboratory learning process.	Specification of guidelines for laboratory design and trainer intervention.

conceptual and empirical literature upon which a great deal of later discussion will be based. We therefore begin, in Chapter Two, with a review of background information concerning the historical and conceptual underpinnings of laboratory education. This outline is continued in Chapter Three with a review of major theoretical and empirical literature within the field of group dynamics, with particular emphasis on constructs and research findings relevant to the laboratory context.

In Chapter Four we begin construction of our intervention model by proposing a re-development of group theory to address the dynamics of the laboratory group. Chapter Five undertakes the second component of the modeling process by drawing relationships between conceptions of the learning process and the theoretical framework outlined in Chapter Four. Chapter Six then outlines a number of recommendations stemming from earlier discussion with respect to guidelines for laboratory design and specific trainer interventions, and provides an illustration of

how these can be used for intervention planning.

Finally, a summary and conclusion of the modeling process is provided in Chapter Seven. Our principal concerns here will be to assess the developed model in terms of its consistency with current theory and practice, and to discuss the implications of the modeling process for other applied contexts.

Regarding methodological issues, this thesis is principally concerned with processes of theoretical and conceptual development rather than the more empirically-oriented aspects of inquiry. As a result, no empirical data are generated in this thesis, either for purposes of model construction or validation. The data base for the present work is drawn from the body of published research which already exists in this field, and which our discussion has identified as lacking in conceptual organization. Criteria for the selection and use of this data are discussed in relevant parts of the thesis.

The extensive concern of this study with conceptual development also necessitates the exclusion of any formal procedures of validation. The importance of this aspect of research is acknowledged however, and it is recognized that further work will be required before the conditions for implementation are fully met. However, an informal conceptual validation of the developed model is provided in the final chapter of the thesis.

II. CHAPTER TWO: The Laboratory Method of Learning and Change:
The Applied Perspective

Introduction

To begin a discussion of background literature it will be
useful to outline the principal foundations on which laboratory
training is based. We start with a brief overview of the
historical development of laboratory education and its emergence
as a major technology for human relations training. From there
we turn to the major philosophical underpinnings on which the
laboratory method is based, beginning with an outline of the
educational goals toward which the method is directed and
followed by a discussion of the underlying assumptions and value
orientations maintained by laboratory proponents. We then move
to an examination of the conceptual basis of the laboratory as a
methodology for learning and change, and to a review of some
theoretical accounts of the learning process taking place in
this context.

Historical Overview

In the summer of 1946, State Teachers College in New Britain, Connecticut sponsored a workshop on "Inter-group Relations" in which a prototype of the laboratory method was first used. As an adjunct to regular workshop sessions, a staff of trained research observers were present who fed back to the participants their observations about individual and group behavior following each meeting. It was discovered, as a result of this novel technique, that the feedback of data from trained observers did more to stimulate the interest of those involved, and produced more insight, more learning, and more behavioral change than the workshop sessions themselves. Given an opportunity to explore and examine their own behavioral data within the supportive workshop climate, participants gained access to a means of personal learning that seemed more effective than any other method. The recognition that this technique was a powerful means of stimulating and supporting learning gave impetus to the elaboration of the training methodology now known as "Laboratory Education" (Benne, et al, 1975).

As a result of their experiences at the Connecticut workshop, a group of researchers[1] organized the National

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[1]The principal members of this group were K. Lewin, L. Bradford, K. Benne, and R. Lippitt. Despite Lewin's untimely death in 1947, his influence, and that of the others, has continued to shape the development of the Laboratory method.

Training Laboratories for Group Development (now simply called NTL) as a means of further developing and experimenting with this novel form of group learning. The initial goals of this organization were: (1) to provide training experiences similar in form to the Connecticut workshop through which participants could enhance their understanding of individual and group behavior; (2) to explore the dynamics and processes of individual and group change within the group context; and (3) to undertake programs of combined research and social action using the Laboratory approach. Toward these ends the NTL group devised a workshop format in which participants would work together in small training groups (T-groups) and in which a 'trainer/observer' would be present to provide observational feedback and guidance. Additional sessions were also included in which participants were introduced to small group theory and given an opportunity to engage in 'skills-practice' exercises and in discussions of change efforts in their back home groups and organizations. This basic laboratory design was first implemented as a three-week residential workshop in 1947, and has been given, in a variety of formats, ever since.

During their first few years of operation the NTL laboratory programs proved extremely successful. Participants found the workshops a valuable source of learning, both in terms of their own individual behavior and with regard to the dynamics of group functioning. The laboratory appeared to have a

significant impact on learning, particularly in the areas of

self-insight, sensitivity to the effects of individual and group

behavior, enhanced interpersonal effectiveness, and the

diagnosis and solution of organizational problems (Stock, 1964).

In addition, the understanding of social change generated in

these workshops was often carried forth by participants to form

the basis of important innovations and changes in their own

group and organizational settings (Benne, et al, 1975).

As these successes became known, a rapid growth took place

in both the number of people involved in laboratory training and

the range of applications for which the method was employed. By

the early 1960's, laboratory-type programs had been set up in a

number of universities, both for research and educational

purposes, and several other educational organizations began to

offer training programs following the NTL model.[2] From its

initial purpose as a vehicle for generalized human relations

training, the laboratory approach soon developed a number of

more specialized applications, involving adaptations to groups

with specific occupational interests and focusing on selected

aspects of group functioning (Benne, et al, 1975). The basic

laboratory design remained a consistent model for effective

group training in such applications, with modifications made

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[2]It is interesting to note that one of the earliest extensions
of the original NTL model was developed in the province of
Saskatchewan, under the auspices of the Qu'Appelle Valley
Training Center.

primarily as a means of meeting the particular learning needs of
the client.

With continued expansion and development over the last
three decades, the laboratory approach now enjoys widespread
recognition as a successful educational tool and as a viable
technology for individual and social change. Current
applications encompass a variety of fields, including
psychotherapy, adult education, social work, business management
training, and organizational consulting, with the focus of
change efforts ranging from individual behavior, through
interpersonal and group dynamics, to the level of full-scale
organizations. Throughout this range of applications the
essential laboratory format of providing observational feedback
about participants' own behavior remains the primary source of
data on which learning and change are based. In addition, the
goal of concurrently enacting and studying change efforts within
this context continues to provide a degree of unity among the
numerous practitioners now occupying the field. Thus, while the
original laboratory concept is often varied to suit the
particular needs of the client or the particular style of the
trainer, the initial goals of the NTL group continue to provide
a common thread tying together what is now a very broad and
diverse area.

The Laboratory Philosophy of Education

The Goals of Laboratory Education

The laboratory method offers access to a number of possible outcomes or educational goals. The specific goals addressed by a given laboratory program will normally be a subset of this overall range, depending on the particular context and client group for which the program is developed.

Schein and Bennis (1965) outline a scheme for identifying and classifying potential laboratory goals based on three fundamental dimensions: the subject of learning, the level of learning, and the ultimate client for the laboratory experience (See Figure 2-1). Seven categories for 'subject of learning' are

Figure 2-1: A Scheme for Classifying Laboratory Goals (from E.H. Schein and W. Bennis, Personal and Organizational Change through Group Methods: The Laboratory Approach. New York: John Wiley & Sons, 1965, p. 58).
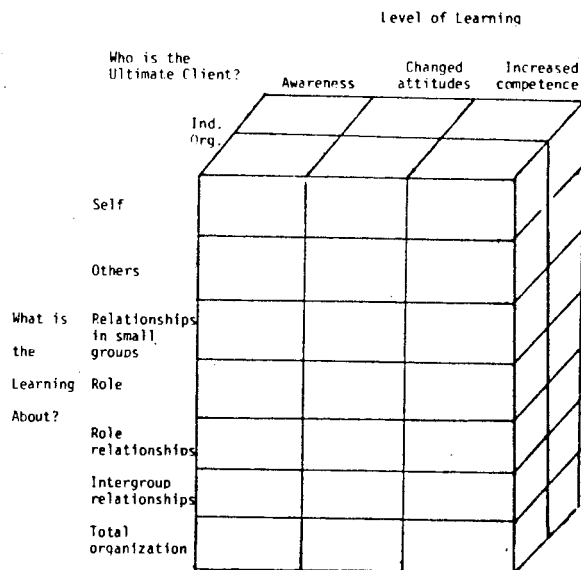
presented, ranging from individual behavior, through
interpersonal and intergroup dynamics, to the level of the whole
organization, and deal with both personal and role-related
functioning. The 'level of learning' dimension recognizes three
potential goals, beginning with increased individual awareness
and progressing to attitude change and finally to behavioral
change. Two possible client systems, the individual and the
organization, are also specified.

Although this scheme outlines a broad range of possible
laboratory goals, there is a great deal more unity of purpose
among laboratory programs than the above might suggest. Many
proponents of the laboratory method argue that these numerous
specific outcomes are supplanted by a more concise set of
"meta-goals" which guide virtually all programs of this type
(Bradford, et al, 1964; Schein and Bennis, 1965; Benne, et al,
1975). One account of these more general purposes outlines the
following: (Paraphrased from Bradford, et al, 1964)

1. Increased awareness of and sensitivity to the interplay of
   emotions, values, and actions in human interaction.
2. Greater ability to perceive and to learn from the
   consequences of one's actions through the use of feedback
   from others.
3. Clarification and development of personal values and goals
   consonant with a democratic and scientific approach to
   social and personal action.
4. Greater ability to utilize concepts and theories of
   interpersonal and group behavior as a basis for linking
   goals and values with consistent action.
5. Achievement of behavioral effectiveness in transactions with
   the environment.
6. Application of personal learnings to external, 'back-home'
   situations.

7. Learning to learn - development of abilities to utilize
   individual and organizational resources as a basis for
   further learning.

Although stated in terms of the individual learner, the

authors maintain that these goals apply equally to group and

organizational contexts, where the focus of learning is on teams

rather than on individual persons. As Bradford, et al, comment,

these goals are "designed to help some unit of human

organization assess its needs for change and to support that

unit in inventing and testing ways in which change may be

achieved" (Bradford, et al, 1964 p. 18). Thus, while the specific

focus of learning may vary from case to case, these central

goals provide an overall basis for learning and change within

the laboratory approach.

Basic Assumptions and Value Orientations

   The goals outlined above arise from a particular set of

assumptions about human learning processes and from the

particular value orientations maintained by laboratory

proponents. Despite individual differences in the writings of

various authors, general agreement is evident concerning these

basic foundations of laboratory education. The essential

components of this overall framework are outlined below.

   Although the underlying conception of laboratory education

was first articulated in the late 1940's and early 1950's, the

primary assumptions on which this conception is based can be
traced to earlier systems of educational thought. Malcolm
Knowles suggests that the educational pilosophy of John Dewey is
perhaps the most significant of these previous works (Knowles,
1973). Knowles outlines four of Dewey's premises that appear to
have had a major impact on the laboratory movement. These are:

1. the notion of "continuity" in learning - "every experience
   both takes up something from those which have gone before
   and modifies in some way the quality of those which come
   after" (Dewey, in Knowles, 1973 p.69). This suggests the
   idea of growth and development as a principal function of
   all education.
2. the view that "all education comes about through experience"
   (Ibid. p.69). The provision of present experiences that can
   serve to enhance subsequent behavior is seen as the central
   problem in education.
3. the nature of teaching and learning as a social process -
   Learning takes place in the context of social intercourse in
   which the capabilities, needs, and past experiences of the
   learner contribute toward the development of cooperative
   enterprise. Here, according to Dewey, "the teacher loses the
   position of the external boss or dictator, but takes on that
   of leader of group activities" (Ibid. p.73).
4. adherence to the values of democracy - Dewey maintains "the
   belief that democratic social arrangements promote a better
   quality of human experience, one which is more widely
   accessible and enjoyed, than do non-democratic and
   anti-democratic forms of social life" (Ibid. p.69).

These four elements of Dewey's educational philosophy have
significantly influenced the development of the laboratory
conception of learning. Both explicitly and implicitly,
laboratory proponents have borrowed and elaborated these primary
assumptions in the development of their method. Examples of how
these premises have been adopted and incorporated into the

laboratory approach are outlined below:

Dewey's principle of continuity receives expression in virtually all laboratory formulations. Perhaps the clearest statement of this is found in Carl Rogers' writings on group education and therapy (Rogers, 1951,1969), where major emphasis is placed on a conception of the learner as a growing, developing individual. In Rogers' words, "the organism has one basic tendency and striving to actualize, maintain and enhance the experiencing organism" (Rogers, 1951 p.479). This view of the learner as a proactive and developing organism is a central underpinning of laboratory methods, which strive to raise the learner's awareness of his or her own individuality as a basis for integrated development. Without such awareness, it is maintained,

> "a human being's goals, values and actions become incongruent with his reality as a total person. He fails to recognize, and so to achieve, the development of his full potential as an individual" (Bradford, et al, 1964 p. 16).

The second of Dewey's principles, that of the experiential nature of learning, is also reflected and elaborated within the laboratory approach. Experiential learnings are seen as the key source from which the development of an awareness and understanding of one's own social functioning can be achieved, and new forms of behavior evaluated. The experiences of laboratory training, according to Bradford,

> "are designed...to help participants to discover and

diagnose disintegrities in their patterns of
participation [and] to provide help from others in
inventing and testing more integrative and less
crippling patterns of response" (Bradford, et al, 1964
p. 16).

Experience then, is viewed as the principal basis for individual

development and growth.

Dewey's view of education as a social process is adopted in

laboratory education as a third major assumption. In most

laboratory formulations the provision of interactive learning

experiences is the central means of achieving the development of

self-awareness and the enhancement of social functioning. This

is evident in several aspects of the laboratory methodology,

including an emphasis on mutual responsibility among

participants and leaders for defining learning needs and

planning activities, and the extensive use of observation and

analysis of interactive behavior in developing an understanding

of social processes (Knowles, 1970;Bradford, et al, 1964).

These primary assumptions from Dewey's conception of

education provide the foundation on which much of the laboratory

approach is built, and form the essence of the laboratory

conception of human learning. Laboratory proponents also adhere

to many of the value orientations espoused by Dewey. Several

authors explicitly recognize and embrace a set of values

generally associated with Democracy and democratic ideals

(Schein and Bennis, 1965;Bradford, et al, 1964; Benne, et al,

1975; Knowles, 1973). Schien and Bennis outline three basic

values related to a concern for democracy: (1) a respect for the individuality of persons and for the enhancement of individual growth; (2) the importance of freedom of choice and self-determination in learning; and (3) the value of authentic and honest communication and collaboration in social affairs (Schein and Bennis, 1965).

Proponents of laboratory education also place a high value on a _scientific_ _approach_ to learning. Various aspects discussed in this regard are: (1) the utilization of the behavioral sciences as a basis for understanding social behavior; (2) the utilization of objectively collected data as a basis for social planning and action; and (3) the exploration and expansion of alternative means of creating and managing change (Benne, _et_ _al_, 1975).

In addition to the above, the pioneering work of Kurt Lewin in the areas of group dynamics and social change (eg. Lewin, 1951) has also had a major impact on the laboratory approach to education. Lewin's original theories concerning processes of social change, and his interest in 'action-research' as a tool for social improvement, underscored much of the early development in this area and have strongly influenced the nature of laboratory education (Benne, _et_ _al_, 1975). Some of Lewin's principal contributions are discussed in later sections of this chapter.

In sum then, the conception of learning employed by laboratory proponents rests upon three principal assumptions: the notion of the learner as a proactive and developing organism, the idea that learning takes place primarily on the basis of experience, and that education is a social process. This formulation of the learning process is brought into operation within a particular value orientation based on the ideals of democratic social interaction and a scientific spirit of inquiry toward individual and social change.[3]

Conceptual and Theoretical Foundations

An Overview of the Laboratory Training Methodology

The laboratory training format was developed as an optimal means of providing collaborative, experiential learning. Drawing upon the conception of learning contained in the above assumptions, the laboratory format sets out to provide conditions and activities in which such a learning process can flourish. The particular workshop characteristics utilized by the originators of the method in meeting this aim are examined below.

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[3] The goals and values outlined in this section constitute the major motivational and philosophical context in which most laboratory programs are conducted. In the remainder of the thesis we will treat these as a given element underlying the development of our model.

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It should be recognized, to begin, that the laboratory
approach was originally developed as a methodology for adult
education.* In this light it is commonly thought of as a
"re-educative" method, rather than one concerned with primary
learning (Bradford, et al, 1964). This view stems from the
assumption that learners are constantly involved in a process of
development and growth. Of the values, concepts and behaviors
which people have learned in earlier development, some will be
"socially functional", and others "dysfunctional" or
"inarticulated"; the laboratory setting is devised to provide an
opportunity for "re-learning", "re-organizing", and exploring
new alternatives in these areas (Ibid. p.19).

Several authors utilize Kurt Lewin's
"Unfreeze-Change-Refreeze" formulation of this learning process
as an overall model for structuring laboratory programs (Lewin,
1951; Schein and Bennis, 1965; Bradford, et al, 1964; Benne, et
al, 1975). This approach suggests that a period of 'unlearning'
must occur prior to the development of new learning, and that
any changes adopted require consolidation and reintegration if
they are to persist. Many characteristics of laboratory training
are designed as a means of implementing this basic model of
change.

Accounts of the specific conditions and activities built

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*Among the originators of laboratory education, L. Bradford was
specifically trained and experienced in Adult Education.

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into the laboratory format are provided by Bradford, et al, (1964), Schein and Bennis (1965), and Benne, et al, (1975). Although these differ somewhat with regard to specific aspects, an overall set of primary characteristics is apparent:

All three sources recognize a first essential element as being the creation of a cultural island - a learning situation which removes participants to some extent from their normal routine activities. Such situations normally involve some degree of ambiguity regarding the structure and leadership of the event, uncertainty concerning individual roles and expectations, and the presentation of vaguely defined or ambiguous group tasks. The removal or blurring of various components of expected social behavior creates a "tension" or "vacuum" which serves to heighten participants' awareness of the immediate situation and to stimulate behavior (Bradford, et al, 1964). These conditions contribute to the 'unfreezing' of participants' expectations, providing them with an opportunity to observe and evaluate their own responses to the situation.

The notion of a 'cultural island' as an initiating condition for learning is discussed extensively by M. Miles (Miles, 1964). Miles argues that, because of various forces maintaining stability in social systems, the deliberate induction of change requires the creation of a "temporary system" to allow innovation to take place. The laboratory situation provides such a system by setting up special purposes,

and time-limited relationships outside the boundaries of normal social expectations.

Within this temporary system the group begins to develop its own internal patterns of functioning as a normal consequence of interaction. Here a second major characteristic of the laboratory format arises, with the trainer attempting to facilitate the development of group expectations in the direction of the general norms and values of the laboratory tradition. Attitudes of responsible participation and collaboration, open and honest communication of feelings and ideas, and a climate of trust, mutual support and exploratory inquiry are encouraged (Benne, et al, 1975).

The 'change' stage of the laboratory process is provided by three additional aspects of the training format. The first is the encouragement of behavioral observation and feedback among participants. Direct observation of behavior and its consequences, and the feedback of others' reactions to individual behavior provide data from which each participant can discover and evaluate the impact of their own social functioning (Schein and Bennis, 1965).

A second element of the change process, the provision of conceptual and theoretical models of social behavior, provides a cognitive dimension to enhance individual understanding and awareness. These models supply a conceptual framework within which observed and experienced behaviors can be analysed

(Bradford, et al, 1964).

The third aspect of the 'change' stage involves individual exploration and experimentation with new patterns of behavior and response as the group works on collective tasks. The trainer often functions here as a model of alternative forms of action and risk-taking. This experimentation provides participants with an opportunity to expand their behavioral repertoire and to broaden their understanding of social processes.

In concert, the three design elements of observation/feedback, conceptual models, and behavioral exploration serve as the basis on which individual participants can undertake to develop and evaluate alternative courses of action and to adopt those changes that prove useful or satisfying.

The 'refreezing' stage of the change process is provided for by the incorporation of activities which focus on the transfer of learning and change. The planning of activities by participants themselves, particularly in the latter stages of the laboratory, is often utilized as a means of developing skills for continued learning (Benne, et al, 1975). Considerable attention is also given to the generalization of learnings and to their application in back-home situations.

In general then, the laboratory training format utilizes six principal elements in providing the conditions necessary for learning and change. These are:

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1. creation of a 'cultural island',
2. development of group norms consonant with laboratory objectives,
3. encouragement of observation and feedback,
4. provision of conceptual models,
5. encouragement of risk-taking and exploration of new behavior, and
6. planning for transfer of learning.

Together these serve to enact a process of

"unfreezing-change-refreezing" as a basis for the re-education

and development of participants.

A Theory of Laboratory Learning

Although much has been written concerning the nature of

laboratory learning (Bradford, et al, 1964; Bennis, et al, 1961;

Harrison, 1965; Schein and Bennis, 1965; Benne, et al, 1975),

few concise theoretical accounts of the learning process are

available. On the whole, this material tends, as in the above

discussion, to focus on the specific conditions and activities

through which learning is enacted, or to be highly general and

anecdotal. There appears to have been a general lack of

attention to the characteristics and underlying nature of the

learning process itself.

Exceptions to this general rule are found in the work of R.

Harrison (1965) and Schein and Bennis (1965), which together

provide the basis for an overall conception of laboratory

learning. Harrison sets forth a model of individual cognitive

functioning and outlines a conception of laboratory learning

based on this model. This formulation specifically addresses the

question of individual learning and change within interpersonal
and group situations and provides a central core around which an
overall conception of laboratory learning can be developed. A
major weakness in Harrison's work however is a lack of specific
attention to the behavioral and emotional components of learning
and to the interrelationships of these within the overall
process of change. These issues are treated more adequately by
Schein and Bennis, whose attention focuses specifically on the
integration of cognitive, affective, and conative elements of
learning. While highly consistent with Harrison's model, their
formulation provides a useful complement to round out a basic
conception of laboratory learning. The central elements of this
combined formulation are outlined below.

Individual Cognitive Learning

We begin with Harrison's (1965) model of individual
cognitive structure and development. In order to function within
a social or interpersonal environment, Harrison maintains, each
individual utilizes a number of cognitive categories or concepts
which discriminate between various elements of the phenomenal
world and provide an internal representation of salient
environmental qualities and phenomena. The set of concepts an
individual applies to a given class of phenomena are organized
and interrelated within a conceptual system which provides an
integrated means of interpreting and responding to those
phenomena. These cognitive systems provide a basis for ordering

perception and guiding behavior; in other words, they act as
'cognitive maps' through which the individual negotiates
transactions and relationships with other people (Harrison,
1965).

Harrison identifies a number of characteristics of
conceptual systems. First, each concept within a particular
system will differ in its degree of salience. Concepts which are
critical in making decisions about a given phenomenon are
considered more salient than others; these tend to channel more
of the energy involved in the individual's relationships with
that class of phenomena and often serve as higher-order,
integrative elements within the conceptual system.

Second, conceptual systems may vary in their degree of
differentiation.

> "The differentiation of a system refers to the variety
> of characteristics of the phenomena in question which
> may be responded to within the system, and to the
> fineness with which differences in these characteristics
> may be discriminated." (Ibid. p.65)

On the whole, the greater the level of overall cognitive
development, the greater the differentiation of individual
conceptual systems.

A third characteristic is that of integration. The
integration of a conceptual system "refers to the consistency
with which phenomena can be located within it" (Ibid. p.65). A
lack of integration is evident in logical inconsistencies
arising when the same data are treated differently by two

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elements of the same system, or by two related systems. Inconsistencies of this kind give rise to cognitive dissonance or stress, the degree of which will generally depend on the salience of the concepts involved: the more central a concept is, the greater the degree of stress resulting from a lack of integration. Also, the more developed the overall conceptual system, the more integrated it will be, and the less the individual will be subject to this stress.

Harrison also outlines various dynamic processes by which conceptual systems change and develop over time. Because cognitive structures are to some extent a reflection of salient environmental properties and phenomena, their development is partially dependent on the degree of variety and change within the environment (Ibid. p.67). As the individual experiences new characteristics and phenomena for which concepts are not available, or when such phenomena give rise to contradiction or dissonance within the present structure, conceptual systems expand and become increasingly refined to accomodate new information.

This development takes place through a dialectical process which Harrison calls the "elaboration of opposites" (Ibid. p.66). Initial responses to new information attempt to fit unfamiliar phenomena into the existing system (thesis); if this is met with disconfirmation or contradiction, attempts are made to explore alternative hypotheses, usually at an opposite polar

extreme to the first (antithesis); after extreme hypotheses have been explored, new concepts are elaborated which incorporate the opposing hypotheses in a more abstract, integrative synthesis. In this way new information is incorporated into an increasingly more differentiated and integrated system of concepts capable of providing a broader and more unified repertoire of responses. In addition, according to Harrison,

> "conceptual systems also develop from concepts which define the self in terms of its environment towards concepts which define the self in terms of its own intrinsic qualities as a self." (Ibid. p.66)

Through the dialectical process of development then, conceptual systems become increasingly integrated and autonomous, and provide a basis for increasing degrees of individual competence within the social environment.

The process of conceptual development may be inhibited or arrested by several factors:

1. A stable or consistent social environment where new phenomena and information are seldom experienced provides little stimulus for change. If the current conceptual system adequately handles all phenomena to which a person is exposed, stresses are minimized and the need for change does not arise.

2. Exposure to phenomena which are so dissonant with the current conceptual system that they are perceived as threatening will also arrest development. The stress of

disconfirmation is so high here that various defense
mechanisms, such as perceptual distortion or isolation of
inconsistent sub-systems, often arise to keep the present
system intact.

3. Certain conceptual systems may be so salient and carry so
   much of the individual's energy that even slight
   inconsistencies will be met with defensive behavior in order
   to maintain the status quo.

   In short, there is an optimal level of stress to which
conceptual systems will respond favorably; when the anxiety of
dissonance is too high, due either to internal or external
factors, the response is generally one which negates development
rather than promoting it.

The Laboratory as a Force Toward Learning

   We now turn to an examination of how the laboratory
functions to facilitate processes of growth and change. Although
we will again be drawing primarily upon Harrison's formulation,
we now begin to incorporate some of Schein and Bennis' concepts
to provide a more balanced account.

   Harrison identifies Laboratory training as a situation
where "some phenomena and concepts which make up an important
part of the interpersonal conceptual systems for most people are
rendered irrelevant and/or inappropriate", and where "conceptual
inadequacy is intentionally produced for educational purposes"
(Ibid. p.68-9). Because the focus of laboratory training is on

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concepts and attitudes which pertain to the self and to interpersonal relationships with others - attitudes which are central to the individual's self-concept and often resistant to change - this initial disconfirmation provides the necessary impetus for removing forces that block natural development, and for initiating the learning process. According to Schein and Bennis, the creation of dissonance is designed to "unfreeze" such blockages and to prepare the participant to engage in processes of change (Schein and Bennis, 1965 p.275). Following Harrison's model, we can outline how this is accomplished.

As individuals enter the laboratory situation, each brings a particular conceptual system which serves as a cognitive map for charting relationships with others and understanding events in the group. A great deal of everyday interpersonal experience takes place within the context of a "hierarchical, dependency" mode of social behavior; consequently, the conceptual systems of most people will lead them to expect similar forms of relationship within the laboratory (Harrison, 1965 p.71). The role and the behavior of the trainer however, and the overall design of laboratory activities, take place within a non-hierarchical, collaborative framework, and thus tend to create a certain amount of dissonance for participants. Schein and Bennis refer to this as the presentation of 'dilemmas' or 'disconfirming information' which call into question some of the assumptions and preconceptions which participants bring to the

laboratory (Schein and Bennis, 1965 p.272).

Disconfirmation creates a certain amount of cognitive dissonance or stress; participants find themselves in something of a "puzzle-box" for which few of their conceptual systems seem adequate (Harrison, 1965 p.69). Although this stress arises on a cognitive level, its major effect is the arousal of various emotional responses which Schein and Bennis refer to as a form of "social anxiety" concerning the individual's role and identity within the group (Schein and Bennis, 1965 p.275). The heightening of emotional responses here is an essential part of the 'unfreezing' process; placing participants in a state of expectancy and readiness for change.

Spurred by the experience of cognitive and emotional stress, the group now begins to explore various alternatives as a means of working their way out of the 'puzzle-box'. While there are numerous potential 'escape routes' from this dissonance provoking situation, and no demand made for participants to follow any particular path, the designers of laboratory education recognize and advocate a particular approach to the solution of cognitive stress. Trainers encourage participants to explore new ways of handling the situation and attempt to provide alternative cognitive maps in the form of new concepts and behavioral responses. The direction of this influence is generally away from the hierarchical, dependency mode of response and toward a more collaborative approach in

which individual autonomy and freedom of expression is promoted.

Schein and Bennis suggest that a major component of emotional learning is accomplished here, primarily in the form of changed attitudes toward the nature of learning in the laboratory setting (Schein and Bennis, 1965). The major impact of the trainer here is not to provide a particular solution for the group, but to encourage a general strategy of attending to and working with the here-and-now data generated within the group. Acceptance of this overall approach reduces the anxiety of disconfirmation and prepares participants for the particular kind of learning the laboratory offers.

Once participants recognize and accept this approach they then begin to engage in learning activities through the process Harrison identifies as the 'elaboration of opposites'. With many social conventions removed, the laboratory presents a situation that is "cognitively rich"; that is, "there is an abundance of phenomena which do not fit the conceptual systems which most participants are able to apply" (Harrison, 1965 p.73). The typical emphasis on work and productivity characteristic of most group situations is negated here in favor of questions of interpersonal and emotional functioning; typical patterns of influence and power are questioned, as are ways of expressing affection, hostility, and intimacy. As the laboratory group faces each of these issues, participants initially attempt to apply current concepts and models in order to make sense of the

situation. As many of these prove unsuccessful and give rise to
dissonance, alternative responses are attempted, often taking
the form of extreme and streotyped opposites to the initial
response. Exploration of varicus alternatives eventually gives
rise to a more adequate, and on the whole, more functional
response. In this way, involvement in group activities entails a
dialectical exploration of new patterns of behavior and affects
the 'change' element of the 'unfreeze-change-refreeze' pattern
of learning. By working through various elements of the
laboratory context, participants thus come to adopt new
conceptual maps and new forms of response reflecting a greater
understanding and greater competence in collective human
interaction.

Schein and Bennis describe this same process in terms of a
repeating "learning cycle" which integrates cognitive, emotional
and behavioral elements of development (Schein and Bennis, 1965
p.272) (See Figure 2-2). Each new phenomenon within the
laboratory presents some degree of cognitive disconfirmation to
participants' conceptual systems. This disconfirmation gives
rise to heightened emotional responses which are resolved
through changes in attitude toward that phenomenon. Attitude
changes in turn permit new forms of behavior to be elicited and
experimented with. New behavior provides additional data for the
group to examine and thus helps to raise individual awareness
and understanding. This new information may in turn present

further disconfirmations, and thus initiate a repetition of the
cycle.

FIGURE 2-2: The Laboratory Learning Cycle (from E.H. Schein and W. Bennis,
Personal and Organizational Change through Group Methods: The
Laboratory Approach. New York: John Wiley & Sons, 1965, p. 274).

A dilemma or some
disconfirming information

Attitude change about
how to learn (acceptance
of meta-goals)

Generation of new behaviour
which makes new information
available

Increased awareness and/or
new disconfirmation

Attitude change about
self and others

New behaviour, hence
new information

Increased awareness and/or
new disconfirmation

Further attitude change
until termination or
equilibrium

Each iteration of this cycle allows participants to
explore alternative forms of behavior with respect to particular
phenomena and to incorporate these within an increasingly more
differentiated and integrated conceptual system. Over the
duration of the laboratory, several repetitions of this cycle
allow not only the addition of new information to various
conceptual systems, but also the integration of emotional and
behavioral components within these systems and within the person
as a whole. In this way, the laboratory facilitates learning at
both a micro level, with the addition of new concepts and modes
of response, and at a macro level, involving the integration of
the entire system.

In sum, the goals of laboratory training are achieved by intentionally inducing a state of cognitive dissonance, by providing alternative cognitive maps for particular aspects of interpersonal and group behavior, and then by facilitating natural processes of change and development with respect to these. Initially, this process focuses on the unfreezing of forces which block natural development and on the provision of alternative means of approaching the learning context. As participants' attitudes about how to function within this situation change, the process becomes centered upon specific components of behavior and understanding which individuals find inadequate within their current conceptual systems. A repeating cycle of disconfirmation-attitude change-new behavior-new information is enacted as participants attempt to deal with induced dissonance, gradually changing various emotional, behavioral and cognitive elements within individual cognitive systems. As new concepts and behaviors are adopted, macro-level changes also occur with respect to the organization and integration of the cognitive system as a whole. These overall changes serve to refreeze new learnings within a more fully developed and competent cognitive map and thus to complete the process of change. The major components of this process are illustrated in Figure 2-3 below. As the illustration suggests, laboratory training utilizes the natural patterns of cognitive development described by Harrison as a basis for enacting an

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overall process of unfreezing, changing, and refreezing

conceptual systems. The major design elements of the laboratory

format function here primarily to initiate and facilitate this

natural process and so to provide an effective approach to

individual learning and development.

- (Figure 2-3) -

Figure 2-3:   A Composite Conception of Laboratory Learning

UNFREEZE	CHANGE	REFREEZE
Induction of Cognitive Dissonance		
Dissonance re: Forces Blocking Cognitive Systems →	Dissonance re: Individual Concepts and Behaviours →	Dissonance re: Overall Conceptual System →
Provision of New Conceptual Maps		
Attitude Change re: Learning →	Attitude Change re: Specific Elements of Cognitive Systems →	Attitude Change re: Self in Relation to Others →
Elaboration of Opposites		
New Behaviour re: Approaches to Learning →	New Behaviour re: Interpersonal and Group Behaviour →	New Behaviour re: Overall Consistency of Action →
Emergence of New Concepts		
New Information and Increased Awareness and/or New Disconfirmation	New Information and Awareness and New Disconfirmation	New Information and Awareness

Summary

In this chapter we have reviewed the major conceptual and theoretical foundations on which the laboratory method is based. We outlined the historical development of the method, its goals and assumptions, and some of the major conceptual underpinnings that characterize this form of education and learning. An overall characterization of the laboratory learning process was developed, and is summarized in Figure 2-3.

In addition to providing a useful background for further discussion, much of this material will be of major importance in the construction of our intervention model. In particular, the conception of laboratory learning processes outlined above will play a significant role in clarifying how the dynamics of laboratory group functioning contribute toward learning and change in this context. Before we can deal with these issues however, an examination of various forces and factors underlying laboratory group dynamics must be undertaken. Chapter Three begins this examination by reviewing some of the major theoretical and empirical literature on which this examination will be based.

III. CHAPTER THREE: Conceptual and Empirical Studies of
Laboratory Education: The Theoretical Perspective

Introduction

The previous chapter provides an overview of laboratory
training with respect to its use as an educational methodology.
This supplies a useful background in terms of the applied or
practical components of this field. In summarizing that
discussion we suggested that a second major source of background
information for the construction of our intervention model would
consist of an examination of the dynamics underlying laboratory
group functioning. Since much of the laboratory learning process
relies on interactional activities and processes within the
group itself, an understanding of these dynamics will be an
essential prerequisite for later discussions. The present
chapter provides a basis for this understanding by reviewing the
major conceptual and empirical literature concerning small group
dynamics in general, and the nature of laboratory group
functioning in particular. In short, we will examine laboratory
education from the perspective of theory and research.

We begin with a brief overview of laboratory education as a
field of scientific research. Following that we outline the

principal conceptual frameworks which have guided the study of group dynamics in general. Finally, we review a number of research findings pertaining to the overall effectiveness of laboratory programs, and the impact of various factors on group functioning.

Theory and Research in Laboratory Education: An Overview

The initial objectives adopted by the originators of laboratory education included those of studying the dynamics and processes of individual and social change, and of combining programs of laboratory training with programs of research. Originally, the laboratory was as much a context for research as it was for training. Although this dual function was actively fulfilled during the first two decades of laboratory operation, recent advances in the area of research and theory have been somewhat less significant than those within the applied realm. At some point in its development, most probably in the mid-1960's, the laboratory approach experienced a separation of theory and practice.[1]

A considerable amount of research was conducted in conjunction with laboratory programs during the 1950's and early

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[1]This separation was coincidental with and perhaps related to several other events, including the adoption of the laboratory method by 'West Coast' therapists, the growth of the Human Potential movement, the re-organization of NTL, and a general shift in emphasis in laboratory education away from group functioning per se and toward individually or organizationally focused programs.

1960's. Many of these investigations concerned the impact and effectiveness of the method itself, while others focused on the behavioral dynamics of groups in general (Gibb, 1975). Research of the former kind has contributed to the progressive improvement of the laboratory design and significantly aided the development of competent professional staff; the latter investigations revealed a wealth of new data about group functioning and helped to move the field of small group research from a stage of infancy to the articulation of its first tentative theories of group dynamics and social change (eg. Bennis, Benne and Chin, 1961). In spite of this initial flurry of research and theory however, the last fifteen years have seen a steady decline in both the quantity and originality of small group studies; this once burgeoning field now appears to be in a state of relative inactivity (Zander, 1979).

The decline of small group research since the mid 1960's is evidenced by several recent reviews (eg. Steiner, 1974; Goodstein and Dovico, 1979; Zander, 1979). For example, Goodstein and Dovico (1979) examine the number of articles concerning small group theory and practice published in the field's major journals during this period. In general, they note a sharp decrease in articles where the small group is treated as a unit of analysis in itself. In one journal specifically

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identified as a "small group" publication[2], this decrease was particularly marked, dropping from approximately 53% in 1965 to less than 10% in 1978 (See Figure 3-1). Examining the content of these publications, the authors suggest that the greatest decline has been in studies which address the dynamics of group functioning per se, with studies focusing on the application of group methods for individual or organizational change becoming relatively more prevalent. Thus, while an interest in applied research has been maintained,[3] the study of groups as unique social systems has fallen off sharply.
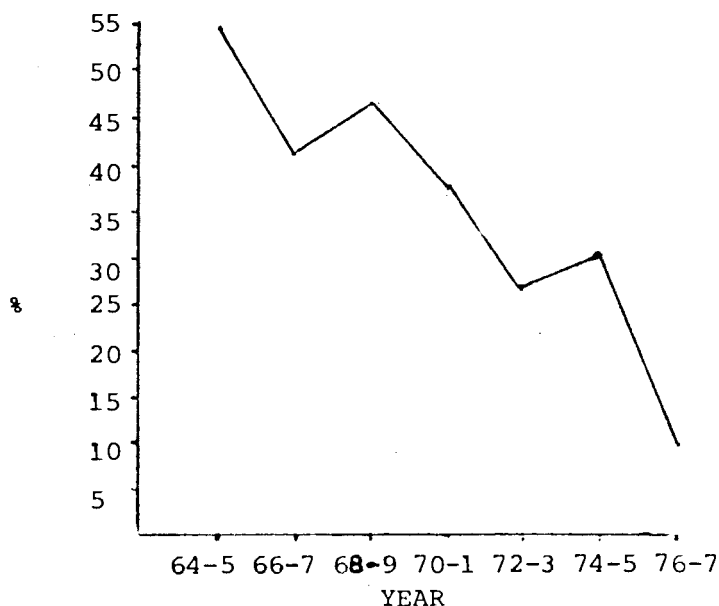
Figure 3-1:   Percentage of group theory and research articles published in the Journal of Applied Behavioral Science from 1964 to 1977 (Goodstein and Dovico, 1979)

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[2] Journal of Applied Behavioral Science
[3] Much of the research conducted during this period has focused on aspects of the training methodoogy such as laboratory structure (eg. Lundgren, 1971; Tompkins, 1972), or trainer behavior (eg. Culbert, 1968; Cooper, 1969; Lieberman, 1973).

In a recent review issue of one of the field's leading journals,[*] several authors undertake an examination of the current lull in group research as a means of taking stock of what has transpired and of looking forward to new directions for research. While part of the present inactivity is attributed to changes in the intellectual zeitgeist and in patterns of research funding since the 1950's (Zander, 1979), several authors suggest that inadequacies in the development of theory are more likely the principal cause (Zander, 1979; Back, 1979; Mills, 1979). Despite the wealth of empirical data which emerged in the first two decades of group research, only a few broadly conceived theoretical formulations of group dynamics were developed in this period. Since then, the elaboration of these models seems to have been virtually neglected.

One consequence of this neglect is that current research suffers from a lack of conceptual clarity and innovation. As one review comments, current research is often conducted on the basis of "concepts originally developed within a theoretical framework - but now treated primarily as self-evident" (Goodstein and Dovico, 1979). A more pertinent consequence however, at least from the perspective of the practitioner, is the fundamental separation and differential growth of the theoretical and applied aspects of this field. As early as 1956, for example, Griffiths noted a separation of theory and

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[*]Journal of Aplied Behavioral Science, 1979, vol. 15(3)

application in group dynamics and suggested that the development

of this area has emphasized application to the detriment of

theory (Griffiths, 1956). This is reflected more recently by

Bednar and Kaul (1979), who, speaking figuratively about the

differential growth of group research and practice, find "two

distinct species evolving, each shaped to its own environment

and neither able to survive in the others'" (Ibid. p. 315).

Commenting further on the "species - researcher", they note an

> "undeniable impression that the field is more aware of
> the subtle points of research design and data analysis
> than of some of the more fundamental conceptual problems
> plaguing theories of group work" (Ibid. p. 313).

Apparently, the development of coherent conceptual models has

not kept pace either with the accumulation of empirical data or

with the broadening application of group training methods.

The current situation in group research is therefore one in

which a significant body of empirical findings has accumulated,

but for which relatively little theoretical integration or

synthesis has been undertaken. Of the available theoretical

formulations, few have been developed within the last fifteen

years, and as a result, do not incorporate the findings of

recent studies. Concurently, most present research tends to

assume the validity of these earlier models and often lacks

conceptual innovation and originality. As the reviewers of group

theory suggest, the time seems ripe for a re-development of the

field's conceptual foundations.

Our Current Understanding of Group Functioning

Although current theories and models of group dynamics may not be entirely adequate, they have contributed significantly to our understanding of the factors and forces underlying group functioning. The framework of basic concepts contained in these formulations and the extensive research that has been conducted on the basis of these provides an important corpus of background information to be considered in the development of our intervention model. As a basis for the restructuring of group theory, it will be useful to review this material and to outline the contributions that have been made toward our current understanding.

Basic Concepts of Group Dynamics

The field of group dynamics is concerned with "investigating the formation of and changes in the structures and functions of groups, and with discovering and formulating the principles that underlie the behavior of groups" (Bany and Johnson, 1964). It attempts to understand the forces and conditions operating on the group as a whole and to explain the impact of group functioning on individual behavior.

The subject matter of this field has been defined in various ways by different authors. Shaw (1971) outlines six typical definitions, each focusing on one or more of the

following characteristics: (1) perceptions and cognitions of group members, (2) motivation and need satisfaction, (3) group goals, (4) group organization, (5) interdependency of members, and (6) interaction. Although these definitions represent different approaches to the conceptualization of groups, Shaw suggests that "different authors are simply looking at different aspects of the same phenomenon" (Ibid. p.5); a considerable amount of overlap is evident.

Since the present study is mainly concerned with aspects of group interaction which affect learning, we will adopt a definition based primarily on the interactive nature of group functioning. The formulation provided by Homans is useful in this regard:

> "We mean by a group a number of persons who communicate with one another often over a span of time, and who are few enough so that each person is able to communicate with all the others, not at second hand, through other people, but face to face." (Homans, 1950 p.1)

While this does not explicitly deal with certain aspects of laboratory groups, such as their special structures and goals, it does address characteristics that are central to this study.

As the term 'Group Dynamics' suggests, this area of study is primarily concerned with the flow of activities and processes characterizing the functioning of the group over time (Bany and Johnson, 1964). The unit of analysis is the group as a whole, and interest is directed to the forces which underlie the dynamic operation of this social unit. As a result, the approach

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that is taken is _processual_ in nature, seeking to account for the interrelated and mutually dependent operation of various forces affecting the whole. A variety of concepts have been utilized to fulfill this aim; among the most useful of these are the following:

1. \The Group as System/ - Based on the work of von Bertalanffy (1950) on biological systems, and Katz and Kahn (1966) on social organizations, many students of group dynamics have employed the concept of 'system' in examining group functioning. Viewed as systems, groups are seen as integrated wholes which function on the basis of the interdependence of their constituent elements, in this case, the group members (Glidewell, 1975). A systemic approach to group behavior attempts to account for the dynamics of the collective by identifying the structural and functional characteristics of the whole.

2. The Concept of Levels - Both the structural and functional characteristics of groups and the interactional processes which emerge from these are affected by a complex set of factors. Students of group dynamics have found it useful to categorize these according to different conceptual levels. Early formulations (eg. Horwitz, 1953) recognized three levels of factors impinging on group interaction: (1) the characteristics of the individual members, (2) the social factors within the group itself, and (3) various aspects of the larger social or institutional context in which the group functions. More recent

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developments in the field of human communication suggest

additional levels: the dynamics of two-person, or dyadic,

relationships, and those of intergroup relations (Barker, et al,

1979). Of course, the dynamic functioning of a group involves a

complex interplay of factors from each of these levels; the

recognition of discrete levels is an arbitrary distinction

useful primarily as a cognitive tool.

3. Member Characteristics - The characteristics of individual

members are significant to the study of groups insofar as they

affect patterns and processes of group interaction. The impact

of individual factors has been examined from various

perspectives, two of which seem particularly important. The

first concerns those characteristics which are relatively stable

and unchanging. Shaw (1971) outlines such aspects as the age,

sex, and intelligence of members, as well as personality

characteristics like emotional stability, conformity,

assertiveness, and social sensitivity as factors in this

category. The second set of factors are somewhat more transient

and dependent on situational influences. Of central importance

here are the personal and interpersonal needs influencing an

individual's orientation to other group members, such as the

needs for inclusion, control, and affection outlined by Schutz

(1958).

4. Group Composition - Students of group dynamics have also

found it useful to look at the effects of the different mixes of

traits composing particular groups. The aspect of group

composition that has received the most attention has been that

of the homogeneity of groups with respect to a variety of

demographic and personality variables (Stock, 1964). The

similarity or diversity of member characteristics within groups

is seen as having a major impact on a number of dimensions of

group interaction and performance (Shaw, 1971).

5. Member Concerns With Authority and Personal Relations - In an

attempt to characterize the interactive behavior of individuals

within the group setting, group theorists have examined

relationships between the individual and the group in terms of

their concern with authority and personal relations such as

intimacy (Bion, 1961; Bennis and Shepard, 1956). It is suggested

that group participation raises two areas of uncertainty for

individual members: (1) how they will relate to authority and

(2) how they will develop personal relations with their peers.

Effective participation is seen as relying on a successful

negotiation of these issues within the group, and much group

activity occurs in relation to this process.

Bennis and Shepard propose a scheme which outlines some of

the principal relational modalities characteristic of individual

behavior concerning these issues. Individuals who tend toward

the establishment and maintenance of authority structures are

called dependents; those who reject authority are

counterdependent. In terms of personal relations, Bennis and

Shepard identify persons who seek intimate relationships with the rest of the group as _overpersonal_, and those who avoid intimacy as _counterpersonal_. A category of _independents_ is also specified, including those members who are neither highly personal nor counterpersonal, but who are able to adapt to the situation in an 'unconflicted' way on the basis of individual needs and goals. Degrees of assertion within these categories are also recognized, with assertive individuals generally being more impactful.

6. _Group Goals and Tasks_ - The nature of the goals that groups work toward and the tasks involved in meeting those goals are also examined as a factor in group dynamics. Shaw (1971) outlines several aspects which affect interaction in this regard, including the complexity or difficulty of the task, the required degree of cooperation, and the differential focus on discussion, problem solving, or production required by different tasks. Attention is also given to the degree of compatibility between overall group goals and those of individual members as a factor influencing group functioning.

7. _Task and Maintenance_ - Not all group behavior is directly task or work-oriented; a certain amount of activity appears to have its central objective in the maintenance of the group as an effectively functioning social unit. In recognition of this, group dynamicists have utilized a distinction between task-oriented behaviors, concerning the procedures, methods, and

functions undertaken to achieve group goals, and

maintenance-oriented behaviors, which attend more to the

socio-emotional concerns of individual members and of the group

as a whole (Bradford, 1978). All group behavior is viewed as

influencing, either positively or negatively, one or both of

these two interrelated dimensions.

8. Group Structure - In general, the term 'group structure'

refers to the "pattern of relationships among the differentiated

parts of the group" (Shaw, 1971 p.234). Because of individual

differences in group participation, members become

differentiated along a number of dimensions, including the

amount and direction of communication, the degree of influence

and control, the performance of specific roles, and the

execution of leadership. Each of these areas is utilized in

examining the nature and effects of group structure.

9. Norms and Boundaries - Groups are often viewed as microcosms

of larger social systems and thus subject to many of the same

forces and dynamics (Slater, 1966). One aspect of this view is

the notion that groups develop their own indigenous normative

system as a basis for cooperative interaction. In the same way

that behavioral expectations and limits to acceptable behavior

are maintained in society as a whole, groups develop and

maintain their own structural standards and boundaries for

appropriate action, and often enforce these through pressures

toward conformity (Shaw, 1971).

10. <u>Group Climate and Cohesion</u> - As a general assessment of group interaction, students of group dynamics often find it useful to speak of the overall "climate" of the group (Bradford, <u>et al</u>, 1964). Arising from the interplay of numerous other factors, the group climate or atmosphere can range from one of anxiety, mistrust, and conflict, to one of trust and cohesion. The degree of cohesion present in a group impacts group functioning primarily through the perceptions of its members; the greater the degree of perceived cohesion, the more likely that members will be willing to contribute toward collective goals.

Bion (1961) identifies three major <u>response modalities</u> which are useful in characterizing group climate. A <u>flight</u> response refers to a withdrawal or avoidance of issues; <u>fight</u> refers to an aggressive, challenging response; and <u>pairing</u> refers to the seeking of support and comfort in more or less intimate sub-groups.

11. <u>Group Development</u> - One of the most powerful concepts in group dynamics is the notion of phases or stages in the development of groups. Several authors have argued that a series of predictable stages are passed through as a group moves from its starting point as an aggregate of independent individuals to a cohesive, productive social unit (Bennis and Shepard, 1956; Schutz, 1958; Mills, 1964; Tuckman, 1965). Bradford (1978) suggests that the study of these developmental stages provides a

view of the overall dynamic functioning of a group and an opportunity to assess the integrated operation of several more specific factors affecting group interaction.

12. External or Contextual Influences - Few groups exist in isolation from a surrounding environment; most function as a component of some larger institution, in relation to other groups, or, at the least, within a larger social or cultural milieu. Although external to the group per se, several elements within a group's environment have a significant impact on its functioning, for example: (1) the values and attitudes of group members are shaped by social and cultural experience, (2) members typically have affiliations with external groups which influence their commitment and ability to contribute, and (3) parent organizations and institutions place both demands and constraints on group activities (Schein and Bennis, 1965). Although interest in these contextual factors has only recently developed, their impact is currently recognized as significant and requiring further study.

This list provides only a brief overview of some of the major concepts currently utilized in the study of group dynamics. The intention here is not to supply a comprehensive discussion of the field, but merely to outline some of the principal components employed in the analysis of group functioning in general. Because the concern of this thesis is centered on one particular type of group with very specific

purposes, a discussion of the general theories of group dynamics developed on the basis of these concepts will not be required; our major concern is with those elements of group functioning specifically relevant to laboratory training and learning. What is required for present purposes then is an examination of group factors which are seen to affect processes of laboratory education. This examination will be undertaken in the section to follow by reviewing research findings relevant to this context.

Research Findings

Laboratory Outcomes

A great deal of research has been conducted in an effort to assess the actual outcomes of laboratory training. Comprehensive reviews of this work have been compiled by Stock (1964), Campbell and Dunnette (1968), Gibb (1975), and others (Schein and Bennis, 1965; Bunker, 1965). The following discussion provides a summary of findings drawn from these reviews.

The most commonly used methodologies for evaluating laboratory outcomes have utilized either pre- and post- measures of participant characteristics and skills, or interview and questionaire techniques administered at various points during and after training (Gibb, 1975). Both self-report and

objective-rater methods have been employed (Bunker, 1965).
Schein and Bennis discuss various methodological problems
associated with this, and other forms of evaluation research,
but note a trend toward increasing sophistication, and with it,
a growing body of positive evidence (Schein and Bennis, 1965).

In general this evidence suggests that the most significant
impact of laboratory training for individual learners is in the
areas of personal awareness, attitude change, and interpersonal
competence. Gibb cites changes such as

> "increases in expressed warmth, self-acceptance,
> internal control, risk taking, empathy, expressed
> caring, interpersonal sensitivity, problem solving
> skills, expressiveness, and openness; and decreases in
> anxiety, rigidity, racial prejudice, discomfort with
> feelings, dogmatism, and alienation" (Gibb, 1975 p.62).

Stock reports similar findings, but notes that specific changes
are evident only "for some people, under certain conditions"
(Stock, 1964 p.434). Apparently, the nature and extent of such
changes is related to the initial state of the learner, with,
for example, withdrawn individuals often gaining in
assertiveness, and aggressive persons becoming more socially
sensitive. These findings indicate "the degree to which
laboratory training outcomes tend to be individual and varied"
and suggest that "there is no standard learning outcome and no
stereotyped ideal toward which conformity is induced" (Bunker,
1965 p.264).

In addition to personal and individual changes, several

studies cited have examined changes in on-the-job performance for laboratory participants, while others have looked at the effect of training on group-level performance. Studies of the former type indicate positive changes in such areas as sensitivity to group processes and to others' behavior, and a greater tolerance for new information (Bunker, 1965). Group performance studies showed improvements in role flexibility, group decision making processes, and in the diagnosis of organizational problems (Stock, 1964; Campbell and Dunnette, 1968).

Several studies compare these laboratory outcomes with those of 'no treatment' control groups. Of one hundred and twenty-six such studies reviewed by Gibb, three reported negative outcomes for the laboratory group, twenty-one found no difference, and the remaining one hundred and two reported significant positive differences favoring the laboratory groups (Gibb, 1975). These results are taken to indicate that the laboratory method contributes to a rate of change far above the 'no treatment' base rate.

On the whole, these findings support the claim that laboratory training methods are effective in bringing about change in both individual and group functioning, and that the induced changes are in the expected direction of increased social and organizational effectiveness.

The Role of Specific Factors

Although studies of laboratory outcomes are instructive, a more significant body of findings has emerged from research conducted to determine the effects of various factors on the nature of those outcomes. Reviews of this research have been carried out by Stock (1964), House (1967), Shaw (1971), and Gibb (1975). Although the amount of research covered by these reviews is impressive, the range of variables dealt with is somewhat disappointing. As Zander comments, "a relatively limited number of topics have been explored out of the number available for investigation" (Zander, 1979 p.281). Perhaps, as he suggests, important problems are

> "set aside because there are no basic data on the
> matter, reliable measures cannot be made of the
> phenomena involved, the theoretical issues are not
> clearly stated, or the project is too costly in time,
> energy, and number of human subjects needed" (Ibid.
> p.281).

The number of useful studies is further limited when, as in the present study, the focus is specifically on group dynamic factors. Relatively few studies address such issues directly, although many have relevant implications. In reviewing this material for present purposes then, attention will be given specifically to studies that examine elements of laboratory group dynamics or which have such implications. In presenting this research, we will follow the conceptual categories outlined earlier in the discussion of group dynamics concepts.

<u>Member</u> <u>Characteristics</u> - Several studies examine the influence of member characteristics on interaction within the group setting and on general group functioning. The majority of these have not been undertaken specifically in laboratory groups, but are considered generally relevant for all group interaction (Shaw, 1971). Most studies focus either on demographic variables or various personality characteristics, as measured by standardized inventory scales, and most employ trained observers to examine the effects of these variables on various categories of group interaction and performance (Stock, 1964; Gibb, 1975).

The most common demographic variables studied have been those of age and sex, and the effects of these are examined primarily with regard to individual participation and interaction. In general, increases in the age of group members are positively related to increases in the amount of participation, and the complexity and differentiation of involvement for individual members (Shaw, 1971). Increasing age is also positively associated with emergent group leadership (Stogdill, 1948) and negatively related to conformity behavior (Costanzo and Shaw, 1966). Sex differences have been found to influence individual assertiveness and competition, as well as conformity (Shaw, 1971).

A number of personality variables have also been found to affect member participation. General intelligence is positively

associated with the amount of individual activity and with emergent leadership, and negatively associated with conformity to group pressure (Shaw, 1971). Individual assertiveness is related to a number of behavioral variables, including leadership, participation, and conformity to group norms, and is seen as a positive factor in promoting group cohesion and influencing group decisions (Borg, 1960). Highly anxious people are found to function negatively on a number of behavioral variables, and so to inhibit effective group functioning (Shaw, 1971).

Stock (1964) and Gibb (1975) both report studies of two related variables which are found to have a major impact on individual participation in laboratory groups. Individual orientation toward interpersonal as opposed to task concerns is reported to increase individual participation and to affect both individual learning and overall group performance (Harrison and Lubin, 1965). Similarly, individual needs for structure and direction in laboratory events are found to affect the degree to which the laboratory format is accepted, and thus to influence learning (Stock and Luft, 1960).

On the whole, these studies support the notion that the characteristics of individual members play a role in determining how members will function within the group setting. Shaw (1971) suggests that various individual characteristics function in concert to affect the needs which seek satisfaction within the

group, and that membership and participation in groups is based on the satisfaction of these needs. Stock (1964) argues further that the type of needs an individual brings to a laboratory setting may be a major determinant of the degree and kind of individual learning and change.

Group Composition - The factor of group composition is specifically relevant to laboratory training, and has been a major design consideration since the inception of this training format. For this reason, a great deal of early research has focused on the influence of this variable. Two major methodologies have been employed; the first is to determine group composition in advance by rating potential members on selected criteria and then to construct groups according to some principle of composition; in the second, the composition of existing groups is specified by identifying the distribution of relevant personality characteristics among group members. Once group composition is known, its effects are examined, either by observational analysis, or through the use of both individual and objective ratings of group performance (Stock, 1964).

Findings from these studies indicate that composition affects group performance and functioning in a number of ways. General effects are noted regarding the amount of individual participation (Shaw, 1971), group problem solving effectiveness (Gibb and Gorman, 1954), the nature of selected group tasks and goals (Gradolph, 1958; Hill and Stock, 1958), and the degree and

kind of emotionality (Leiberman, 1958). These differences have been studied primarily with regard to the homogeneity or heterogeneity of groups along a number of dimensions.

Homogeneous groups in general tend to have lower levels of affect, a greater orientation toward issues external to the immediate group situation (ie. back-home problems), and are more efficient in task performance and problem solving (Stock, 1964). Groups composed primarily of individuals with a strong orientation toward task as opposed to interpersonal concerns show particularly low affect and a tendency to aviod the development of strong interpersonal bonds (Stock and Hill, 1958). Groups that reflect a consistent preference for low structure tended to engage in more self-analysis, while those prefering a high level of structure gravitate away from self-analysis and toward the development of specific group tasks (Stock and Luft, 1960). Homogeneity on a variety of individual personality factors is also reported to reduce affect and to increase task effectiveness (Hoffman and Maier, 1961), and groups composed of all male or all female members show greater levels of overall conformity (Reitan and Shaw, 1964).

One particularly interesting finding with implications for trainer behavior is that in many cases trainers tended to adjust their behavior to compensate for missing elements in group composition; for example, the trainer in a low structure group attempting to introduce structural components (Lieberman, 1958).

Another study suggests that the association of the trainer with one sub-group within a dichotomous or polarized group may be detrimental to overall group functioning (Gibb and Gorman, 1954).

Taken within the context of laboratory training, these findings suggest a number of implications concerning the effect of composition on learning. It is argued for example, that the tendency of homogeneous groups to have lower levels of affect and less of a concern with interpersonal issues makes them less suitable for laboratories which focus primarily on the development of individual and interpersonal skills and perhaps more suitable for learning skills relevant for particular organizational or occupational interests (Schein and Bennis, 1965). The results of research on group composition are thus of central importance in designing laboratory programs.

Group Goals and Tasks - The effects of group goals and tasks on group functioning have recieved little attention in the literature. Of the few studies reported, the majority have focused on group functioning in general and not specifically on laboratory training groups, and are thus only indirectly relevant. In general this research has attempted to ascertain the impact of various kinds of group activity on overall group performance rather than on specific parameters, and observational analysis has been the most common means of data gathering.

The effects of various types of group tasks, in terms of their differential focus on discussion, problem soving, or production, have been examined by Hackman (1968). This study showed high levels of 'issue involvement' for group members, an orientation toward action, and a higher degree of originality respectively for each type of task. Carter, et al, (1950) found that the type of leadership emerging within groups is also a function of the type of task, as a result of differences in the skills and abilities required. On the dimension of task difficulty, it is found that increasing difficulty tends to impair overall performance and effectiveness (Shaw, 1971), but to enhance individual attempts to provide leadership (Bass, et al, 1958).

One study with direct implications for laboratory training (Shaw, 1971) suggests that group tasks play a role in securing individual participation to the extent that they provide a compatible avenue for individual goal attainment. Groups with overall tasks which were compatible with individual goals tended to be generally more effective and provided greater satisfaction for individual members.

An examination of task activities specifically within a laboratory group revealed that groups develop differentially with regard to their emphasis on task issues, but that most eventually reach a point where approximately seventy percent of activity is task related, and thirty percent is related to

emotional and maintenance issues (Back, 1948). The same study
found that emotional issues tend to be proportionally higher in
early stages of group developement but that the actual amount
varies from group to group.

It is difficult to draw firm conclusions from these
findings. In general, it appears that group tasks and goals are
significant in determining member involvement and activity. For
laboratory education, the development of tasks which will
fulfill a broad spectrum of individual goals and thus bring
about greater involvement might be suggested as an important
design consideration.

Group Structure - Group structure as a factor affecting
group performance has been extensively studied both within the
laboratory setting and without. Two major methodologies have
been employed; the first being experimental and the second a
more naturalistic form of study.

Experimental studies of group structure are exemplified by
the work of Bavelas (1948, 1950) and Leavitt (1951). Structure
was manipulated in these studies by varying the amount and
direction cf communication in which members were allowed to
participate; in some groups each member could talk directly to
all others (decentralized network), while in others, information
had to pass through particular members before it could reach the
rest of the group (centralized network). Several effects were
noted: (1) decentralized networks tended to be more efficient in

the solution of complex problems, (2) centralized networks performed better on simple tasks, and (3) in centralized networks, members occupying the central position tended to be given leadership status more than others (Leavitt, 1950). Within the laboratory context, these findings are useful with regard to emerging communication structures and their potential impact on group performance and member participation.

Studies conducted within laboratory groups are of greater significance however, since many of these have addressed the relationships between the structure of the learning environment and the degree of learning and change. These studies use a naturalistic design comparing the effects of a more highly structured format (in terms of the amount of trainer control over activities and exercises) with less structured ones, using a variety of learning outcome measures. Gibb (1975) summarizes twenty-three studies in which an unstructured T-group format was compared with more didactic, structured controls. Seventeen of these studies indicate greater learning for the unstructured format, three show no difference, and three favored more highly structured methods. The significance of these findings is contaminated however by differences between comparison groups regarding the content of group activity. Studies comparing different degrees of structure within a general experiential learning format were less conclusive, but nonetheless showed similar effects (Gibb, 1975). In all cases, very high degrees of

structure and control on the part of the trainer had a negative effect on learning.

More specific studies of laboratory structure report additional relevant findings. The provision of structure early in the event was found to reduce anxiety and resistance in participants (Lundgren, 1971) and to enhance decision making ability (Tompkins, 1972). The reduction of structure during laboratory programs was found to increase problem solving effectiveness and to elevate the expression of feelings and emotions (Hull, 1971). In general, Shaw (1971) reports that the greater the extent to which members are allowed to communicate with one another, especially regarding feelings, the more that overall group performance will be enhanced.

A final area of research relevant to the factor of structure is that in which laboratory trainers have been replaced by instruments or tape-recordings which guide group activity. Although such studies have attempted to reduce structure, Gibb (1975) argues that such instruments actually have the opposite effect by providing strict protocols for group behavior. In general, programmed training of this type is found to be less effective than leader-led training (Gibb, 1975).

The amount of structure to incorporate is thus a major consideration for the design of laboratory programs and for guiding trainer behavior. On the whole, reduced structure appears to enhance laboratory learning, except where it

interferes with such basic needs such as meals, lodging, etc.
This is probably related to the noted increases in emotional
expression and member involvement in decision making and problem
solving. The introduction of structure at strategic points
however, particularly in the early stages of the laboratory,
seems to have a beneficial effect.

Group Norms and Boundaries - Despite the importance given
by laboratory theorists to the norms of laboratory training,
relatively little research has been conducted to determine their
actual role in laboratory group interaction and learning.
Perhaps the work of earlier social psychologists on conformity
behavior (eg. Asch, 1951; Sherif and Sherif, 1956) has been
treated as given and not requiring elaboration. Early studies
concerning the impact of group norms on conformity appear to
provide a basis for most current laboratory theory. The overall
findings of this work suggest that: (1) there is a tendency
toward conformity to group norms (Asch, 1951; Frye and Bass,
1963), (2) groups exercise coercive measures to enforce norms
(Schachter, 1951; Homans, 1950), and (3) the greater the
ambiguity of the situation, the more norm seeking and conformity
behavior is evident (Shaw, 1971).

It was noted earlier that both the characteristics of
individual members and the composition of the group influence
the kinds of activities and interactions engaged in by
laboratory participants. Although this research does not

explicitly address the question of group norms, it is likely that these influences are related to the establishment and maintenance of behavioral standards for the group. Bennis, et al, (1957) have demonstrated that norms develop early in the life of a group and that, once formed, they tend to persist. Group preferences for particular types of activity and interaction are thus likely to be established as norms early in group formation.

One study gives clear evidence of the impact of the trainer in setting group norms. Back (1948) notes that the laboratory trainer is strongly influential in setting group norms, particularly regarding the kinds of affective expression engaged in. With a lack of research relating such norms to specific training outcomes, the relevance of this aspect of trainer influence remains unclear.

Much more research is needed in this area before clear conclusions can be drawn. From what is available, it appears that group norms do influence the functioning of both individual members and the group as a whole, and that trainers are influential in establishing these norms. One might speculate, on this basis, that groups which embrace the norms and standards typical of laboratory education will generally show a greater degree of learning in those areas specifically treated as laboratory goals. No clear evidence is available however to support such a claim.

Group Development - Numerous studies have been conducted
into the nature and impact of group development, and this is one
of the few areas of group research where significant theoretical
development has taken place. The movement of groups through
several more-or-less distinct phases of development has been
recognized as one of the most pervasive aspects of group
functioning and has spawned the elaboration of several accounts
(eg. Bennis and Shepard, 1956; Schutz, 1958; Mills, 1964;
Tuckman, 1965). Unfortunately, the results of empirical studies
in this area continue to provide only inconclusive evidence for
the primacy of any one of these formulations (Gibb, 1975).

At least part of the problem for researchers lies in the
fact that the concept of group development is abstract and
difficult to define operationally. Although researchers can
consistently recognize developmental phases when they look
retrospectively at observational data, it has been difficult to
identify specific behavioral criteria which support these
observations (Stock, 1964). Because each group is a unique mix
of people in a unique situation, the manifestation of various
developmental stages seems to be different in every case. While
it is possible to predict that certain issues and activities
will arise at various times during the life of a group, it seems
virtually imposssible to predict just when such issues will
emerge and in what specific behavioral form they will arise
(Stock, 1964).

Despite these problems, the basic notion of developmental phases, and the major interactional dynamics seen to underlie these, are widely accepted. Although differing in terminology, most authors recognize issues of member dependence and interdependence as the basis of group development, and relate various stages of group formation to changes in member concern with these issues. The following brief account of group phases is based largely on the work of Bennis and Shepard (1978).

In the initial stages of group develoment the major concern of group members has to do with each person finding acceptance and inclusion within the group; most behavior at this stage reflects a preoccupation with dependency, often evidenced by the establishment of tentative group structures and boundaries as a means of regulating behavior. When membership is established, the central concern of members shifts to that of making effective contributions to and exercising influence over group activities. Power struggles among members and a rejection of the trainer or leader are often present here, reflecting a counterdependent mode of response. One consequence of these concerns is the emergence of a more effective group structure with definite status and authority roles. A third stage normally entails the integrated functioning of the group on the basis of established norms and structures, with a central concern for members being interdependence. This third stage is often short lived however, if it is realized that initial structures and

norms are inappropriately restrictive or unfair. Such a
disruption will normally place the group and its members in
crisis, bringing about a reconsideration of earlier issues and a
renegotiation of group structures as a means of allaying
uncertainty and anxiety. In effect then, crisis points in the
life of the group may bring about a recycling through these
stages in an attempt to reorganize group efforts and continue
group development.

Although it has been difficult to investigate these
patterns of functioning empirically, research has provided a
number of findings which have an important bearing on
interaction and learning within the laboratory context. Studies
suggest, for example, that group development has an effect on:
(1) the kind of work and emotionality present in the group at
any time (Stock and Ben Zeev, 1958; Liebowitz, 1972), (2) the
formation of group norms (Bennis, et al, 1957), (3) the
development of cohesiveness and productivity (Horwitz and
Cartwright, 1953), (4) the development of trust (Draeger, 1968),
and (5) changes in group climate (Bass, 1962). In addition,
indications of the impact of member/trainer relations as a
component of the developmental process are evident in Back
(1948), Mann (1966), and Lundgren (1979).

Because of its abstract nature, the concept of group
development embraces a number of other, more specific aspects of
group dynamics. In this sense it is an extremely useful concept

in tying together various elements of group interaction and in assessing overall patterns of group functioning. Perhaps because of its imprecision as a research concept however, it has not been widely used in this fashion. Employed in this way, it might well prove to be an important conceptual device for determining appropriate strategies for group design and intervention.

Trainer Behavior - While it might be argued that trainer behavior is not strictly speaking an element of group dynamics, the trainer has an inevitable impact on laboratory group interaction and learning and is therefore usefully included in the present discussion. The importance of this factor in laboratory education was recognized in early research; however it has only been in recent years that the salience of trainer behavior has been recognized and a concerted effort made to reveal its influence (Lundgren, 1979). The principal research question addressed in current investigations is - "What characteristics of trainer behavior are necessary and sufficient to bring about effective laboratory learning?". The most common research strategy has been to relate various trainer characteristics, as measured by a number of standardized tests, to the learning outcomes of laboratory groups which they lead (Smith, 1980a).

Research of this kind encounters a number of probems in obtaining a clear picture of trainer effectiveness. Variability among trainers with regard to the training designs they use, the

particular behaviors employed to fulfill various functions, and the goals established for individual laboratory programs, as well as difficulties in obtaining adequate samples of trainers and groups and in measuring outcomes have plagued the area. However, recent methodological advances, according to Smith

"generate some confidence that we can describe the characteristics of an effective trainer with somewhat greater precision than previously" (Smith, 1980a p.65).

Findings which support this claim are outlined below.

The role of the trainer with regard to group development and the provision of structure and norms has already been discussed. These fndings will not be further elaborated except to say that the trainer often functions as an authority figure and a symbol onto which a variety of group responses may be projected. Trainers are often emulated, treated with deference, challenged, rejected, or scapegoated, depending on the particular themes and stages of group interaction (Bennis and Shepard, 1978).

The principal question of "Do trainers influence learning?" has been extensively researched, and although the results are varied, there is general support for an affirmative answer. Groups using programmed or tape-recorded instructions in lieu of a trainer showed significantly less learning than trainer-led groups; however completely leaderless groups often showed some of the same gains as leader-led groups and occasionally out-performed them (Gibb, 1975). While these findings call into

question the nature of trainer influence, other studies provide clear evidence that the trainer is a prominent figure in group interaction and exerts a significant impact on learning. Smith (1980a) has demonstrated that the trainer is viewed by participants as more influential and more trusted than other members. Additional evidence suggests that the trainer influences member perceptions of others (Lohman, et al, 1959), member goals (Vansina, 1961), and personal learning (Peters, 1973).

More recently, researchers have been less concerned with knowing if trainers have an influence and have taken greater interest in examining the question of how trainers affect learning. Schein and Bennis (1965) suggest that two primary forms of learning take place within the laboratory, one based on identification with and modeling of trainer behavior, the other through scanning the group environment for potential behavioral alternatives and then trying selected behaviors and seeking feedback from others. Early research tended to emphasize the modeling aspect of trainer influences (Back, 1948); however, more recent research reveals that an emphasis on the scanning mode by trainers tends to increase and to provide better transfer of learning. Cooper (1969), for example, found that groups whose trainers emphasized scanning over modeling performed better on follow-up tests than their counterparts.

In an attempt to uncover the dimensions of trainer influence, several studies have undertaken to examine the functional nature of specific trainer behaviors. In an extensive factor-analytic study, Leiberman, et al, (1973) identified four major components of leader behavior that are found to affect learning: (1) stimulation of group activity, often involving the creation of tension as a driving force; (2) provision of caring and support for members; (3) attribution of meaning to group activities; and (4) an executive function, mainly concerned with the administration of the event. While all four factors were deemed important, the combination of the 'caring' and 'meaning attribution' dimensions were found the most impactful for learning. Studies by Smith (1980b) had similar results, but suggest that the combination of caring/support with the induction of tension through confrontation is the most powerful training style. Additional evidence is provided with respect to other trainer behaviors, indicating that trainer self-disclosure (Culbert, 1968), and an orientation to group processes as opposed to individual members (Pino, 1969) is beneficial for learning, and that the tendency of trainers to provide rewards and punishments has negative effects (Bolman, 1971). [5]

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[5]While Bolman's findings might be seen as contradicting Bruner's notion of rewards and punishments discussed previously, it is important to remember that laboratory training is primarily a methodology of adult education and that it differs from processes of primary education. Knowles (1973) has argued that the reinforcements for adult learning (ie. rewards and

One final study deserving mention focuses on the nature of group influences on leader behavior. Smith (1980a) found that the particular 'climate' or 'culture' within the group at any particular time plays a significant role in determining which general functions and which specific behaviors trainers will deem as appropriate. The most effective trainer behaviors are those which respond to the needs of the group at a given time; for example in a group with a high degree of tension, trainer support and caring is called for, whereas groups which are fixed at a point of mutual support and admiration require the trainer to induce tension via confrontation.

On the whole then, trainer behavior can be seen as a major factor influencing group interaction and learning. A number of dimensions of this influence have been identified and some suggestion of how these relate to ongoing group dynamics is provided. While our understanding of this factor is not complete and considerable research remains to be done, recent studies have provided a significant addition to our understanding of trainer influences on laboratory group dynamics and learning.

External Influences - Perhaps because of its formulation as a 'cultural island', few researchers have addressed the issue of external factors operating to affect laboratory learning. No social grouping however, regardless of its purpose, exists in

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[5](cont'd) punishments) are intrinsic to the situation and to the adult learner, and that extrinsic reinforcements are unnecessary and often detrimental.

isolation; like any other component of society at large, the laboratory operates within a context of environmental and organizational constraints which must exert some influence on laboratory processes. The lack of research regarding such factors leaves an important area of group dynamics virtually untouched.

Some of the effects of cultural values and attitudes present in society are apparent from earlier discussions of member characteristics. The particular attitudes, values, and interpersonal orientations that each person brings to the laboratory are often reflective of those held generally in society. Some of these, for example, an orientation toward persons rather than things, and positive attitudes toward minimally structured learning, are seen as facilitative to the laboratory process, while others may be a hindrance.

The impact of various aspects of the organization or institution sponsoring a laboratory program are outlined in a theoretical discussion by Schein and Bennis (1965). On the whole, organizations are suspected of maintaining a number of attitudes and norms which militate against laboratory effectiveness, including an emphasis on hierarchical social structures, status relations based on position and authority, a lack of experimental attitude (especially regarding personal behavior), and an emphasis on promotion via 'pleasing the boss' (Ibid. p.282). In addition, the goals which 'organization-bound'

individuals bring to the laboratory, or with which they are <u>sent</u> by the organization itself, may not coincide with the goals of the laboratory or the trainer. For example, individuals may attend a laboratory with a view toward gaining solutions to organizational problems but are unwilling to examine or work on the human relations components of those problems; or an individual may be sent to a laboratory program primarily for assessment and not for personal or professional development. Finally, a lack of willingness to change within the sponsoring institution may tend to negate the learnings which participants take back to the work context.

Singer, <u>et al</u>, (1975) recognize a similar set of issues, and discuss these largely within the perspective of the ethics and responsibilities of persons and organizations who sponsor or conduct laboratory programs. While this information is useful to the practitioner, it does not provide a clear picture of when and how these factors are likely to present themselves. The lack of empirical research addressing these issues is an unfortunate omission, and studies are desperately needed to fill in this important area of laboratory research and theory.

Summary

This chapter serves to outline some of the major
contributions that have been made by empirical research to an
understanding of laboratory group dynamics. Some areas, like
those of group structure and development, and leader behavior
have been reasonably well covered and provide a good deal of
useful information; others, like group goals and tasks, group
norms, and various external influences, appear to have been
largely neglected by researchers. Although research in this area
is far from complete, there is much that can be said about
various aspects of laboratory group dynamics; however, the
narrow focus required of the researcher leaves much of this
material unconnected and diffuse. The need for conceptual
organization is apparent.

In the following chapter we will begin to address the
question of a reorganization of group theory as an initial step
in the construction of our intervention model. Using the present
review as a basis, we will explore various implications arising
from this discussion to propose an organization or structure of
group theory and research to specifically address the laboratory
context. The aim of this reordering will be to provide an
integration and synthesis of the material reviewed in the
present chapter.

IV. CHAPTER FOUR: A Re-Casting of Group Theory

Introduction

Having explored the conceptual underpinnings of the
laboratory methodology and some of the major theoretical and
empirical literature concerning laboratory group dynamics, we
can now begin construction of a heuristic model of intervention
as outlined in Chapter One. While considerable research has been
done to address relevant issues, and various theoretical
formulations have attempted to place this research within a
coherent framework, current models do not provide the conceptual
bridge that we have argued for. What is required here is a
synthesis and extension of past research within a conceptual
framework that will allow practitioners to devise forms of
intervention which effectively implement laboratory programs.

As suggested in Chapter One, a first step in fulfilling
this need would be the re-development of group theory
specifically addressing the laboratory group. This will be
undertaken here by identifying interactional factors that past
research has identified as relevant to the laboratory context,
examining and extending the relationships between them, and by
proposing an organized conceptual system in which they can be

framed. To begin, we briefly review the criteria by which this re-development will be guided, and examine certain concepts of group dynamics which will be useful as a _heuristic_ _basis_ for this task. We then propose a particular conceptual framework, based on the above, to provide a scheme for re-casting this material. Finally, this framework is employed in examining current theory and research to identify salient _factors_ _and_ _relationships_ and to carry out the re-development. The chapter concludes with a summary of the results of this first stage of model building.

It is important to note that the model building process undertaken here is not intended to provide a complete and fully developed theoretical structure. Our aim is simply to suggest, primarily on pragmatic grounds, a way of synthesizing current group theory and research in a way that facilitates practitioner access to those elements that are salient for the laboratory context.

Criteria and Guidelines for a Re-Casting of Group Theory

To fulfill the functions of our intervention model, the re-development of group theory must fulfill a number of specific criteria. As a starting point for model construction, it will be useful to clarify these and to suggest a means of approach that will ensure their satisfaction.

The first criterion is that an optimal scope cf factors be included. To serve as a basis for understanding laboratory group processes, our structure must incorporate a broad enough range of influences to account for central dynamics, but should include only those that are of specific and major importance. Second, our model should be simple enough to provide quick access to relevent information. As a basis for immediate intervention planning and action, we need a framework which represents salient dynamics in a concise, easily accessible fashion. A final criterion is an appropriate degree of unification. We require a conceptual scheme which integrates group theory and demonstrates functional interrelationships among relevant factors. This again would provide a concise and useful theoretical basis for intervention planning.

To provide a structure of group theory which meets these criteria we require an overall conceptual basis that will allow us to organize and integrate the body of material reviewed in Chapter Three. While no hard-and-fast guidelines are available to specify apropriate principles for theory construction (Hempel, 1966), it is possible to suggest certain general characteristics of group functioning which provide a useful, albeit heuristic, basis for the present task. Such characteristics appeal to overall patterns of group behavior based on the functicnal interrelationships of other, more specific factors, and are thus valuable as a basis for

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synthesis.

In Chapter Three we identified the concept of 'group development' as one such construct that is useful in this regard. Several authors have employed the notion of a developmental sequence in group behavior and have found it useful as a way of integrating and conceptually organizing other aspects (eg. Bennis and Shepard, 1956; Schutz, 1958; Mills, 1964; Tuckman, 1965). While the specific factors dealt with and the particular formulation of developmental phases differs somewhat among these various theories, each demonstrates the utility of 'group development' as a basis for theoretical synthesis.

In addition to its value as an integrative theoretical construct, group development has also been useful in the applied realm. Neilsen (1978), for example, outlines a scheme in which developmental patterns are employed as a basis for managing an educational program in which group techniques are used. Developmental concepts were found to offer useful clues for teacher behavior in this context, suggesting that similar applications might be made in the area of laboratory education.

A focus on developmental patterns in laboratory groups thus appears to be a promising avenue of approach for the present study. In both the theoretical and practical realms this concept has proven valuable as a means of organization and integration. To make use of this construct for present purposes however, we

will require an explication of various relationships between specific elements of group functioning and the overall process of development. This will constitute our principal focus in the section to follow.

A Developmental Model of Laboratory Group Dynamics

The re-working of group theory relevant to laboratory training is carried out here in three parts. The first proposes a conceptual framework specifying a particular formulation of group developmental phases and a scheme for categorizing interactional factors in relation to these phases. Using this framework we then examine several specific relationships between various factors and group development, based on our review of previous theory and research. The final step provides a theoretical synthesis and organization of this material.

A Conceptual Framework

As cited, a number of theoretical works have specifically addressed the question of group development as a means of integrating other factors and influences. Despite areas of overlap, each tends to focus on a particular type of group, and on a specific set of factors. As a result, none of these formulations provides a sufficiently comprehensive integration of factors to fulfill present aims. Moreover, few developments have taken place in this area in the last decade, and most

models fail to incorporate the findings of recent research. For present purposes then, we will need to devise a framework of our own.

While none of the current developmental models are completely adequate, each has particular strengths that are relevant to the present study, and which provide the basis for a composite framework. Drawing upon the particular strong points of these models, we can identify elements that will compose a more complete model. To use these elements however it is essential that they have a common basis and that they fulfill the criterion of 'relevance to laboratory training'; in short, all must address the nature of group development specifically in the laboratory context. On these grounds we are able to reject some schemes as inappropriate, for example that of Tuckman (1965), which is based on psychotherapeutic groups, and to select others that are useful, specifically those of Bennis and Shepard (1956), Schutz (1958), and Mills (1964).

Next, we identify the specific elements of these models that can serve present purposes. Each of the three schemes listed above outlines a series of developmental phases. Bennis and Shepard (1956) suggest a scheme utilizing two major phases with three sub-phases in each. Although relatively complex, this scheme does not include an explicit termination phase, which others have identified as essential (Mills, 1964). Schutz (1958) proposes a three-stage model based on a theory of need

fulfillment in individual members. Although Schutz presents

cogent arguments for his first two stages, the third is only

partially developed, and, on the whole, the model neglects

numerous elements, including group structures and norms. Mills

(1964) specifically addresses these inadequacies in previous

works and appears to provide a more suitable approach. His

five-stage model, ilustrated in Figure 4-1 below, includes

elements of group norm formation and termination, and

incorporates several factors from the earlier works. Although

Mills' scheme has its own inadequacies, particularly with

respect to the data gathering methods used in its development

(Hare, 1973), these are not viewed as critical, and the scheme

appears to provide the most useful alternative for present

purposes. Mills' formulation is simple enough to allow an easy

classification of group phases, and yet inclusive of a

relatively broad range of factors.

- (Figure 4-1) -

Figure 4-1: Mills' Phases of Laboratory Group Development (from T. Mills, Group Transformation. Englewood Cliffs, N.J.: Prentice-Hall, 1964).

Developmental Sequence	Description
Phase One: The Encounter	Prospective members assess the requirements and potential benefits of group membership and begin to feel out other members for initial expectations and commitments. This stage is often characterized by a premature rush into talk activities based on individual preconceptions about group functioning and brought about by initial anxiety and uncertainty.
Phase Two: Testing Boundaries and Modeling Roles	Recognizing the inadequacies of their earlier efforts, members begin to reassess their assumptions about the group and to seek more appropriate forms of action. Considerable effort is made to test the limits of acceptable behaviour, particularly by challenging authority figures, and to define new roles to suit the situation.
Phase Three: Negotiating an Indigenous Normative System	Members begin to see the group as a means of meeting individual goals and attempt to influence the direction of group activity. Conflict among sub-groups with differing goals is often apparent and efforts are made to establish and enforce criteria for member behaviour which will enable mutual goal satisfaction. Realistic group tasks are set up and a framework of roles and norms emerges as a basis for "responsible" group membership.
Phase Four: Production	With a workable structure in place, the group begins to utilize its resources and to push for goal attainment. Communication is open and supportive, and a degree of role and norm flexibility develops as members contribute according to their own skills and interests.
Phase Five: Separation	As the event comes to a close, group structures dissolve into intimate cliques and dyads. Members are primarily concerned with obtaining confirmation of themselves as effective participants and of the value of the learning experience. Discussion of "back-home" transfer of learning is apparent.

III

This scheme provides a first element of our conceptual framework by setting forth a specific pattern of developmental phases to structure our analysis. To complement this scheme, it will be useful to develop a means of categorizing group dynamic factors in relation to these phases. This will provide a means of characterizing the salient aspects of group functioning for each phase. Of the three models being considered here, Bennis and Shepard's appears to provide the most comprehensive analysis. Schutz's model deals primarily with individual member characteristics and tends to overlook a number of salient group-level factors; Mills' is similarly less inclusive, neglecting factors such as role differentiation among members and group structures (Mills, 1964). The Bennis and Shepard formulation utilizes a set of six major categories to organize a relatively broad range of factors. These categories include:

1. Emotional Themes
2. Content Themes
3. Characteristics of Dominant Members
4. Group Structure
5. Group Activity
6. Factors Facilitating Group Movement

These will provide the basis for the scheme to be used here.

Although relatively comprehensive, this framework does not explicitly deal with certain factors that recent research suggests as important. Among the elements not addressed by Bennis and Shepard are: group norms and values, the role of

various external factors, the effects of group composition, and specific aspects of trainer behavior. To provide a more adequate framework, appropriate additions to the existing categories are required, either through the incorporation of such factors into the existing structure, or through the creation of new categories. Group norms and trainer behaviors for example can be accomodated within elements of the present framework, while factors of group composition will require the formation of an additional section.

An additional problem with the Bennis and Shepard formulation concerns the <u>organization of categories</u>. Some elements, for example, 'group structure', 'group activity' and 'dominant member characteristics', refer to specific factors affecting the <u>interactional dynamics</u> of the group; others, like 'emotional themes' and 'content themes' suggest a focus on more general <u>outcomes</u> or <u>consequences</u> of the interplay of other factors. The latter two abstract general patterns from the totality of group interaction and express these as themes related to particular developmental phases. These are not unlike what Whitman (1965) refers to as "Focal Conflicts", though at a more general level; we might refer to these abstract themes then as the "Focal Themes" of group interaction.

As a means of further refining these categories and providing a somewhat greater level of integration then, the six categories from Bennis and Shepard's model, plus an additional

one addressing 'group composition' will be restructured
according to two overarching categories of "Focal Themes" and
"Interactional Factors"; the former including emotional and
content themes, and the latter embracing the remaining five
categories. As a further simplification, Bennis and Shepard's
categories of 'dominant member characteristics' and 'factors
facilitating group movement' will be considered together under a
new category of 'Energizing Factors'. In conjunction with Mills'
scheme of group developmental phases, this structure provides a
means of characterizing a broad range of dynamic factors
operating within the group at particular times; it thus provides
a relatively simple and unified framework in which to organize
various elements of group theory. An outline of this scheme is
presented in Figure 4-2 below, which summarizes our framework to
date. The particular elements of group theory incorporated
within this framework are listed according to the category in
which they are included.

The value of this scheme is twofold: As a way of organizing
theory for the practitioner, it provides a unified and easily
accessible overview of salient group factors and processes. The
"Focal Themes" component serves as a convenient key for
identifying the developmental phase in which a group is
operating, and then for determining the specific interactional
factors salient in that stage. Many of the practitioner's
requirements are thus satisfied by this scheme.

Figure 4-2: A Conceptual Framework for Organizing Laboratory Group Theory (illustrating factors included).

Developmental Phases	Focal Themes			Interactional Factors		
	Emotional	Content	Group Tasks & Activities	Energizing Factors	Group Structure	Group Composition
1. The Encounter	-emotional climate	-general development of goals & tasks	-specific development of goals & tasks	-impact of dominant members	-group norms	-effects of homogeneous vs. heterogeneous composition
2. Testing Boundaries & Modeling Roles	-salient relational modalities re: authority & intimacy	-task & maintenance issues	-behavioural manifestation of underlying themes	-individual & group perceptions	-roles	
3. Negotiating an Indigenous Normative System	-salient response modalities	-predominant member concerns		-external factors	-sub-group structure	
4. Production				-trainer behaviour	-authority structure	
5. Separation					-group cohesion	

II5

Secondly, this framework will also be useful for organizing further stages in the development of our intervention model. By structuring the discussion of relationships between group theory and laboratory learning, and the outline of recommendations according to the same framework of developmental stages, the model will clearly explicate a sequence of conceptual links between theory and practice , and will thus provide an appropriate bridge between these areas.

Group Factors in the Developmental Process

Using this framework, we can now identify some major factors operating at various stages of laboratory group development and specify how these factors vary in relation to one another as the developmental process unfolds. For each of the major categories in Figure 4-2, we will outline salient factors and relationships affecting group functioning in each developmental phase, and will examine these in light of the theory and research reviewed earlier. In doing so we will gather information to fill out various components of the framework suggested above, and thus provide a synthesis of group theory outlining the major characteristics of laboratory group functioning.

While our concern here is to identify the major characteristics of group functioning apart from the effects of various trainer interventions, some mention of the impact of

trainer behaviors will be unavoidable. The role of the trainer is cne of the principal factors affecting group functioning in this context, and its impact cannot be ignored. For present purposes however, we will limit our discussion to the general effects of these behaviors which serve to implement the basic laboratory design; in other words, we will be concerned only with those behaviors which are primary elements of this particular type of 'temporary system'. A more detailed discussion of trainer interventions is presented in later chapters.

STAGE 1: The Encounter

We previously (Figure 4-1) identified this first stage as one in which members assess the requirements and benefits of membership and begin to feel out other members for initial expectations and commitments. While participants are generally aware of the overall goals of the laboratory, the specific activities and procedures to be employed are usually unknown. Based on previous experiences, members typically bring with them a number of assumptions and preconceptions about laboratory training and small group functioning which serve to allay this uncertainty by providing a basis for initial interaction. Much of the group's functioning at this point reflects these preconceptions and assumptions.

A. Interactional Factors

1. Group Tasks and Activities

The principal group activities in this stage involve a superficial sharing of background data, and an initial (and usually premature) thrust into task activity (Mills, 1964), both of which are responses to the uncertainties of the situation. Members begin to introduce themselves and to talk about previous experience and background in an attempt to overcome initial feelings of uncertainty and unfamiliarity. This discussion is usually guarded and superficial however, with the focus of concern being the safety of the self rather than a sincere exploration of others.

At the group level, the response to uncertainty generally takes the form of a push to initiate concrete tasks. Both the form and the content of these tasks reflect the preconceptions which group members have of group functioning, often involving a return to procedures and activities that have been successful in the past. The use of voting as a decision-making process and the election, either overtly or covertly, of a 'leader' are typical responses in this stage, and the contents of discussion and action are focused on external issues and concerns.

2. Energizing Factors

The ambiguous nature of the laboratory's goals and structures, and the influence of members' past experience with groups are the most significant energizing factors in this stage (Schein and Bennis, 1965), with other external factors exerting a somewhat lesser impact. On the basis of past experience,

members typically expect the trainer to 'lead' the group by providing concrete tasks and roles. The laboratory's disconfirmation of these preconceptions creates a tension or vacuum which group members attempt to fill by acting on the basis of previous assumptions. External factors such as goals set by a sponsoring institution or organization may also influence group activity (either positively or negatively) by focusing member attention toward specific areas and setting general expectations.

Previous member experience and personality are also factors determining which individuals will arise as dominant in this phase of development. Members who are perceived as influential and high in status on the basis of their visibility in group interaction, often fill the gap left by the trainer by offering an alternative authority source. The behavior of these secondary 'leaders' significantly influences the mode and content of group activity in this phase.

3. Group Structure

Group structure here is virtually non-existent. Because the overriding concern of group members is with the establishment of initial expectations and commitments, the group consists primarily of independent and undifferentiated individuals; few relational or communicational patterns have begun to emerge. Although there is a push toward task activities, this is done without giving consideration to required roles and procedures,

and is more a means of working out individual/group relations
than a serious attempt to develop the group as a functioning
unit. In their concern for establishing an identity with respect
to the rest of the group, members rely on the task as a means of
'feeling out' other members and defining initial loyalties.
Toward the end of this process dyadic relationships begin to
form among members based primarily on similarities and shared
assumptions.

4. Group Composition

The effects of group composition are felt in a variety of
ways. In general, groups that are homogeneous with respect to
background experience and occupational affiliation tend to deal
with issues of member inclusion and introduction somewhat
earlier than do heterogeneous groups. This stems from the fact
that.there is a broader range of shared assumptions and
expectations in this type of group; heterogeneous groups
generally have fewer shared assumptions and need more time to
establish a basis for group/member relationships (Schein and
Bennis, 1965).

The state of anomie characteristic of this stage also
differs as a result of group composition. Homogeneous groups
experience uncertainty primarily because of the disconfirmation
of social expectations that are shared by virtually all members;
the preconceptions of the group as a whole are at variance with
the given situation. The state of anomie in heterogeneous groups

on the other hand arises more on an individual level, with each

person being uncertain, not only about the requirements of the

situation, but also about the expectations of other group

members (Schein and Bennis, 1965). Levels of uncertainty and

anxiety are accordingly higher in heterogeneous groups.

B. FOCAL THEMES

Each of the above factors plays a role in influencing the

interactional dynamics of the group. In concert, these factors

affect both the content of group activity and the principal

modes of interaction and relationship within the group as a

whole. By identifying the overall 'Focal Themes' emerging from

these components of the interactional process, we can obtain a

general description of group functioning characteristic of this

first stage of development.

1. Content Themes

The principal content theme concerns the assessment of

membership expectations by each individual and the testing out

of members' abilities to contribute meaningfully to the group

and to gain from involvement in the laboratory (Mills, 1964).

The focal point lies essentially with individual participants as

they attempt to establish an initial identity as a prospective

group member and thus to overcome initial uncertainty. This is

reflected in the group as a whole through its response of "naive

activism" (Ibid. p.70). The group begins to allay uncertainties

about membership expectations by establishing concrete and

structured activities and tasks.

2. Emotional Themes

The major emotional themes characterizing the group at this
time are 'Inclusion' and 'Dependency' (Bennis and Snepard,
1978). Needs for acceptance by the group and a sense of
belonging are crucial for individual members (Schutz, 1958).
Uncertainties with respect to these needs give rise to an
overall response of dependence, with members seeking
satisfaction and comfort through the direction and structuring
of an authority figure. The dependency modality is further
evident when the group seeks to establish its own concrete,
structured task as a means of providing a familiar and
predictable structure. This response is characterized as a
'flight' from the immediate situation (Bennis and Shepard, 1979
p. 17) - in a sense, not facing salient group and individual
issues and fleeing from these by concentrating on a concrete,
externally oriented task.

STAGE 2: Testing Boundaries and Modeling Roles

The transition into the second stage of group development
is usually predicated on two general outcomes of the first
stage. First, as a result of initial activities, group members
become familiar with one another and feel enough of a sense of
belonging to make a commitment to remain in the group and pursue
mutual goals. In other words, the initial inclusion needs of
group members have been met (Schutz, 1958). Second, the early

push forward into concrete tasks becomes problematic as a result
of unrealistic or conflicting assumptions about how the task
should be pursued. Recognizing these inadequacies, individual
members begin to reassess their previous assumptions about the
group and attempt to come to some understanding of the situation
at hand. This is accomplished through a process of testing the
limits of acceptable behavior and defining the range of freedoms
within the group, and by assessing the impact of new behavioral
roles.

A. Interactional factors

1. Group Tasks and Activities

Activities in this stage consist primarily of attempts to
propose overall group goals acceptable to the majority of
members and to determine the extent of individual freedom and
influence with respect to those goals (Mills, 1964). Earlier
tasks, although they served to diffuse initial anxiety and
provide a basic level of member inclusion, are generally the
result of only one or two dominant members' inputs and not of
total group participation. In the present stage, other members
begin to assert their own positions and interests, and the group
as a whole is forced to reconsider its aims. Much discussion
centers around the development of goals and procedures to
accomodate the learning needs of all members, with different
interest groups often vying for influence and control. With a
considerable amount of uncertainty still remaining in the group,

the goals and tasks proposed continue to reflect the biases and preconceptions of members' past experience.

Having generally satisfied individual inclusion needs in earlier sessions, members now begin to concern themselves with the issues of being actively involved and having an influence on the group (Schutz, 1958), and with establishing appropriate degrees of intimacy with other members (Bennis and Shepard, 1978). With no preset roles or guidelines, the forms in which influence and involvement can usefully be expressed are unclear. Members begin to seek out appropriate ways of behaving in relation to others and to assess the impact of different roles and behaviors. Frustration and confusion are commonly present here, resulting from the lack of direction and structure, and members typically direct these feelings toward the trainer or other authority figures rather than openly confronting each other. The first recognition of group maintenance needs often arises in this stage, and rudimentary forms of member feedback and support begin to emerge (Mills, 1964).

2. Energizing Factors

Several energizing factors are apparent in this stage. The ambiguity of group leadership continues to leave a vacuum for which the group must devise its own solution and response. In testing the limits of the freedom they have been given, members often challenge the trainer by taking freedom to an extreme, or test the leadership role through subtle manipulation. In this

stage as well, the trainer very often becomes the focus of projected anxiety and frustration resulting from the lack of structure, although much of this is expressed indirectly and not as an open challenge.

External factors such as a sponsoring institution, inasmuch as they may represent sources of authority and constraint, are also a subject of group challenge in this stage. In many cases the organization becomes the overt focus of group anxiety and hostility, acting as a scapegoat for challenges which might otherwise be directed at the trainer or other members (Schein and Bennis, 1965).

The previous social and cultural expectations of individual members continue to provide a basis for action within the group, although this influence shifts somewhat as members begin to recognize and reassess assumptions that have proven inadequate. While questioned in this stage of development, these influences continue to affect individual and group activity until processes of role modeling and evaluation begin to suggest new alternatives. Conflicts among members' interests and personal goals are also a source of group energy as the attempt is made to select appropriate overall goals.

Group members who dominate this stage as energizing factors are primarily those who are assertively dependent or counterdependent (Bennis and Shepard, 1978). Members who are actively dependent continue to seek highly structured and

concrete tasks as a means of overcoming the uncertainties of the group at this point. Counterdependent members often react against such suggestions, preferring to take on the challenge of freedom from authority. In attempting to establish overall group goals, these members are often in conflict, with each trying to exercise influence and control over the group (Ibid. p.26). As the group is still quite new and members have not yet developed a means of openly dealing with this conflict, much of the force of this clash is channeled to external bodies such as the trainer or sponsoring organization. Many of the less assertive members withdraw from active involvement as uncomfortable feelings of animosity and conflict emerge.

3. Group Structure

Stemming from the conflict described above, group structure begins to take on a more definite form. Dyads formed earlier become strengthened as members seek comfort and security in alliances with participants who share similar goals and assumptions. This process eventually spreads, with individual alliances developing into small sub-groups or cliques within the whole. Often in opposition to one another, these cliques tend to develop strong internal bonds and act as power blocks for the advancement of particular interests and goals, as well as to support certain sets of appropriate roles and behaviors (Ibid. p.26).

4. Group Composition

A number of compositional effects are apparent in this stage. Homogeneous groups, by virtue of their more commonly shared expectations and assumptions, tend to put up greater resistance to testing and changing group boundaries and roles. The greater the unification of the group, the more support there will be for maintaining preconceptions. In turn, homogeneous groups will tend to challenge the authority and leadership of the trainer more strongly and more directly, and to focus more on issues concerning the external organization, as a result of a resistance to examining within-group boundaries and roles (Schein and Bennis, 1965).

Heterogeneous groups, with a less unified composition of member experience and preconceptions, will tend to enter into boundary and role testing earlier and more actively. Without the presence of a supporting majority and status quo, the issues of behavioral limits and appropriate roles are more salient and more likely to emerge as dominant concerns. A wider range of differences among members will generally lead to higher levels of conflict and more expression of emotion in response to the situation (Ibid. p. 316).

B. Focal Themes

1. Content Themes

In terms of the content of group activity, the major theme
is the testing of limits for acceptable behavior, principally in
relation to issues of authority, levels of intimacy among
members, commitment to the group, and overall group goals
(Mills, 1964). On the whole, these issues represent the major
concerns of individuals as they attempt to discover appropriate
ways of behaving in relation to other members and to the group
as a whole. The process of boundary and role testing, for
individual participants, represents a reassessment of prior
assumptions and preconceptions about their involvement as group
members.

2. Emotional Themes

On the emotional level, major themes of influence and
control and counterdependence are apparent. The earlier
satisfaction of individual inclusion needs brings to the fore
issues concerning member power and control in the situation
(Schutz, 1958). The testing of boundaries and roles reflects, on
an individual level, a desire to influence the group and to
establish group goals and procedures that are in line with
personal preferences. This becomes evident at the group level
through the rejection of outside authority and a push for
self-determination within the group. Although arising from
issues of influence and control within the group, the major
thrust of these counterdependent activities is directed toward
external figures, apparently because the group is not yet in a

position to confront or challenge its own functioning.

Responses to these emotional themes commonly appear in the 'flight' or 'pairing' modalities (Bennis and Shepard, 1978). Conflicting interests and goals are challenged, although often implicitly, and a great deal of indirect opposition is often apparent. Members seek to support and strengthen their influence by forming dyads and cliques. This pairing response leads both to the establishment of power blocks within the group, and to the strengthening of interpersonal bonds within portions of the whole.

STAGE 3: Negotiating an Indigenous Normative System

The third stage of group develoment is characterized initially by a continuation of earlier conflicts and member attempts to influence the direction of group functioning. Emerging from the second stage however, the group has at least implicitly established some basic boundaries for acceptable behavior and developed rudimentary roles for individual participation. On the basis of these, the group can now begin to examine its own patterns of functioning and to set forth general criteria for governing member participation. Conflicts among individual goals are usually overcome here and realistic group aims are accepted by the majority of members. Norms for 'responsible' member behavior emerge as a means of guiding and regulating individual and collective action.

A. Interactional Factors

1. Group Tasks and Activities.

In terms of specific group tasks and activities, an almost equal emphasis is evident in pursuing concrete tasks and addressing issues concerning processes of group interaction (Mills, 1964). Recognition of the importance of maintenance issues and an increase in behaviors focusing on the group process as opposed to content are major new developments here as the group begins to take on a more self-analytic mode of functioning. Many of the leadership roles previously perceived as held by the trainer are now taken on by members (Bennis and Shepard, 1978), and open discussions of personal expectations and boundaries become more common. Group tasks become more concrete and realistic, with an accompanying clarification of specific task roles and responsibilities for individual members (Mills, 1964). The incorporation of previously conflicting goals into a single overall framework often leads to a spurring of creativity and for the first time group members begin to overcome earlier preconceptions and to take on new forms of behavior.

2. Energizing Factors

The major energizing factors operating here again concern the trainer, various external forces, and the behavior of dominant members. Initially in this phase, confrontation and challenge of the trainer is openly expressed and dealt with. This reassessment of the trainer's role takes the focus of group

anxiety away from external authority symbols and places it squarely within the group itself. Members become more aware of the dynamics of power and influence within the group itself and seek to negotiate acceptable norms for working together (Schein and Bennis, 1965).

Following the renegotiation of the trainer's role, a parallel clarification of the relationship between the group and the parent organization or institution takes place, with external projection of group anxiety and hostility subsiding (Neilsen, 1978). The group now begins to realistically examine the external constraints under which it is working and to incorporate these into the group's overall goals and tasks.

Initial conflicts among dominant members are also a factor moving the group through this stage. The discomfort of conflict within the group provides a major impetus for establishing norms and boundaries to regulate member behavior, and the reconciliation of differences resulting from this spurs a great deal of creative work. The result of this process is usually evident in the development of closer interpersonal relationships and an increasing level of cohesion within the group.

There is a major shift during this stage with regard to the energizing group members. Initially, assertive dependent and overpersonal, and assertive counterdependent and counterpersonal members are the most salient as issues of authority and intimacy are faced and dealt with. As the conflicts among these members

are worked out, other members begin to exert a more profound
influence. Assertive 'independents' in particular arise here and
play a major role in negotiating norms acceptable to the group
as a whole (Bennis and Shepard, 1978).

3. Group Structure

Characteristics of group structure follow a similar,
shifting pattern during this stage. The cliques and sub-groups
formed in the earlier stage initially continue to maintain their
strength and control. Communication patterns at this point
clearly evidence the splitting of the group into warring
factions. As conflicts are gradually resolved however, members
not strongly associated with the sub-groups begin to act as
liasons and to provide linkages between previously divided
members (Ibid. p.32). As these members emerge, the cliques
gradually break down in favor of a more inclusive network of
relationships embracing a widening number of other participants.

4. Group Composition

The formation of group norms and changes in group structure
are strongly affected by the composition of the group (Schein
and Bennis, 1965). For homogeneous groups, passage through this
stage is often rapid and relatively uneventful. Because of
shared common concerns and interests, conflicts tend to be less
pronounced. The formation of group norms often comes easily for
these groups, and on the whole, these norms tend to be
consistent with earlier assumptions and preconceptions and are

relatively conservative in nature. The general orientation of homogeneous groups toward goals and tasks that have an external focus also facilitates the development of task roles and structures. On the whole however, these groups tend to be less self-analytic.

Heterogeneous groups on the other hand generally spend a considerable amount of time in negotiating norms and structures. More conflict is apparent in these groups, due to greater differences in member goals and orientations, and greater effort is required to establish common norms. Considerably more time is spent here in examining issues of group maintenance as a means of assuring the accomodation of all members. Norms emerging from this process tend to allow greater degrees of risk-taking and facilitate a climate of self-analysis in the group.

B. Focal Themes

Considering this phase in terms of focal themes, it appears that many of the issues of the previous phase continue to occupy the group. Rather than being focused externally however, these issues are now examined directly in relation to the group itself.

1. Content Themes

The content themes of the group continue to center around issues of authority, intimacy, and commitment, but rather than testing these isssues in relation to an external authority, the concern is now with establishing specific internal criteria to

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regulate member behavior in relation to these issues (Bennis and Shepard, 1978). The central issue here is the definition of responsible membership as a guide for individual behavior. A secondary issue for individual members within this overall theme is the integration of personal goals with those of the group as a whole.

2. Emotional Themes

The emotional themes in this stage also continue to center around the issues of influence, control and counterdependence that were apparent earlier (Ibid. p.32). Focusing these specifically within the group however, individual members now become directly concerned with their own response to influence and control by other participants. With an interest in fulfilling individual goals, negotiation of power issues takes place as a means of establishing a basis for mutual influence and mutual satisfaction. The development of norms thus represents the group's attempt to overcome dependency on external authority and to deal with its own internal issues of control and influence.

The major response to this emotional climate is that of 'pairing' (Ibid. p.32). Members seek to deal with power concerns by developing stronger interpersonal bonds with other persons. Initially this takes place in sub-groups which support individual preferences; later breakdown of these cliques in favor of the whole group represents a widening scope of pairing

relationships and a growing degree of intimacy with more and
more other participants. A growing level of understanding
emerges within the group as a consequence of this process, with
an enhanced ability to creatively pursue collective tasks and
goals a major secondary outcome.

STAGE 4: Production

With a set of norms in place and an overall structure of
roles and relationships within the group, concerns with task
accomplishment now become central. The particular resources of
each member, in the form of skills, information, etc. are called
forth and put to use in collective activity. Although the
emergent structure of the group becomes the basis for this
productive stage, a degree of flexibility concerning roles and
norms gradually develops as individual members begin to explore
and experiment with new behaviors (Mills, 1964). The task itself
often becomes only a vehicle for learning rather than an end in
itself.

A. Interactional Factors

1. Group Tasks and Activities

The principal group activities here are strongly oriented
toward working on and completing overall group tasks. Morale is
high as members feel they are 'finally getting down to
business'. The resources of individual members are called forth
or volunteered and attempts are made to integrate as many of
these as possible. Group maintenance, although not a central

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issue, is addressed when appropriate, and feedback and support among members becomes more common. Minor conflicts which arise in completing the work are occasionally 'overlooked' in favor of the task, but more serious conflicts are openly confronted and dealt with.

2. Energizing Factors

As an energizing factor, the external organization may play a significant role in this stage, often becoming the central focus for the group's activity. Group tasks commonly undertake legitimate action with respect to a sponsoring institution, attempting to come to grips with human relations problems within an organization and proposing changes to ameliorate these.

Perhaps the most salient source of energy here however is the group itself. Having overcome various internal problems and developed itself into a well-functioning social unit, the group feeds primarily off its own momentum and the input of its members. High spirits and a strong commitment to the group as a whole, as well as a growing feeling of success in both group and individual goals, spurs most of the group's movement.

3. Group Structure

For the first time in its history, there is a more-or-less equal distribution of participation and influence within the group (Bennis and Shepard, 1978). Assertive individuals in general often take on emergent leadership roles, but considerable effort is taken to secure the input and

participation of others. On the whole, the functions of group membership are well distributed, with each member participating according to his or her own skills and interests.

Group structure in this phase of development is highly cohesive. On the basis of established roles and norms, member influence and participation is fairly integrated, with emergent leaders usually providing the focus of communication flow within the group. Sub-groups are also evident in many groups, forming as a means of undertaking specific components of the overall task and generally being in coordination with other components. In addition, a degree of role flexibility and an acceptance of deviant members or behaviors arises, particularly in the latter stages of task completion. On the whole, structural characteristics in this phase appear to be based primarily on the functional requirements of the task, and not, as before, the result of stereotyped preconceptions or bids for power.

4. Group Composition

Compositional effects are notable here particularly with regard to the content of group task activities. Homogeneous groups generally develop tasks reflecting a strong orientation toward externally or organizationally related problems. The majority of group activity focuses on these specific tasks, and relatively few maintenance behaviors become salient for the group. Heterogenous groups, by contrast, tend to focus more directly on interpersonal problems, particularly those which are

salient within the immediate situation. Expressions of emotion and affection among members are typically more common in heterogeneous groups as well (Schein and Bennis, 1965).

B. Focal Themes

Placing these within the context of focal themes, we can identify a major change from the last phase to the present. The turmoil of the previous phase, resulting in the establishment of group norm and role structures, has given way to a smooth but active mode of functioning.

1. Content Themes

Major themes occuring on the content level are the push for goal attainment and the utilization of members' resources to complete the given task. Operating within the context of established norms, the principal concern for individual members lies in making useful and responsible contributions, and at the same time, enhancing individual learning. For the group as a whole, a balance is struck between responsibility to the group and responsibility to individual needs and interests, from which the flexibility noted above arises (Mills, 1964).

2. Emotional Themes

Emotional themes primarily concern integration and interdependence (Bennis and Shepard, 1978). The overall feeling or climate in the group at this point is one of cooperative interrelationship; each member contributing according to his or her ability and others responding in kind. Feelings of

comradeship and affection are widely expressed as each member finds him/herself to be part of an integrated and more-or-less efficiently functioning unit. The 'Pairing' response grows to encompass almost all members of the group.

STAGE 5: Separation

With tasks completed and overall goals at least partially met, the laboratory event is terminated. The group as a whole begins to disband, first into cliques and sub-groups, and then into intimate dyads. Members gradually withdraw from the group milieu to consider their own learnings and to place these in the context of the external world. A major focus here is on the confirmation of learnings and their transfer to back-home situations. Sentimentality is often apparent, and failing attempts are often made to keep the group together after the event.

A. Interactional Factors

1. Group Tasks and Activities

Group activities typically involve final presentations and evaluations of task accomplishments, with positive evaluations far exceding negative ones. Any unfinished business or left-over concerns are usually dealt with here as well. A major concern for individuals appears to be obtaining positive confirmation of their part in the group's task and in the laboratory as a whole (Bennis and Shepard, 1978). A great deal of intimacy is expressed among participants, and discussions focus on how the

learning relates to external situations.

2. Energizing Factors

Although this is a stage of winding-down, it is activated
or energized by several factors. The trainer is looked to both
for confirmation of individual and group learning, and for
interpretation of the experience. Not uncommonly, the trainer is
asked to evaluate the group as a 'good' one, or to reveal his
'secret hidden agenda', reflecting perhaps a resurfacing of
earlier preconceptions and assumptions in anticipation of
returning to more rigidly structured social contexts. External
organizations or situations in participants' lives are thus also
significant here in providing a source of criteria for
evaluating the experience and suggesting further possibilities
for transfer of learning (Schein and Bennis, 1965). Additional
support and confirmation also comes from other members as they
discuss the experience and share reactions.

3. Group Structure

The dissolution of the group's structure reduces the level
of integrated functioning and once again particular individuals
arise as dominant. In contrast to earlier stages however, where
'conflicted' members tended to take the fore, salient members
here are generally the assertive and 'unconflicted' independents
(Bennis and Shepard, 1978). These members are likely to have
emerged as group leaders in the latter stages and are now
visible focal points for other members. Their evaluations and

reactions to the experience take on particular importance for other members. Some overpersonals are also significant here as well, though not dominant for the group as a whole.

With the structure of the group gradually dissipating, individuals withdraw from the mainly task-oriented structure, and spend the last portions of the laboratory in small cliques and eventually in dyads. This is essentially the reverse of the process which characterized the initial formation of the group structure (Schutz, 1958), and suggests a particular pattern of stages in structural development.

4. Group Composition

Group composition has an effect on this stage primarily through the emphasis that is placed on different types of learning (Schein and Bennis, 1965). Homogeneous groups, due to their major concern with external, organizational problems, place a greater emphasis on learning that can be applied to such areas. Heterogeneous groups tend to emphasize learning which focus on personal and interpersonal levels rather than organizational concerns. These differences are consistent with and a reflection of the dynamics of earlier stages.

B. Focal Themes

1. Content Themes

Content themes focus primarily on completion of task activities, evaluation of the learning experience, and the disssolution of group boundaries. For individual members, these

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themes represent a need for positive confirmation as an
effective group member and a concern about the value and
transferability of the experence. Reflected on the group level,
these take the form of overall positive feedback and discussion
of back-home problems and concerns, with the trainer being
looked to for support and interpretation of learnings.

2. Emotional Themes

Emotionally, the central theme of this phase is that of
intimacy. Having worked together through periods of strong
frustration, anxiety, and conflict, group members feel strong
bonds with other participants; expressions of intimacy and
affection are common in the final stage of most laboratories as
a reflection of these bonds. The concerns which members feel
about the learning experience are shared in small cliques and
dyads primarily as a means of personal support and confirmation.
This can be viewed as a 'pairing' response to the eventuality of
termination and separation (Bennis and Shepard, 1978).

Caveats to the Model

The developmental process described above represents an
idealized and generalized account of the contents and sequences
of events found to characterize group functioning in a number of
laboratory situations. As with human development however,
complete growth and maturation is seldom achieved. Often, "the
treatment of later issues reveals inadequacies in the resolution
of earlier ones", and groups will from time to time "regress as

well as progress" (Neilsen, 1978). Some groups appear to get stuck or fixated at particular levels, some seem to operate in two stages at the same time, while still others will move forward in spite of having ignored issues at an earlier stage. Developmental variations of this kind often tend to leave the group in a more-or-less dysfunctional state, but by no means preclude group effectiveness for particular kinds of activities.

The major inadequacy of this, and other models of group development is the imposition of a linear sequence of events onto what is essentially a non-linear phenomenon. Although the exact sequencing and the particular manifestation of developmental issues may vary from group to group however, the pattern outlined above appears to provide an account of the major 'benchmarks' that virtually all groups will pass at some point between the start and the end of laboratory events. The model thus provides a general account of the forms of developmental phases, though perhaps not the exact contents or sequences characterizing a particular group. In effect, the model presents a 'statistically normal' picture of group development, not a specification of 'correct' or 'true' development. The path of develoment in any one group can only be measured or evaluated in terms of the group's own goals and aims.

Summary

Using the conceptual framework specified in the beginning
of this chapter we have outlined patterns of laboratory group
functioning in relation to a series of five developmental
phases. For each stage we examined a variety of interactional
factors underlying individual and group behavior and have
specified how these factors operate in relation to each other.
The overall functioning of the group based on these
interactional dynamics is specified in terms of the overriding
'focal themes' emerging in each developmental phase. Themes on
both the content and emotional or relational levels have been
outlined.

This discussion provides a general account of the major
factors affecting laboratory group functioning and an abstracted
characterization of the overall dynamic processes which arise on
this basis. In sum, this discussion presents an overall model of
laboratory group dynamics in relation to group development. This
model is summarized in Figure 4-3. Focusing specifically on
factors affecting laboratory group dynamics and using the
concepts of group development and group focal themes to provide
a simplified and unified framework, this model satisfies the
criteria outlined earlier. By providing a re-development of
group theory specifically addressed to the laboratory context,
the model thus comprises the first step in the construction of
an intervention model for laboratory education. We are now ready

to consider the second stage of model construction by turning to an examination of relationships between this theoretical structure and the processes of learning which characterize laboratory education.

- (Figure 4-3) -

Figure 4-3: Summary of Factors Affecting Group Functioning in Different Phases of Development

Phase of Development	"Focal Themes"			Interactional Factors		
	Emotional Themes	Content Themes	Group Tasks & Activities	Energizing Factors	Group Structure	Group Composition
1. The Encounter	-Inclusion -Dependency -Flight/Fight	-Individual--assessment of membership expectations -Group--"naive activism"	-Superficial sharing of background data -Activity for activity's sake	-High status members -Trainer looked to for structure & direction -Interaction based on previous experience & preconceptions -External organization imposes goals & expectations	-Isolated & independent individuals -Early formation of dyads based on shared experience	-Homogeneous--quick inclusion -Anomie due to disconfirmation of shared experience -Heterogeneous--slow inclusion -Anomie due to lack of shared experience
2. Testing Boundaries and Modeling Roles	-Control & Influence -Counterdependence (re: external authority) -Flight/Fight -Pairing	-Individual--re-assessment of preconceptions -Test limits of behaviour re: authority, intimacy, commitment	-Task definition based on past experience -Modeling & assessment of roles -Group maintenance behaviours emerge	-Dependent & counter-dependent members in conflict -Trainer focus of projected anxiety & hostility	-Strengthening of dyads & formation of opposing cliques	-Homo--more resistance -Stronger challenge of trainer -Greater external focus -Hetero--earlier boundary testing -More conflict & emotional expression
3. Negotiating an Indigenous Normative System	-Control & Influence -Counterdependence (re: internal functioning) -Pairing	-Integration of individual and group goals -Criteria for responsible membership	-Assumption of leadership roles by members -Realistic & concrete tasks -Novelty emerges -Maintenance behaviours increase	-Trainer role challenged & re-assessed -Resolution of internal conflicts -Clarification of relationship with external organization	-Competition between cliques -Later emergence of liaisons & breakdowns of sub-groups	-Homo--norms established easily -Task structure arises quickly -Hetero--more risk-taking -Slower norm setting -More maintenance
4. Production	-Integration -Interdependence -Pairing	-Push for goal attainment -Concern for useful contribution of resources	-Open confrontation, support & affection -Strong task orientation -Maintenance when appropriate	-Integrated participation -Trainer becomes accepted & trusted group member -Legitimate action in relation to external organization	-High cohesion & integration based on norms & roles -Role & norm flexibility	-Homo--external focus -Maintenance less salient -Hetero--interpersonal focus -More support & affection
5. Separation	-Intimacy -Pairing	-Confirmation of self as effective member -Evaluation of learning -Dissolution of boundaries	-Positive evaluation of task & learning -Discussion of back-home problems -Expression of intimacy	-Assertive independent members centre of focus -Trainer looked to for confirmation & interpretation -External criteria for evaluating learning	-Dissolution of structure into cliques & intimate dyads	-Homo--external applications emphasized -Hetero--personal & interpersonal issues more salient

V. CHAPTER FIVE: Relationships Between Group Theory and

Laboratory Learning

Introduction

The present chapter undertakes the second stage in the

construction of our intervention model. As set out in Chapter

One, this phase entails the specification of relationships

between the theory we are using and the specific change process

the practitioner attempts to enact. More specifically, our

purpose here will be to relate various aspects of group

functioning, as outlined above, to the processes of learning

that are defined as valuable within the laboratory framework.

The value of this part of the model, as suggested, will rest

upon its ability to provide an account of how various factors

inherent in the laboratory context contribute toward this

particular learning process. The central criteria to be

fulfilled in this stage then are a specification of the major

components of group functioning which affect laboratory

learning, and an explication of their impact.

As a basis for the present discussion, we will draw upon

the conception of laboratory learning reviewed in Chapter Two,

which outlines the major characteristics of the change process

occuring in this context, and the primary value orientations on which that process is based. Considering these in relation to the developmental model of laboratory group dynamics proposed in Chapter Four, we will identify various group factors which act to facilitate the given learning process. Relationships between group functioning and laboratory learning are initially identified by examining the learning process in the context of various stages of group development; these are then elaborated by outlining the role that various factors play in facilitating learning in various stages. As a summary of this discussion, we identify a number of points which characterize the major relationships between group functioning and laboratory learning.

Since our discussion now begins to focus on the process of learning taking place in the laboratory, it will be useful here to examine in more detail the role and the impact of the trainer. Several important elements of this learning process are initiated or facilitated by trainer behaviors; it is of value therefore to incorporate these influences into the present discussion.

The Learning Process as a Function of Group Development

First, we will outline the components of the learning process that are salient in each of the five developmental stages, and the principal interactional factors which operate to fulfill these.

PHASE 1. The Encounter

The first step in the learning process outlined in Chapter Two consists of the presentation of disconfirmation as a way of unfreezing participants' conceptual systems. Several factors are active in this first stage of laboratory development to accomplish this:

As a 'cultural island', the laboratory removes many of the routine activities and normal social relationships which tend to stabilize conceptual systems. Laboratory participants face an environment where, unlike most social situations, appropriate behavior is not clearly defined by convention or ritual. In addition, the presence of other individuals who are relative strangers and who often come from quite dissimilar backgrounds presents a second source of uncertainty and disconfirmation. A third and perhaps more significant source of disconfirmation lies in the role and the behavior of the trainer. Virtually all participants have initial expectations of the teacher/student relationship based on a typical pedagogical prototype; the trainer's abdication from this role, through the refusal to provide definite structures and tasks, negates a central element in the cognitive maps of most participants and presents a major source of dissonance.

The absence of forces which stabilize conceptual systems and the presence of others which tend to negate social

expectations creates a state of anomie which prepares participants for learning and change with respect to particular types of behavior. Two kinds of conceptual systems are particularly salient in this first stage of the laboratory: those concerning individual behavior in interpersonal and group interaction, and those pertaining to the nature of the learning process. Due to the predominance of inclusion needs for individual members and a concern for understanding the membership requirements of the learning group, these two aspects of individual functioning are a central focus for participants as they enter the laboratory. As a result, it is these systems in particular that are unfrozen, and it is in these areas where the majority of learning will take place.

As Harrison's model of learning suggests however, the initial response to disconfirmation is not an immediate reordering of these conceptual systems, but an attempt to fit anomalous phenomena into the existing structure; the first response is to reaffirm the 'thesis' (Harrison, 1965 p.38). Much of the group's activity within this first stage of development reflects this: Individuals begin to share background data with one another using highly superficial and ritualized forms of interaction, and relationships begin to emerge on the basis of shared interests and backgrounds. The trainer continues to be treated as a source of structure and guidance and as a focal point of individual concern, and when the trainer fails to

provide sought-after support, the group sets up a task structure and begins to pursue activities typical of a 'work-oriented' group, with assertive members being looked to for leadership. In the presence of disconfirmation then, the group reacts with an initial attempt to assert previous conceptual maps and to force the anomalous situation into an established cognitive and behavioral structure.

Here again however, disconfirmation arises from several sources as a further element of conceptual unfreezing. As we have seen, the group's initial reaction of 'naive activism' is generally unsatisfactory for the majority of members. The expression of dissatisfaction by high status members, as well as the questioning of group methods and the suggestion of alternative means of approach by the trainer are instrumental here in bringing these inadequacies to light and thus in disconfirming the initial thesis. The first stage of group development thus contains several elements which facilitate the initial unfreezing components of the learning process.

PHASE 2. Testing Boundaries and Modeling Roles

In terms of Harrison's model of laboratory learning, the major focus of activity in the second stage of group development could be called an exploration and elaboration of the 'antithesis' to earlier responses (Harrison, 1965 p.39). When the initial dependency response proves inadequate for most group members, the group begins to experiment with its opposite:

counterdependence toward the trainer and the situation. Members begin to test the limits of acceptable behavior with respect to issues of authority and intimacy by playing out extreme roles and engaging in stereotyped behavior. In the area of authority for example, individuals often challenge the leadership of the trainer by flatly rejecting all of his or her suggestions. For the most part, such behavior represents an attempt to determine what the boundaries of the situation are and to assess the impact of extreme behavior.

Group activities within the second stage of development play a crucial role in facilitating the learning process for individual members. As a result of disconfirmation and dissonance emerging in the previous phase, considerable cognitive and emotional stress is present with regard to appropriate behavior. Since an excess of this stress tends to induce defensiveness and rigidity, the trainer plays a major role here in reducing psychological stress and in providing the basis for an acceptable overall approach to learning.

Several elements of the trainer's role are significant in fulfilling this component of the learning process: First, norms for open and honest expression of feelings are encouraged to provide participants with a constructive outlet for emotional expression. By espousing and practicing an open and non-threatening expression of feeling, the trainer provides a model which participants can follow. Second, norms for

experimentation and exploration are proposed which encourage participants to experiment with new forms of action and assess their impact. Third, the trainer also encourages and models an objective analysis of behavioral data generated within the group. Participants are introduced to interpersonal and group theory and thus given a conceptual basis on which behavior can be discussed and examined. Finally, the trainer demonstrates trust and support for group activities. Even in the face of open challenges to his or her leadership, the trainer attempts to show respect for the group's interactional processes and a willingness to allow the group to follow its own path of exploration.

These actions serve to provide an overall approach to the learning situation and an alternative cognitive map with which individual members can engage in processes of exploration. Given a conceptual framework for understanding interpersonal phenomena and a set of norms to guide learning activities, the threat and anxiety of disconfirmation is reduced and participants are thus prepared to engage in laboratory learning. Acceptance of this overall approach is usually preceded however by a considerable amount of testing by individual members in order to establish the validity and import of the trainer's suggestions. Much of the counterdependence and boundary testing evident in this stage of development takes place with respect to these trainer inputs and allows participants to fully explore the extent and the

implications of the approach that has been suggested. This facilitates an elaboration of the 'antithesis' to the initial dependency response and helps move the learning process forward.

In short, activities within the second phase of group development serve to provide an elaboration of responses at an opposite extreme to the group's initial preconceptions and opens the way for further exploration. This stage thus fulfills a first component of the 'elaboration of opposites' process as a major element of the learning process.

PHASE 3. Negotiating an Indigenous Normative System

In the previous stage, major components of learning have taken place in terms of the elaboration of alternative and 'antithetical' responses concerning the nature of individual involvement in the learning process, with the resultant adoption of new attitudes toward learning. The present stage entails a similar process, occuring now in relation to actual behavior within the group. Patterns of relationship and interaction which were apparent in earlier phases as an expression of participants' initial systems of interpersonal behavior now become the 'thesis' for which new alternatives are sought.

Early in this phase, participants engage in behaviors which attempt to explore polar opposites to the initial dependency response and to test the limits of acceptable alternatives for group interaction. Conflicts between dependent and counterdependent, and overpersonal and counterpersonal

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individuals are often apparent here as a result of this testing process. Motivated in part by the presence of this conflict, and in part by new attitudes toward learning however, the group now begins to define criteria for responsible behavior within the learning context. As this phase of development progresses, the group goes through a process of testing alternatives to initial behavior, which eventually gives rise to the working out of an acceptable synthesis. New behavioral patterns begin to emerge which suggest a more functional alternative than either the original dependency thesis or its counterdependent antithesis, and these provide a basis on which the group can work together in an effective and productive manner.

The third stage of group development thus constitutes a major 'elaboration of opposites' process from which new and more satisfactory approaches to group interaction begin to emerge. Taking place largely with respect to issues which help to define appropriate relationships between the individual and the group, (ie. issues of authority, intimacy, commitment, etc.), this process provides a major component of learning concerning the nature of collaborative work and learning. As a result, the group as a whole develops an internal structure that is appropriate for its own goals, and individuals begin to explore new forms of behavior in relation to the group.

The major elements of learning in this phase are facilitated almost entirely by interactional dynamics within the

group itself. The natural development of an indigenous structure of norms and relationships within the group provides both the content and process dimensions of learning; members learn _about_ group functioning by _experiencing_ _and_ _participating_ in the development of functional patterns of interaction and relationship. This learning is facilitated to some extent by the trainer, who acts mainly to provide emotional support to members and to raise various interactional dynamics to group awareness by intervening with relevant theory and feedback. For the most part however, trainers will entrust the learning process to the group itself, intervening only when necessary to maintain the beneficial direction of the process.

PHASE 4. Production

As the group enters the fourth stage, appropriate individual attitudes toward learning and functional relationships have emerged, and the group is now able to begin functioning as an effective social unit. Arising from earlier developments in the learning process, a synthesis has occured with regard to indvidual and group functioning within the laboratory context, and, for most participants, new cognitive maps have begun to take form. In the present stage these new elements of understanding and behavior provide the basis for group activity and become the subject of further elaboration and integration. Members now begin to work on group tasks as a way of putting these new behaviors into practice and assessing their

impact. Often, this period of group activity is one in which new attitudes are experienced, new behavioral skills are practiced, and greater awareness developed. In short, the subtleties and nuances of the newly emerging synthesis are explored.

Again, learning processes in this stage are facilitated largely by the interactional dynamics occuring within the group itself. With norms of open and honest communication among members and an atmosphere of open exploration in place, participants are free to experiment with new behavior and to provide feedback to other members concerning the impact of their actions. Individuals have access to a great deal of new information about social and interpersonal behavior and about the impact of various modes of action, which allows participants to evaluate new patterns of behavior and provides a basis on which new cognitive maps can be more fully developed and integrated within the person as a whole.

The role of the trainer in this part of the learning process is again to ensure that group activities follow a course that is functional in terms of the elaboration and exploration of new cognitive maps. The attribution of meaning to various group events, the provision of support and encouragement for members, and the facilitation of open interaction among participants are examples of interventions that are useful in this stage. As before however, the major part of the learning process is entrusted to the group's own interactional process.

The fourth phase of group development thus entails a process of elaborating and experimenting with new forms of behavior based on the synthesis derived earlier. This exploration takes place mainly in terms of individual patterns of behavior and response within the group context. The major elements of learning here pertain mostly to the embellishment of new cognitive maps for guiding behavior within the immediate group situation and to the integration of new information into the existing cognitive systems of the individual.

PHASE 5. Separation

In the final phase of group development most of the time and activity is spent in the completion and evaluation of the event. While group activity quickly winds down in this last stage, certain very important aspects of the learning process continue to take place. In the previous phase, participants have effectively completed a sequence of learning which enabled them to adopt new cognitive maps and new patterns of behavior within the context of the laboratory group. Although much has been done to facilitate a refreezing of this material within individual cognitive structures, this integration remains largely within the 'cultural island' framework of the laboratory. In the final phase of learning then, steps are taken to facilitate the transfer of this learning to outside contexts.

The abundance of positive, confirming feedback among group members and between members and the trainer serves here to

enhance refreezing. Discussion of back-home problems and the potential for transfer of learning also serves to prepare participants for the application of new learning within other settings. In cases where participants have initially identified specific problems or situations as a focus for laboratory activity, these will be reviewed here and the implications of new learning explored. Often, some form of follow-up is formally established, or at least informally encouraged.

Elements of this final stage of learning take place primarily within cliques and dyads which emerge as the group structure breaks down, or in interaction between group members and the trainer. The supportive and intimate exchange within cliques is a major source of confirmation for individual learning, and the interpretations and feedback provided by the trainer supply a strong affirmation of the changes that have taken place.

The major component of learning taking place here is a final integration and confirmation of earlier learning. Interactional dynamics within the group in this stage are functional in providing confirmatory feedback, as are the evaluations and interpretations given by the trainer. While these activities serve to conclude the laboratory learning process, a major goal here is to leave participants with a continuing ability to take charge of their own learning and to facilitate a continuing process of development beyond the scope

of the laboratory. In this way, the laboratory experience is not limited to the learning of specific behavioral skills within the framework of the particular event, but provides the participant with a basis for long-term learning and an ability to understand the nature and dynamics of change in human behavior in a variety of settings. Thus the overall laboratory goals of facilitating the continued development of individuals and the enhancement of collaborative social action are met.[1]

In summary, we have seen how developmental processes within the laboratory group closely parallel various stages of Harrison's model of laboratory learning. In each developmental phase, elements of group interaction become salient to facilitate particular components of the learning process. These elements and their relationships to the learning process are summarized in Figure 5-1 below. The activities and developmental processes arising naturally within the group setting are a major force in the creation of new learning; the design of the laboratory program and the behavior of the trainer are significant here mainly as a means of initiating and facilitating this natural process of learning and of ensuring that it does not become blocked or arrested at critical points.

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[1]The use of the term "refreezing" to describe the process of integration occuring in this final stage may be somewhat misleading. The aim here is not to replace old conceptual systems with new ones that are equally rigid, but to incorporate greater flexibility and to enhance skills for self-initiated and self-directed change. "Jelling" has been suggested as a more appropriate term for this process.

Figure 5-1: Components of the Laboratory Learning Process and Major Facilitating Factors in Relation to Group Developmental Phases

Phase of Development	Salient Components of the Learning Process	Major Facilitating Factors	
		Group Factors	Laboratory Format/ Trainer Behaviours
1. The Encounter	-Induction of cognitive dissonance -Unfreezing of conceptual systems -Attempts to affirm "dependency" thesis	-Initial preconceptions and assumptions of members -Naive activism -Questioning of group tasks by high status members	-Abstinence from traditional leadership role -Cultural island -Questioning of naive activism
2. Testing Boundaries and Modeling Roles	-Initial "elaboration of opposites" (re: learning process) -Provision of alternative conceptual maps -Exploration of counterdependent antithesis	-Boundary testing and role modeling -Counterdependence -Conflict between sub-groups	-Provision of norms for learning -Provision of conceptual maps -Reduction of psychological threat
3. Negotiating an Indigenous Normative System	-Elaboration of opposites (re: group interaction) -Emergence of new concepts and behaviours within laboratory context	-Establishment of group norms -Emergence of functional group roles and structures -Resolution of conflict -Emergence of member communication skills	-Emotional support -Use of theory and feedback to raise dynamics to awareness
4. Production	-Elaboration and experimentation with synthesis -Integration of new concepts and behaviours within laboratory context	-Completion of tasks -Creative exploration with new behaviour -Feedback among members -Integrated group structure	-As above
5. Separation	-Refreezing -Transfer of learning to other contexts	-Positive confirming feedback -Discussion of back-home problems -Supportive cliques and dyads	-Feedback, evaluation and support -Meaning attribution

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The Role of Specific Factors

The above discussion outlines some general relationships between group functioning and the process of learning that takes place in laboratory education. While this fulfills a significant part of the modeling undertaken here, it will be useful to extend our analysis somewhat further by examining the role that certain major factors play within this context. In this section we will examine in some detail the operations of selected factors that play a significant role in the learning process over the life of the group. While these factors have been discussed in previous sections (see Figures 4-2, 4-3 and 5-1), the present discussion goes beyond the operations of these factors at specific developmental phases and explores the broader implications in terms of laboratory design and methodology.

1. Laboratory and Group Structure - The impact of structure is significant within the laboratory learning process in two distinct ways: first, in terms of the structure of the learning situation that is imposed by the laboratory design and format, and second, in terms of the emergent social structure within the group itself. Although these are interdependent, we will consider them separately for present purposes.

In order to fulfill various components of the learning
process, certain characteristics of <u>imposed</u> <u>structure</u> are
specifically built into the laboratory format. As a 'cultural
island' or 'temporary system', the laboratory format sets up a
situation in which many of the structural components of everyday
experience are removed in order to unfreeze participants'
expectations and allow experimentation outside of typical social
patterns. In this sense we might view the laboratory as a
situation that is <u>lacking</u>, at least initially, in imposed
structure.[2] The lack of structure here presents, in effect, a
blank screen onto which the assumptions and preconceptions of
group members are projected, bringing these underlying
conceptual maps to group awareness and allowing them to be
explicitly tested.

As these become subject to disconfirmation however, and
participants begin to experience stress and anxiety, the
learning process begins to call for different strategies in
terms of imposed structure. For example, the provision of a
minimal structure at this point is useful to prevent stress from
becoming excessive, enabling the group to pass a difficult
transition point and to continue with the learning process. This
might be accomplished by providing conceptual input or by

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[2] As noted previously, the removal of structure does not include
the basic physical needs of participants such as eating,
accomodation, etc., but concerns mainly the <u>interactional</u> <u>and</u>
<u>relational</u> elements of the laboratory context.

suggesting various ways of exploring participants' expectations and assumptions, as a way of initiating group activity.

As the group begins to engage in various learning activities, the need for imposed structure is again reduced. Here, as we have seen, the group begins to develop its own indigenous structure, and the working out of this process forms a major component of the learning experience. Very little structuring is required here, except where the group becomes blocked or where anxiety or conflict is high; in these cases, the provision of minimal structure by the trainer is usually sufficient to move the group forward. In later stages then, the lack of imposed structure allows the group to develop its own patterns of interaction and to learn from its own structuring process.

The emergent structure arising on the basis of group development also contributes toward the learning process. Arising in response to changing member needs during the life of the group, indigenous patterns of relationship and communication provide both an avenue for the satisfaction of these needs and a vehicle by which to experience various components of social behavior. As group structure grows from initial dyads and cliques to sub-groups and finally to a unified network on the basis of shifting needs for inclusion, control and integration, participants come to understand the interpersonal dynamics underlying group functioning and begin to recognize the impact

that these factors have on their own behavior. Each change and transition in the development of an indigenous group structure thus provides an opportunity and a vehicle for learning.

2. Group Tasks and Activities - The tasks and activities which occupy group attention at various points in the laboratory are significant in the learning process from the standpoint of the content which they supply, as well as from a process perspective. While the particular activities undertaken in laboratory programs will vary as a result of the overall goals of a particular event, the trainer's particular expertise and assessment of group learning needs, and the interests and preferences of the group, these activities serve to fulfill certain general components of the learning process.

As we have seen for example, the initial movement of the group into premature task activities serves a major function in raising group awareness of the inadequacy of certain preconceptions about interpersonal and group interaction. Recognition that these tasks do not fulfill the needs of most members is instrumental in the disconfirming and unfreezing process, and helps to initiate learning.

Later task developments initiated by the group also facilitate learning. The breakdown and disconfirmation of initial tasks which leaves the group in a state of anomie and heightened anxiety, is a major factor in the adoption of new

approaches to learning. The resultant development of norms for the open expression of emotion, and the recognition of various socio-emotional concerns as legitimate components of group activity facilitates the emergence of maintenance-oriented behavior within the group, and provides a major step forward for both individual and group development. Also, as new structures and patterns of interaction develop, group tasks begin to emerge which more adequately fulfill the needs and interests of most members. As the laboratory progresses, group activities continue to become more integrative and capable of fulfilling the needs of individual members, and thus of securing their active involvement.

The emergence and development of tasks and activities within the group itself thus comprises a major element of learning, in terms of both the specific information being dealt with, and the experiencing of new ways of working and interacting in groups. In addition, tasks and activities initiated by the trainer also contribute toward the learning process.

Two forms of trainer influence are particularly significant here: First, the trainer continually introduces and models a simultaneous attention to both the content and process levels of group activity. That is, participants are encouraged not only to actively involve themselves in group tasks, but also to monitor their own behavior and that of other members as these tasks are

pursued. Continual emphasis on this combination of doing and observing helps participants become more fully aware of interactional processes and to learn from their own experiences.

Second, the trainer may occasionally introduce structured, temporary tasks or exercises as a means of facilitating group development or providing specific kinds of conceptual and experiential input. Depending on the personal style of the trainer and on the particular goals of the laboratory, these exercises may be used only as a means of moving the group through difficult transition points, or as a major component of training.

On the whole then, group tasks and activities, whether they are initiated by the group itself or by the trainer, play a significant role in facilitating the learning process. They provide not only the <u>content</u> of learning, in the form of conceptual and experiential input, but also the major means, or <u>process</u>, of laboratory training and education.

<u>3. Dominant Group Members</u> - Members who emerge as dominant in various stages of group develoment also play an important role in facilitating the learning process. On the whole, four major learning functions are fulfilled through the agency of these individuals: (1) the provision of a focal point around which various group concerns are addressed, (2) the modeling of new behaviors, (3) the initiation and provision of input for group

tasks, and (4) the provision of feedback for other members.

The role of dominant members as a _focal point for group concerns_ is particularly salient in the early stages of the laboratory. Members with previous human relations and organizational experience are often attributed high degrees of status in the laboratory, and become a central point around which a great deal of early activity takes place: In the absence of an active trainer these members often become a secondary figure of authority in relation to the dependency response; less assertive members identify with these individuals as a way of finding security and fulfillment of inclusion needs; and initial goal setting is often influenced by these people.

In later stages other assertive individuals emerge as focal points for the working through of various salient group issues. The development of conflicts between highly dependent and counterdependent individuals for example reflects general concerns within the group as a whole with issues of appropriate authority and intimacy. By representing and dealing with these concerns, these members provide a forum in which the general concerns of other members can be worked out, and in which major developmental issues can be resolved.

Dominant members also function in the _modeling of new behaviors and roles_. In the second and third stages, where many group members remain uncertain about appropriate behavior, the presence of dominant individuals who actively take on new

behaviors is useful in providing a model for new forms of action. An example of this function occurs as the group begins to set up its own indigenous structure: many of the leadership behaviors previously held by the trainer are often taken on here by dominant members, demonstrating to other members various alternatives for appropriate behavior. This not only helps to move the group forward in its development, but also provides behavioral information from which other members can learn.

The impact of dominant members continues with respect to initiating tasks and supplying relevant information and input. Although group tasks and activities change significantly over time as the contributions and needs of other members are accomodated, initially these tasks are introduced and advanced through the input of a few. By proposing activities and taking on a responsibility for getting things started, these members fulfill an important function not only in facilitating group development, but again in supplying behavioral and experiential data for group learning.

Finally, dominant members also serve as a focal point for the initiation and exchange of feedback among participants. The visibility of high status members makes them a natural focal point for the expression of reactions and the airing of complaints and criticisms. Through these early exchanges members begin to gain skills in the giving and receiving of feedback, and to recognize these interactions as acceptable and useful

within the group. The status of these members also creates a
situation where the feedback they engender becomes highly
significant for other members; exchanges of feedback involving
these members functions as an important source of learning for
other members. By initiating and providing a focal point for
feedback then, dominant members again help to facilitate
learning.

As a consequence of the status given to dominant members, a
number of important components of the learning process are
facilitated. While the particular individuals who emerge as
dominant in various stages may vary, the simple presence of some
members to serve as a focal point contributes significantly to
the effectiveness of the laboratory.

4. Emotional Climate - The emotional climate or atmosphere
within the laboratory group at various stages also contributes
to the learning process. The presence of heightened emotional
responses early in the laboratory serves as a major force
activating and motivating participants to get involved in the
process. In addition to providing energy for the group, the
elevation of affective responses also helps to initiate the
expression of feelings and to legitimate this as an appropriate
part of laboratory activity. Participants begin to recognize
that the airing of emotional reactions can be useful for the
development of the group, and this contributes to the later

emergence of group maintenance behaviors and open feedback among
group members.

During the second and third stages of group development, an
emotional climate of <u>conflict</u> is often present as a result of
boundary testing and the initial development of new group
structures. The tension arising here motivates the group to deal
with issues of authority and intimacy and eventually spurs a
resolution of conflict through the establishment of effective
group norms and structures. In working out a resolution of these
issues, group members experience and learn new behavioral
strategies for dealing with the affective components of group
functioning, and at the same time fulfill a number of group
maintenance requirements which help to facilitate further
development.

In the latter stages of the laboratory the emotional
climate shifts from agitation and conflict to one of intimacy
and caring. Within an integrated and effective group structure,
members experience feelings of closeness with others, as well as
feelings of success in terms of the task. Expressions of support
and warmth typically emerge here, which facilitate behavioral
experimentation and risk-taking and provide a basis for open and
meaningful feedback. This both encourages new learning and helps
to provide confirmation and support for refreezing.

As a major energizing factor and as a stimulus for
addressing the affective dimensions of learning then, the

emotional climate of the laboratory group is a significant facilitating factor.

5. Trainer Behavior - Although trainer behavior has a significant impact on group learning throughout the laboratory, the nature of this influence shifts radically from stage to stage in response to changes in the learning needs of the group. The trainer's initial inactivity and abdication from an expected leadership role is functional in the first stage as a way of disconfirming expectations and facilitating the unfreezing process. Later in this stage, the provision of alternative conceptual maps in the form of information about social behavior, new norms, and new behavioral approaches within the laboratory context helps to reduce the anxiety of disconfirmation, to satisfy inclusion needs, and to enable participants to engage in the learning process.

In the second stage, with the group needing to deal with issues of influence and control but not yet able to address these within the group itself, the trainer acts as a focal point through which the group can initially come to grips with these issues. The working through of authority issues with the trainer allows the group to test alternative forms of action and to assess the limits of appropriate behavior, thus moving the group toward the emergence of its own internal structure.

As this structure develops in the third and fourth stages, the trainer becomes less active in helping to move the group forward in favor of other roles which serve to facilitate individual and group learning. Here the trainer acts primarily as an observer, providing feedback to the group in order to raise awareness of various social forces and processes and to place these within a meaningful framework. Occasionally the trainer will intervene in group activity during these stages, primarily as a means of helping the group to move beyond difficult transition points.

In the final stages of the laboratory the trainer is primarily active in providing emotional support and feedback to the group. In response to individual needs for confirmation and as a means of refreezing learning, these behaviors play a significant role in facilitating the integration of new information and behavior and in enabling the transfer of learning.

Thus as the group progresses through various stages of devlopment, and as different components of the learning process become salient, the behavior of the trainer shifts accordingly. By responding to and fulfilling the learning needs of the group at particular points, the trainer plays a significant role in moving the learning process forward and allowing participants to maximize the potential benefits of the laboratory experience. In this way, trainer behavior is perhaps the most important factor

influencing the effectiveness of laboratory education.

While the specific roles and behaviors of the trainer vary from stage to stage, we can identify five _major functions_ that these fulfill with respect to the learning process. First, trainers act as a _focal point for individual and group responses_, alowing these to be publicly expressed and made available for conscious examination. This function is particularly salient in the initial stages of the laboratory, where the projection of participant assumptions onto the trainer and their subsequent disconfirmation helps to initiate the learning process; and later where the expression of counterdependency toward the trainer facilitates the exploration of alternative, antithetical responses.

A second function, one that is more widely spread throughout the laboratory, is the _provision of cognitive maps_. The proposal of new approaches and norms for learning in the early part of the laboratory, and the attribution of meaning to later group activities are examples of this funcion.

Third, trainers act to _facilitate group development_ at critical points. By helping the group to move beyond points of blockage, the trainer helps to keep the learning process flowing and thus to maximize learning for individual participants.

Fourth, the _provision of emotional support_ also serves to facilitate learning. This function is important in enabling the group to deal effectively with issues concerning the development

of an indigenous structure, in encouraging risk-taking in the exploration of new behavior, and in allowing group members to use feedback constructively for examining and integrating new behavior.

Finally, the trainer also serves to establish and maintain a functional level of tension within the group. Tension is often a natural consequence of laboratory activities and a major factor in moving the group forward. Too little tension is often a sign that salient issues are not being confronted and dealt with; too much tension may be indicative of dysfunctional behavior or a blockage in group development. The maintenance of an appropriate level of stress serves a major function in facilitating and managing the learning process.

The performance of these functions varies not only over time during the laboratory, but also as a function of each trainer's particular style and approach. A major determinant of trainer effectiveness lies in an ability to recognize when these various roles are required and to formulate interventions which will adequately fulfill the required function.

6. Group Composition - The factor of group composition has an important impact on learning, both as a direct influence on particular components of the learning process, and through the modification of interactional factors which indirectly affect learning. The principal direct influence occurs early in the

laboratory where group composition affects the initial disconfirmation of participants' assumptions and preconceptions. Most laboratory groups are intentionally composed of individuals who are relative strangers to one another as a way of facilitating unfreezing. This process is heightened in heterogeneous groups where shared background experiences are even further limited and uncertainty is accordingly more pronounced. Heterogeneous groups thus tend to experience disconformation and anxiety earlier and to a greater degree than homogeneous groups, and often tend to unfreeze more readily at deeper levels.

Other effects of group composition arise more indirectly through their impact on group interaction. Because of their more widely shared expectations for example, homogeneous groups tend to establish norms and structures sooner and with fewer instances of conflict and competition. As a result, these groups often become more unified in their resistance to change, in their challenge to the trainer, and in their focus on external problems. The impact of these effects on learning is a general reduction in the amount of emotional expression due to conflicting frames of reference, less emphasis on here-and-now interpersonal dynamics, and a stronger task focus. Because of these factors, homogeneous groups are often less suitable for learning on a personal or interpersonal level, and fare much better in terms of organizational-level problems and concerns.

Heterogenous groups, by contrast, tend to exhibit interactional characteristics of virtually an opposite kind, and are thus more suited for laboratories focusing on the development of personal and interpersonal skills and for the teaching of group dynamics.

By affecting the interactional dynamics of the group then, group composition tends to influence the nature of the learning process in several ways. These effects work to modify and to some extent limit the kinds of learning that are easily obtainable in particular groups. The effects of group composition are therefore significant, and are a major factor in laboratory effectiveness.

Summary and Implications

In this chapter we have focused on the second major step in the construction of our intervention model for laboratory education. We began by examining Harrison's dialectical model of cognitive development in social learning in light of the five-phase developmental model of group dynamics outlined in the previous chapter. This suggested a number of relationships between the theory which group practitioners use and the change process they attempt to enact. These relationships were initially identified by examining the components of learning that take place in each developmental phase, and were then elaborated by outlining how various group factors operate within the laboratory context to affect the learning process. To

summarize these relationships we will now outline a number of
characteristics suggested by this discussion concerning the
general nature of the laboratory learning process as a function
of group interaction.

In outlining these characteristics we consider two major
areas: first, those which address the general nature of the
learning process in relation to group functioning, and second,
those which suggest some limitations to the range of
applicability of this form of learning.

A. The General Nature of Laboratory Learning

1. Laboratory education requires the establishment of a
'temporary social system' to make innovation and change more
easily accessible.

Laboratory education takes place within a 'cultural island'
specifically designed to facilitate processes of learning and
change. This is accomplished through the use of particular
arrangements of social structure in which the roles and actions
of members are not previously defined. The creation of this
temporary system outside of typical social expectations and
patterns provides an environment in which innovation and change
become easier to achieve.

2. Laboratory learning focuses on the group's own
interactional process and on the nature of individual

behavior within that process.

Unlike many other forms of education, the laboratory approach sets up a situation in which participants become directly involved in and experience first hand the subject they are studying. It is through this involvement and experience that individual participants learn about their own behavior and about the nature of group functioning in general. Within this unique context the trainer is not required to take on a didactic role, but functions rather like a conductor in an improvisational orchestra - providing general guidance and direction, but allowing participants to develop and coordinate their own parts in relation to the rest of the group.

3. The nature of group interaction allows laboratory education to address two different levels or types of learning.

The first type of learning occurs on a content level and pertains to the specific concepts and ideas learned and the particular attitudinal and behavioral changes occurring as a result of participation in laboratory activities. The addition of new information and behavioral responses to participants' conceptual systems occurs primarily at this level.

The second type can be characterized as learning at a process level. In addition to learning new concepts and skills, participants also acquire new cognitive and behavioral

strategies in terms of their own processes of learning and development; in effect, they learn particular approaches to learning. This component of laboratory education is similar to that referred to by Bateson as "deutero-learning" (Bateson, 1972 p.279). Learning on this second level allows participants to become engaged in continued personal development beyond the termination of the particular laboratory event.

4. The interactional dynamics occuring as the group develops its own indigenous structure provide the major content and process of the educational experience.

The particular issues and activities in which the group becomes involved during the laboratory provide the basis for many of the specific contents of learning. While the particular nature of these activities may vary from group to group, such activities generally reflect the concerns of individual members with certain underlying components of behavior that are common to virtually all social interaction. As the group deals with its own variation of these basic interactional themes, participants gain an understanding of these primary issues and begin to develop behavioral competencies in relation to them.

The major process through which this learning is accomplished is the group's own development as it faces and comes to grips with these issues. The experience of working through these concerns as the group grows and matures as a

functioning social unit provides the principal basis on which understanding and competence are developed.

5. The nature of group interaction allows laboratory education to address the cognitive, emotional, and behavioral dimensions of individual functioning and to integrate these within the person.

Laboratory education is designed to involve participants not only in cognitive learning but also in the emotional and behavioral aspects of individual and group functioning. By directly experiencing all three components of learning within the group context, and by having an opportunity to explore and experiment with alternative modes of response, participants gain a more inclusive understanding and competence in social interaction.

Often, one of the principal sources of disconfirmation arising within the laboratory is the experience of discontinuity and dissonance between cognitive, behavioral and emotional elements of individual coceptual systems. Typically, for example, participants will recognize that while they _believe_ one thing, they actually _do_ another; or while they _think_ one thing, they may _feel_ something quite different. Awareness of these discrepancies gives rise to a great deal of new learning and ultimately to a more satisfactory integration of the self.

6. Observation of behavior within the group and the provision of feedback among members are central components in the learning of new behavioral patterns and responses.

Although the laboratory format is designed to elicit new behavior, the adoption of new responses and patterns of social functioning can only take place on the basis of (1) the availability of alternative behaviors, and (2) an assessment of the impact of these. By observing how other members react to various situations and by seeing the impact that these behaviors have, individual participants have a chance to see behavioral alternatives in action and to judge the viability of these for themselves. Once new behaviors are enacted, feedback from other members allows individuals to gauge their effectiveness and to decide whether or not to continue experimenting with those forms of action.

B. Limitations on Laboratory Education

1. The effectiveness of laboratory education depends on the willingness of participants to confront issues of interpersonal and group interaction and to explore behavioral alternatives with respect to these.

One of the essential starting points for laboratory training is the acceptance of particular norms to guide activity in the learning context. Willingness to "pay attention to and value the here-and-now data" generated by the group, "to be more

authentic in relationships" with others, and to engage in
laboratory activities in a "spirit of inquiry" are essential for
effective learning (Schein and Bennis, 1965 p. 273). Only to the
extent that participants' basic value and belief systems allow
these norms to be accepted will members be able to gain from the
laboratory experience. Thus the values and norms adhered to by
particular individuals or cultural groups may tend to negate
laboratory learning.

2. Because the learning of specific concepts and skills is
based on experience, the range of this learning is in many
ways limited to issues and behaviors that arise within the
group.

While various conceptual and theoretical issues may be
brought up by the trainer, actual experiential learning can only
take place when such issues become a focus of group attention
and activity. Material presented on a conceptual level may lead
to cognitive learning, but it is only on the basis of
experiential exploration that this material is dealt with on
behavioral and emotional levels. Although a certain amount of
generalization can be made from various experiential learnings,
the full benefit of laboratory learning is limited to those
issues and concerns actually addressed within the group.

3. Because of heightened emotionality in various components

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of the learning situation, laboratory education may be unsuitable for some individuals.

Persons who are highly 'conflicted' with respect to certain aspects of social behavior, or whose social development has been seriously arrested or distorted by early experience tend to react to only slight disconfirmation with a great deal of defensiveness and resistance. For these 'neurotic' individuals the laboratory experience may be highly stressful and may actually be detrimental to growth and development. The behavior of these individuals may also interfere with the developmental process within the group and thus negate learning for other participants. Although the laboratory on the whole may have a number of therapeutic effects, it is generally limited to "therapy for normals". The use of the laboratory format for intensive psychctherapy requires a number of specialized adaptations and particular skills on the part of the trainer.

These points provide an overall characterization of the laboratory learning process as it relates to the general nature of group functioning. As a summary of the earlier and more detailed discussion of relationships between group theory and laboratory learning, this completes the second stage in the process of constructing an intervention model for laboratory education. We are now ready to proceed with the third and final stage in our model building process.

VI. CHAPTER SIX: Recommendations and Guidelines for Practitioner Action

Introduction

With two major components of our intervention model developed in Chapters Four and Five, we are now ready to undertake the third and final stage of the modeling process. Having set forth a particular organization of group theory and outlined various relationships between this theory and the laboratory learning process, our concluding step will be to make explicit a number of recommendations which stem from these discussions.

In general terms, the main purpose of this portion of the model is to outline specific connections between the largely descriptive account of laboratory group functioning outlined above and a set of guidelines specifying practitioner action; it is here that we move from a descriptive to a prescriptive mode. As the general introduction to this thesis suggests, the move from descriptive to prescriptive modalities requires, first of all, the reintroduction of contextual elements into general theory, and second, reference to a particular value orientation with respect to the subject at hand. These allow us to specify

respectively, "what the current situation is" in a given context of application, and "what we are trying to accomplish" or "what ought to be" within that context. From this basis we can then outline specific steps that will inform us about "how to get there from here". Our earlier discussions largely fulfill the first two elements of this bridge; the present task is to make the prescriptive connections explicit for specific areas of practitioner concern.

As outlined in Chapter One, this final stage is intended to provide a basis on which the laboratory practitioner can devise appropriate action steps for intervening in given group processes. The general introduction suggested that this was to take place on two different levels: (1) a specification of the general strategy which interventions might take, and (2) identification of specific behavioral tactics through which interventions can be effectively implemented. In the present context, these two levels correspond to (1) the design of overall laboratory programs as strategies for implementing the learning process, and (2) the enactment of specific interventions by the trainer to effectively realize this strategy. The concern of this chapter will therefore be to outline various recommendations pertaining to these two areas, based on earlier discussions.

Our aim here is to provide a set of guidelines which practitioners can use to identify appropriate interventions

given a particular group situation. Since the appropriateness of
interventions will depend on the specific situation for which
they are devised, this discussion cannot provide strict
protocols for trainer behavior during the course of a laboratory
program; a "cookbook" approach of this kind would negate many of
the individual and situational factors which make each
laboratory a unique experience. What this discussion does
provide however, is an outline of various considerations that
are important in devising interventions to suit particular
situations. While these guidelines are necessarily general, they
nonetheless provide a basis for identifying specific behavioral
strategies to meet the requirements of the given learning
process in specific laboratory contexts. They are designed to
facilitate the trainer's planning of laboratory interventions,
not to replace that planning with pre-set behavior.

Due to the generality of these guidelines, it will be
useful to include in this chapter additional information about
how they might be put to use as a guide for intervention
planning. Following the discussion of recommendations and
guidelines, therefore, we will outline a possible sequence of
steps for intervention planning given a specific laboratory
situation. This will allow us to illustrate one way in which the
model could be applied, and to demonstrate its utility in the
planning of interventions.

I. Recommendations and Guidelines for Laboratory Design

In this section we will be concerned with recommendations that pertain to the setting up of laboratory programs as a vehicle for implementing the particular learning process characteristic of this context. These are identified in four major areas relevant to laboratory design: (1) the setting of objectives, (2) the selection of participants, (3) structuring the 'temporary system', and (4) the role of the trainer.

A. Recommendations for Setting Laboratory Objectives

The following pertain to the establishment of learning objectives that are appropriate for laboratory programs. These represent considerations that stem from the particular nature of laboratory learning and the value orientations characteristic of the laboratory tradition, and are useful in formulating objectives that are consonant with that orientation.

1. Because of the specific focus of laboratory education, learning objectives should be consonant with the basic laboratory format and obtainable within that context.

Since laboratory education is a specialized form of teaching/training focusing specifically on patterns and processes of collaborative social interaction, appropriate objectives will take into account the particular strengths and weaknesses of this format and should aim only toward relevant and realizable goals. The experience of

inappropriate or unfulfilled objectives may be more detrimental to individual development than no training at all.

In addition, objectives should also be set in recognition of the particular time and location constraints for the given laboratory. A lack of time or facilities to complete tasks may be a major disappointment for participants and may tend to negate learning.

2. Since laboratory effectiveness depends on the active participation of the people involved, the setting of laboratory objectives should be undertaken with the input and consent of participants.

Laboratory training is effective only to the extent that participants can become actively involved in working on issues which they feel are important. The imposition of irrelevant objectives will undoubtedly reduce the value and the extent of learning. Consultation with participants in setting laboratory objectives, in addition to ensuring relevance, will also tend to raise participants' interest and readiness to engage in laboratory activities.

3. Due to the open, participative nature of the laboratory learning process and its strong group orientation, participants should have prior knowledge of the objectives

and general format of the laboratory and should be given the
option of not attending.

Because learning depends to a great extent on participants'
authentic and active involvement in laboratory activities,
attendance at the laboratory should be fully voluntary and with
prior knowledge of learning activities. Once the group begins to
form, group pressures toward conformity may make it difficult
for individuals to opt out if the objectives or methods prove
unsatisfactory. Prior knowledge of objectives and some degree of
self-selection will ensure that participants are not brought
under these pressures.

4. In order for laboratory learning to address participants'
specific learning needs, the setting of objectives should
include consideration of the appropriate content and focus
of learning.

In formulating laboratory objectives it is important to
consider whether the major focus of learning will be on an
individual, interpersonal, or group level, or some combination
of these. While laboratory activities typically occur on all
three levels simultaneously, most programs tend to focus on
particular components of social behavior. In light of the
learning needs suggested by participants, the trainer should
define an appropriate focus of training and some of the major
content features that should be addressed.

5. The reliance of laboratory learning on patterns of group functioning requires that objective setting take into account any compositional constraints that may affect the nature of the laboratory group.

Although trainers often have the ability to select participants for laboratory programs, training is occasionally conducted within previously established groups (eg. work groups). In such cases it is important to recognize the limitations that compositional effects might have with respect to the learning process. Groups that are homogeneous with respect to age, sex, or other variables will have different focuses of interest and different interactional dynamics which, as we have seen, will affect the nature of the learning.

B. Recommendations for the Selection of Participants

Because of the particular nature of the laboratory learning process and of laboratory group interaction, consideration should be given to the selection of participants. The following are relevant in this regard.

1. Because of various compositional effects on group functioning, groups should be composed in accordance with established learning objectives, where selection of participants is possible.

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Given a set of objectives, certain configurations of group composition can be established to complement and facilitate the learning process. The general tendency of heterogenous groups to have higher levels of emotionality and conflict and to be more self-analytic makes them particularly well suited for personal and interpersonal levels of training; homogeneous groups are generally more appropriate for dealing with particular occupational or organizational concerns. Depending on the particular focus and objectives of the laboratory, the trainer might want to vary the balance of participants with respect to age, sex, organizational status, or other variables.

2. Given the specific value orientation of the laboratory approach, the selection of individual participants or groups should strive for a match between the basic values and beliefs of the individual or group and those of the laboratory format.

Laboratory training is conducted within a specific and openly recognized value orientation. Much of the effectiveness of training depends on the extent to which participants can accept the norms and expectations of the laboratory context. For individuals or groups who do not share or are unwilling to explore these values, the laboratory will be largely unsuccessful. A management group for, for example, whose principal interest is in raising production levels in an

organization without any interest in or commitment to improving social relations may be inappropriate for laboratory education. Similarly, certain cultural groups whose background experience places a negative value on open expression of ideas and feelings may also be less suitable for this type of training.

3. To facilitate the "cultural island" nature of laboratory learning, participants who are relative strangers to one another should be selected.

The involvement of participants who are relatively unfamiliar with one another is one of the main components of the initial unfreezing process. Selection of participants who are not likely to share preconceptions and social expectations will facilitate this process.

4. Because of heightened emotionality and cognitive stress in certain parts of the laboratory experience, effort should be made to discourage highly conflicted or neurotic individuals from attending the laboratory.

As we have seen, individuals who are experiencing psychological problems or who may be seeking a form of therapy may react negatively to the laboratory experience. Unless the laboratory is set up specifically as a therapy group and the trainer has the necessary expertise to conduct therapeutic sessions, these persons may disrupt regular laboratory

activities, or more importantly, may be damaged by the
experience.

5. Because of the dependence on interactional activities in
   laboratory education, consideration should be given to the
   number of participants who will be involved in the group.

Since individual learning depends on direct involvement and
interaction with other members, degrees of learning will be
affected to some extent by the size of the group. If groups are
too large (eg. more than twenty people), natural sub-grouping is
likely to restrict patterns of interaction within the group as a
whole, with participants losing the benefit of fully collective
activity. At the same time however, groups that are too small
(eg. less than six members) may not demonstrate a wide variety
of interactional dynamics and may again restrict the quality of
learning. An appropriate size for most laboratories is therefore
between six and twenty participants. When larger groups are
involved, the creation of smaller 'teams' or sub-groups for
major portions of the laboratory is often advisable.

C. Recommendations for Laboratory Format and Structure

An essential prerequisite for laboratory learning is the
setting up of a 'temporary system' or 'cultural island' in which
learning can occur. The following considerations are relevant in
establishing an appropriate structure and format for this
temporary system, and follow from our discussion of

relationships between group functioning and the laboratory learning process.

   1. An essential component of laboratory design should be the creation of a temporary 'cultural island' in which participants can explore social behavior outside the boundaries of typical social systems.

   For participants to experience and gain an understanding of various forces and processes underlying social behavior, a situation is required in which these forces can be raised to awareness and examined. As a cultural island, the laboratory should remove participants from the typical everyday activities and relationships which stabilize social systems, and should create a blank screen onto which participants' assumptions and preconceptions can be projected. Typical notions of authority, status, intimacy, and so on, which underlie most social behavior become apparent within this situation and become the subject of group examination. Without the benefit of prescribed social behaviors and relationships, the group comes to grips with these issues, often through the development of new and creative responses to collective work; participants thus come to recognize and understand the processes on which social interaction is based.

   2. An emphasis on collective work and activity within the

laboratory is required to facilitate the development of group structures that are appropriate for interactive learning.

The focus of laboratory learning requires that participants examine the nature of behavior within an interactive social context. Since a major part of the learning in this situation results from the involvement of participants in the development of appropriate working relationships with others, an emphasis on collective work by the group as a whole is helpful in providing an effective learning environment. By collaborating with other members on common tasks, participants take part in the development of useful group structures and thus become involved in a significant process of social learning. The emphasis on collective work may be facilitated at various points by the provision of group-oriented tasks by the trainer.

3. The duration and intensity of the laboratory must be established in accordance with the nature of the learning to be accomplished.

For particular aspects of individual and group behavior to be affected by laboratory training, relevant conceptual systems must be unfrozen, changed and refrozen. When learning objectives appeal to relatively deep, underlying aspects of behavior, such as basic interpersonal orientations or values, the degree of unfreezing required often necessitates an extended and intensive

laboratory experience. Laboratories of relatively short duration (eg. 1-3 days) are often effective only for a superficial level of skill-attainment; longer durations (eg. 1-2 weeks) tend to unfreeze participants at a deeper level and can thus appeal to more significant changes. To achieve significant changes in a relatively short period, intensive 'marathon' groups are often used as a way of maximizing the intensity and effectiveness of the alloted time.[1]

> 4. The close relationship between the group's learning process and its patterns of development suggest that the need for imposed structure should vary during the laboratory in response to the group's developmental process.

As we have seen, the group's passage through various developmental phases facilitates the emergence of various components of the learning process and serves to move that process forward. In the early part of the laboratory, for example, where processes of conceptual disconfirmation are active, the withdrawal of imposed structure is a major facilitating force. As unfreezing is accomplished and participants begin to seek out alternatives, the provision of structure becomes useful as a way of setting appropriate norms for learning and reducing the anxiety of dissonance. Once the

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[1]At the same time however, marathon groups are often highly stressful, requiring a great deal of skill on the part of the trainer in managing tension levels.

group has adopted new approaches to learning, it is again useful to remove structural constraints so that the group can proceed with the development of its own internal structure. Finally, in the latter portions of the laboratory, the provision of structure is again useful to facilitate the confirmation of learning. As the group develops then, the structural requirements of the learning environment change.

5. To fulfill the goal of meeting participants' specific learning needs, patterns of structure within the basic laboratory format should be varied according to the particular objectives of the program.

Although the general pattern of structuring outlined above is appropriate for most programs, it may be useful to vary this format in order to fulfill certain learning objectives. If, for example, the principal focus of the laboratory is to develop a particular set of skills in participants, more structure may be required in the middle sections of the program. The provision of specific skill-building exercises to complement the group's development may be a more functional approach here. Particular sets of objectives will thus play a role in determining the type and amount of structure required at various stages, although the basic pattern is likely to remain largely in effect.

Structural variations also provide a means of managing levels of group tension and anxiety. Generally, the reduction of

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structure, for example through the withdrawal of trainer direction, gives rise to increased tension and allows the group to directly experience a number of salient dynamics. Again, these structural variations should be made relevant to the particular goals and areas to be explored.

D. Recommendations Concerning the Role of the Trainer

As we have seen, several important elements of the overall laboratory learning process are facilitated through the role of the trainer. Based on our discussions of laboratory learning processes and overall laboratory values and objectives, implications concerning the performance of that role and its potential impact on learning can now be outlined.

1. To implement the laboratory format as outlined above, the role of the trainer should involve the fulfillment of five major functions:

1. to provide a focal point for group and individual responses
2. to provide cognitive maps
3. to facilitate group development
4. to provide emotional support
5. to maintain a functional level of tension

Although the particular manner in which these functions are fulfilled may vary from trainer to trainer or from situation to situation, much of the trainer's effectiveness stems from the performance of these functions in some way or other. As we have seen, each of these elements of the trainer's role is significant in particular portions of the learning process. On

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the whole, these functions serve to initiate and orchestrate the learning process rather then actually controlling it. In this sense the trainer fulfills the role of a facilitator rather than a provider of knowledge.[2]

2. In consonance with general laboratory values and objectives, the particular way in which each trainer fulfills the five major functions should depend in part on the trainer's individual behavioral style and his or her areas of expertise.

In keeping with laboratory norms for authenticity and openness in interaction, and as a model of those norms, each trainer must develop ways of fulfilling the major functions that are in consonance with his or her own style of social functioning. For many participants the trainer is perceived as a highly significant group member and often provides a model for various group behaviors. A lack of authenticity on the part of the trainer will be perceived as negating laboratory norms and will reduce the trainer's effectiveness.

3. Because trainer style may affect learning for individual

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[2]The effectiveness of these functions depends to some extent on a legitimation of the laboratory process and the trainer's role by the group. It has been suggested that the trainer's position as a high status (ie. highly educated, professional, etc.) "cultural representative" helps to sanction the particular learning process and to provide this legitimation.

participants, it is often useful to use two individuals as co-trainers.

In fulfilling the trainer's role within the context of particular individual styles, each trainer will tend to be more active, and more effective, in the performance of particular functions. Some trainers are better supporters; others tend to take a more cognitive approach. Since the learning styles of individual participants will also vary, some trainers are likely to be viewed as more effective than others by individual members. The degree of fit between participant and trainer styles may thus have a significant effect on learning. The use of two individuals with different training styles as co-trainers is often useful in reaching a wider range of participants.

4. To facilitate the fulfillment of specific participant learning needs, the particular pattern or configuration of functions performed by the trainer should vary according to the particular objectives of the laboratory.

Although all five principal functions are likely to be performed in any laboratory program, the particular objectives of individual events may call for an emphasis on particular functions. In groups which focus specifically on the understanding of group processes, for example, the trainer might be less active in facilitating group development than he or she might be in an individually-focused skill building group. By

de-emphasizing this function the 'process' group would experience more directly the play of forces underlying group development and would learn more about that particular aspect of social behavior; for the skill development group, this approach would draw attention away from the specific objectives and could impair skill attainment. Variations in trainer functioning are therefore useful for specialized types of laboratory education.

Summary

In terms of the recommendations for laboratory design, we have reviewed a number of points which can serve as guidelines for setting up laboratory programs as a way of enacting the given learning process. These recommendations provide a useful set of guidelines upon which the establishment of laboratory programs can be carried out in light of specific conditions and contingencies. In this way, the model of intervention provides an appropriate basis for practitioner action with respect to the planning of an overall strategy for particular laboratory events, and thus fulfills a major objective of our modeling process.

II. Recommendations for Intervention Planning

This section deals with considerations concerning the formulation of specific trainer interventions. As a way of implementing general training strategies designed on the basis of the above considerations, particular actions are required on

the part of the trainer. These actions or interventions serve to guide and facilitate group processes so that learning can be maximized. In effect, trainer interventions are the key to laboratory effectiveness.

The following discussion examines recommendations in two major areas. The first provides an overview of some general characteristics of intervention and some major considerations affecting their overall role in the learning process. The second outlines a number of group factors which are useful as clues to the nature of appropriate interventions; these provide information that is useful in the diagnosis of group training needs and the formulation of specific trainer actions on the basis of our previous discussions.

A. General Characteristics of Intervention

The following considerations concern the overall role of trainer interventions and some principal characteristics relevant to their enactment.

1. Because of the trainer's involvement in ongoing group activities as a leader or guide, the most useful means of fulfilling trainer functions is through interventions into the group's interactional process.

As we suggested above, the principal tool that trainers use to affect the learning process is to interject specific kinds of input into the group's interactional process. To

put a particular laboratory design into effect and to facilitate the more or less natural process of learning, interventions are required in the five major areas outlined earlier. Fulfillment of these functions does not implement the learning process per se, but guides and focuses that process in particular ways. Most trainer input will occur as a means of performing these basic functions.

2. As a way of meeting specific learning objectives, interventions can focus on any or all of the individual, interpersonal, or group levels of behavior.

At any particular time during the laboratory, important dynamics take place on all three of these levels; each plays into and affects behavior at the other levels. For various components of learning however it is often useful to focus on particular levels in order to raise group awareness of specific social forces and processes. The selection of appropriate levels of intervention depends in part on the learning objectives of the laboratory, and on the particular circumstance. The principal consideration in this selection however is the identification of the most effective 'leverage point' for fulfilling the desired function.

3. The laboratory's reliance on direct experience as a basis for learning requires that specific interventions address

the immediate and salient learning needs of the group and should help fulfill those needs.

At each point in the laboratory, individual members and the group as a whole have particular learning needs as a result of the experiences occuring at various times. Some of these needs arise as a function of normal group interaction and development, others arise from the particular objectives of the group within the context of the learning process. As group development proceeds, and as various elements of the learning process emerge and are fulfilled, these needs change; the pattern of salient needs will vary at different points in the laboratory. An important consideration in intervention planning is the recognition of dominant needs and the selection of appropriate means of fulfilling these so that immediate experiences can be utilized for learning.

4. The laboratory's reliance on experiential learning also requires that the timing of interventions at points of transition and blockage within the learning process should allow participants to experience and make initial attempts to solve the problem but not be delayed so long that resignation and 'flight' occur.

Points of blockage and transition within the group present major difficulties for members, but also hold a great potential for learning. By intervening too early in these situations, the

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trainer does not allow participants enough time to experience the problem or to attempt solutions. Leaving the problem go on too long will create unnecessary frustration which may give rise to problem-aviodance and set a pattern for further difficulties. Appropriately timed interventions will allow the potential learning to be realized.

5. Where the trainer is unsure about the appropriateness of particular interventions or when the group's problems are not critical, the withholding of interventions may be the most functional approach.

Assuming the trainer has an appropriate level of training and experience, the need for particular interventions will be readily apparent on the basis of the group's interactional dynamics. Unless the need for intervention is obvious, either because of developmental blockage or the need to facilitate particular components of the learning process, a policy of non-intervention is often the best route to take. As long as problems do not become intractable, the group's experience of working through various issues on its own will generally enhance learning. Because of the trainer's central position, a lack of assuredness while making interventions is easily perceived by the group and may seriously undermine intervention effectiveness.

B. Group Factors for Diagnosis and Intervention Planning

Stemming directly from our earlier discussions concerning the relationship between laboratory learning and group functioning, the following are important considerations for diagnosing the learning needs of the group and for selecting appropriate interventions in specific situations.

1. In general, observation and analysis of the group's developmental process provides useful information for selecting an appropriate focus for intervention.

As we have seen, the progression of the group through various developmental phases closely parallels and facilitates various elements of the learning process. An understanding of the developmental sequence in relation to learning provides several clues regarding the salient learning needs of the group at particular points and helps in the formulation of appropriate interventions. In the initial stages for example, individual needs for 'inclusion' are often dominant; interventions which focus on individual needs and which help bring members into the group may be particularly useful here. In later stages, where needs for control and influence emerge, interventions focusing on the interpersonal level may be more appropriate. As the group develops its own structure in later stages, needs for integration become salient, and useful interventions may appeal more to group-level behavior. Thus the developmental process provides major clues for the formulation of interventions.

2. The emotional level or climate within the group at
particular points provides clues concerning the underlying
behavioral issues and dynamics occupying the group's
attention.

Both the type and the level of emotionality vary from time
to time in the group as a reflection of different issues and
concerns underlying group activity. Initially, for example,
levels of anxiety and frustration are often quite high as the
group faces dissonance and attempts to fulfill needs for
inclusion without the benefit of expected structures. Later a
climate of conflict often emerges as issues of control and
influence become salient. The type of emotionality present thus
helps to identify the principal interactional issues or themes
underlying group activity and provides clues to the required
content and function of interventions.

As well, the level of emotionality will also help to
identify whether or not interventions are actually necessary and
what form they should take. Too little emotion may be indicative
of the fact that the group is avoiding important issues and may
require interventions to clarify and deal with such blockages.
Too much emotion may suggest dysfunctional patterns of
interaction within the group or an inability to find appropriate
alternative behaviors. The reduction of tension, the provision
of support for members, or the modeling of new behaviors might
be appropriate interventions here. Moderate levels of

emotionality are often functional for the group and may not require intervention at all.

   3. The nature of group tasks and activities provides a major indicator of the dominant conceptual and behavioral issues faced by the group.

   The content aspects of group functioning are often a useful indicator of the issues and problems being dealt with. Many of the forces underlying individual and group behavior are reflected in the actual activities of the group. Conflict between dominant dependent and counterdependent individuals for example often reflects an underlying concern with issues of influence and control within the context of norm and boundary setting; challenges to the trainer often indicate an overall counterdependence within the group in response to initial disconfirmation. Once the dominant content themes of group interaction have been identified, decisions can be made regarding appropriate interventions.

   4. The group's response to and treatment of dominant members also helps to identify salient interactional issues.

   As central figures in the group, dominant members often become a focal point through which various issues and concerns are dealt with. Reactions of dependency, scapegoating, and emulation for example are typically indicative of the group's

attempt to come to grips with general issues by focusing on a highly visible member. By exploring behavioral alternatives with respect to this person, the group can openly deal with issues that are of general concern but which may be difficult to work on within the current group structure. The group's treatment of dominant members is thus a useful indicator of more widespread concerns.

In this light, dominant members may also present a useful 'leverage point' for implementing particular interventions. By initiating a solution of particular issues in relation to these members, a more general solution may arise vicariously; or by focusing attention on the underlying issues which are directed toward these members the group as a whole may become more aware of and more capable of dealing with the issue at hand.

III. Recommendations for Enacting Interventions

A final set of recommendations are relevant as guidelines for the enactment of specific interventions. Given the above considerations concerning the general characteristics of interventions and the diagnosis of intervention needs, specific behaviors must be selected to fulfill the desired functions. Several recommendations concerning these specific behaviors are outlined below in terms of (A) the provision of appropriate structures for group interaction, and (B) some specific forms of intervention behavior.

A. Recommendations for Providing Appropriate Structures

A central element of intervention effectiveness is the provision of an appropriate structure for group activity at specific points in the laboratory. The recommendations below outline the structural requirements of the laboratory group at various points in the learning process and suggest appropriate ways of fulfilling these.

1. As a way of inducing cognitive dissonance, a lack of structure early in the laboratory is useful for facilitating the unfreezing process.

The disconfirmation of expectations and the removal of familiar elements of social behavior early in the laboratory provides some degree of cognitive dissonance for participants. The experience of dissonance unfreezes the individuals and prepares them for active involvement in processes of learning and change. Provision of this dissonance can be facilitated by the trainer's withdrawal from an active 'leadership' role and the questioning of ambiguous group goals.

2. The provision of appropriate norms for learning and conceptual frameworks for the analysis of behavior following the unfreezing of participants helps to reduce psychological threat and to provide a general approach to the learning situation.

The provision of norms and conceptual frameworks by the trainer is an important and effective structural component of the laboratory at this point. Faced with heightened anxiety and lacking alternative approaches to the situation, participants find this part of the laboratory both stressful and frustrating. The suggestion of particular strategies for dealing with the situation allows participants to engage in the learning process with an attitude of open and authentic inquiry. This can often be affected through the use of particular structured experiential exercises.

3. Once group activity is underway, it is generally functional for the trainer to reduce the imposition of structure.

Significant conponents of learning take place as the group develops its own indigenous structure of norms and working relationshps. It is here that a great deal of novelty arises in terms of new forms of individual and group behavior. To the extent that the group feels free to experiment with and explore new behavior, a great deal of learning takes place naturally in this stage. The withdrawal of the trainer from an active structuring role is thus beneficial here.

4. The provision of structure in the final stage of the laboratory is functional in terms of the refreezing process.

A principal need of group members in the final stage of the event is the receipt of support and confirmation for learning that has taken place. The fulfillment of this need is an important part of the processes which refreeze and integrate learning, and which aid in the transfer of new information and behavior to other contexts. Confirmation by the trainer is particularly significant here, and is an important consideration for intervention. Closure exercises are an example of the kind of structuring that is useful here.

B. Specific Forms of Intervention Behavior

The following outline specific forms of intervention behavior and discuss the appropriateness of each for particular stages of laboratory group development.

1. Interventions which supply conceptual input are useful in providing the group with a cognitive framework with which to understand and organize experiential learnings; these are most appropriately used following interactions in which major issues have been experienced and dealt with.

Although much laboratory learning relies on experience, such experience is only useful to the extent that it can be understood and integrated within a cognitive framework. The provision of conceptual inputs immediately following the working through of important behavioral issues provides a meaningful framework in which experience can be organized. Appropriate

situations for this type of intervention may arise throughout the laboratory as various issues and dynamics arise; however, this form of intervention is particularly useful in the early stages when members are searching for alternative cognitive maps to guide interaction, and near the termination point where the integration of learning is crucial. Conceptual input interventions should be brief and succinct, and be phrased in a manner that is appropriate for the particular group (Freedman, 1978).

2. Where the group becomes blocked as a consequence of not having appropriate behaviors available to deal with particular issues, interventions which serve to model new forms of behavior or to coach participants in taking on such action are useful.

At certain points in the laboratory participants may not be aware of forms of behavior that would be useful in overcomming interactional problems; lacking viable alternatives, the group becomes blocked in its development. At such times the enactment of interventions which demonstrate functional behavior or which help participants discover and use such behavior provides a basis on which problems can be resolved. This type of intervention is especially useful in the early parts of the laboratory to help in the establishment of functional patterns of interaction and appropriate norms for participation, as well

as following certain conceptual inputs to exemplify related behavior.

3. Interventions in which the trainer feeds back to the group observations about their own interactional process are useful in raising group awareness of forces and dynamics underlying group functioning and of the implications and consequences of individual behavior.

One of the principal objectives of laboratory education is to help participants become aware of the interactional dynamics in which they are involved and to improve their understanding and competence concerning those dynamics. Involvement in group activities in itself may not be sufficient to bring this about however, unless group members take time to consciously examine their own working process. By feeding back observations about the patterns and characteristics apparent in group interaction, the trainer facilitates learning in several ways. Members become more aware of the distinction between the content and process dimensions of interaction and begin making their own process observations; the impact of specific behaviors is recognized and discussed; and possible changes in the group's process or structure may be considered and implemented. Process-observation interventions thus facilitate the learning of new behaviors by raising various dimensions of here-and-now group functioning to awareness and explicitly examining them. This form of

intervention is often appropriate during the middle portions of the laboratory where the majority of new behavior is generated, and to some extent early in the laboratory as a model for functional group behavior.

4. When the group's progress is blocked by levels of tension and emotionality that are either too high or too low, interventions which seek to maintain an appropriate balance may be functional.

A certain level of anxiety and emotionality within laboratory groups provides one of the major sources of energy to move the group through processes of development and learning; a moderate level of tension usually indicates that the group is actively working on salient issues. When levels of emotional energy become very high, or when things seem to be working too smoothly, it is likely that issues and problems are being addressed in a dysfunctional manner, or not at all. In either case it is useful for the trainer to intervene to alter the energy level in an appropriate direction. Challenging issues or confronting group behavior is often useful in raising tension to a functional level; providing emotional support, mediating conflicts, or providing structured exercises to deal with problematic issues may all help to release tension and to move the group forward.

5. For problems or issues which the group finds particularly difficult to deal with directly because of their current state of development, the provision of temporary structures in the form of experiential exercises can be a useful intervention.

Often in the earlier portions of the laboratory group structures and patterns of interaction have not yet developed to a point where they provide an adequate basis for dealing with particular issues. As a result, these issues can become problematic and create a state of blockage. The use of structured exercises to temporarily change group interaction and to allow new forms of behavior to be generated and examined often helps the group face these issues and thus to facilitate their development. This form of intervention should be used sparingly so as not to create an artificial dependency on the exercise format or the trainer as a means of working through problems.

6. As a means of facilitating group development and modeling functional behaviors, the trainer may choose to fulfill particular group roles and functions.

One of the major stumbling blocks for group development is the recognition and fulfillment of particular roles which allow the group's communication process to function effectively. The learning of these roles is often an important part of laboratory

training, and until the group is able to fulfill them on its own, it is often useful for the trainer to model such roles. By performing necessary group functions, the trainer helps to further the course of development in the group and at the same time provides behavioral data which the group can examine. Ideally, these roles will be taken up by group members as they begin to accept greater responsibility for the group's functioning. As before, these interventions are best used only in the middle parts of the laboratory in order to discourage a dependency on the trainer.

Summary

The above section outlines a number of recommendations for practitioner action in terms of specific interventions. It is through such interventions that a major part of the laboratory learning process is enacted. We have examined several points arising from earlier discussions which provide a basis for the selection of appropriate forms and methods of intervention. Using these as guidelines, the trainer can identify appropriate actions to ensure that the learning process does not become arrested at critical points and to help participants maximize their learning.

A Procedure and Example of Intervention Planning

Based on discussions in the previous chapters, we have made a number of recomendations which suggest specific action steps to be taken by practitioners in the design and implementation of laboratory education programs. These provide specific guidelines for establishing programs to initiate the laboratory learning process and for selecting appropriate trainer behaviors to facilitate that process. This in effect fulfills the third conponent of our intervention model and completes the bridge between the theories upon which the laboratory approach is based and the actual methods used in laboratory practice.

Although our intervention model is essentially complete, it will be useful to include as a final step some additional information that will be of value in putting this framework to use. As cited, our outline of recommendations and guidelines serves primarily to call attention to a number of considerations that are salient in laboratory design and practice. We have avoided placing these within a particular programatic framework in order to steer away from a 'cookbook' approach to intervention planning. To illustrate how these guidelines might be employed however, we will outline a possible sequence of steps that a trainer might follow in planning interventions for a particular group situation. We also provide a case example to illustrate each step. In our example we assume that the

laboratory is already in progress and that appropriate design
considerations have been made - our focus is on the selection of
specific actions given a situation in which intervention seems
to be required. We begin with a general description of the group
situation which will serve as our example.

Description of a Group Situation

The example used in the following discussion is a specific
situation that occured in a laboratory group in which the author
acted as trainer or facilitator.[3]

> The group consists of twelve undergraduate students of mixed
> sex, age, race, and academic background. They have been
> meeting one night a week for approximately five hours each
> session, and are in the seventh week of a thirteen-week
> course focusing on interpersonal and group dynamics. The
> group has established a goal for itself - "the experiential
> and theoretical exploration of issues concerning group
> effectiveness" - and have decided to work toward enhancing
> their own functioning as a group. To this point they have
> spent time in getting to know one another, finding common
> interests, and working out an appropriate relationship with
> the facilitator. They have been working on a series of
> exercises to examine various elements of group behavior; on
> the whole their treatment of these experiences has been
> largely intellectual, with little concerted effort being
> given to the examination of these issues within the group
> itself. Communication remains, in general, superficial,
> awkward, and guarded.
>   Two major sub-groups have emerged, one strongly
> oriented toward task activities and the other concerned more
> with socio-emotional issues; several members remain quiet
> most of the time. Two dominant members have arisen as
> 'leaders'; each seems to be aligned with one of the
> sub-groups, and often acts as the spokesperson for that
> group. Thus far, the task-oriented group has been the most
> active in setting group goals and activities.

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[3]The example used occured in an undergraduate course in
Interpersonal and Group Processes conducted in the Department of
Communication, Simon Fraser University, in the Spring Semester
of 1981.

The specific situation occurs late in the evening
following the completion of two exercises. The first
exercise was initiated by a member of the 'task' group and
deals with a general, group-level issue that is relatively
intellectual and non-threatening; the second looks at a more
personal issue of individual feedback; the 'socio-emotional'
group wants to discuss this in terms of here-and-now group
processes.* Time will only permit the discussion of one
exercise, and the group begins to decide on how the time
should be spent. A conflict breaks out between the two
sub-groups, focused primarily on the leading members of
each. An impasse is reached.

Procedure for Intervention Planning

STEP ONE: Determine Current Phase of Development and Salient Group Characteristics

Throughout our discussion we have argued that processes of

laboratory learning are closely tied to the functional dynamics

of the group and that these dynamics are best represented in

terms of the developmental sequence occuring over the course of

the laboratory. In constructing the model we used the

developmental theme as a way of accessing the salient dynamics

of the group at particular times. In applying the model then,

the first step is to determine the current phase of development

within the group and to analyse the current situation in terms

of its salient interactional characteristics. This is

accomplished in the following steps:

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*The particular content of such issues is usually immaterial;
they serve primarily as "rallying points" around which the more
basic issues of group processes are addressed. These are the
issues that the trainer wishes to surface.

A. Identify the Focal Themes of group interaction

An examination of group interaction in terms of (1) the
salient emotional themes and (2) the content themes, provides us
with an overall characterization of group functioning. Using
Figure 4-3 (p. 139) we can then relate these themes to a
particular developmental phase.

> Example: The group appears to be facing two principal
> issues: (1) the exercise of power for control of group time
> and activity, and (2) the appropriate means of dealing with
> personal issues such as the expression of feelings. One
> group wants to pursue a task-oriented approach, the other
> wants to address personal concerns. Members align themselves
> with one group and push for a particular position. In terms
> of content themes, this can be seen as a testing of the
> authority/intimacy issue within the group; the emotional
> theme seem to be primarily that of control and influence,
> with the main relational modality being a 'pairing'
> response. In Figure 4-3 these themes are related to Phase
> Two; but since the group seems to be addressing these in
> terms of its own functioning, we might suggest that the
> present situation occurs at a transition point between
> Stages Two and Three.

B. Analyse the situation to determine the current state of
salient interactional factors

Given a particular phase of development, Figure 4-3 also
provides an outline of pertinent interactional factors and a
general characterization of the expected state of those
influences in that phase. Using this as a guide, we can examine
the given situation in terms of the factors outlined and can
determine how these are manifested in the group at hand. This
analysis allows us to identify the main interactional

characteristics affecting the situation.

> Example: For the latter part of Stage Two in Figure 4-3, several factors are outlined which appear to be relevant to the present case. In terms of task activities, we can see that the group continues to use past experience (ie. use of structured exercises) as a basis for action, and that issues of group maintenance are beginning to emerge; members also appear to be modeling roles concerning leadership and appropriate activity. Structurally, the group consists of one sub-group which follows a dependency approach, and another that is more counterdependent and personal; these sub-groups are in conflict. Assertive dependent and counterdependent individuals lead each group, and the conflict between them is a major energizing factor.

STEP TWO: Assess Current Group Learning Needs

The second part of our model specifies relationships between the interactional dynamics of the group and the specific process of learning occuring in the laboratory. Once we have examined group functioning and determined its principal characteristics, we can utilize this part of the model to diagnose the learning requirements presented by the situation at hand. This is accomplished through four major steps:

A. Identify Operative Components of the Learning Process

Based on earlier steps, we can now turn to Figure 5-1 (p. 154) to identify the general components of the learning process salient for the particular phase of development we have identified. This informs us about the major learning steps that are taking place and the major requirements that need to be fulfilled.

Example: Since we have identified the current situation as a transition between Phase Two and Phase Three, we can examine Figure 5-1 to identify the learning components taking place in this period. We find, on this basis, that the group is involved in the exploration of a counterdependent antithesis to their earlier responses, and beginning to initiate an "exploration of opposites" process regarding the interactional dynamics of the group.

B. Identify Interactional Factors Salient for this Learning Component

Figure 5-1 also outlines for each developmental phase a number of group factors which we expect to be operating to facilitate relevant parts of the learning process. Usng this we can identify various factors that should be apparent in the current situation to help activate the present learning process. Various guidelines in Section II-B earlier in this chapter are also useful in this analysis.

Example: Following Figure 5-1 for the phase we have identified, we find that the conflict between sub-groups and expressions of counterdependence are major interactional factors affecting learning. Being a transition phase, we can also identify the present situation as involving the early emergence of functional group roles and a working out of group norms.

C. Identify factors from B above which are pertinent to the specific objectives of the given laboratory.

Of the factors outlined in Figure 5-1 for the given phase of development, some may be irrelevant for the particular

objectives of individual laboratory programs. This step allows

us to determine which factors are relevant to the present

situation. Guidelines in Sections I-A and I-D are useful here.

> Example: Since the group is primarily concerned with group
> processes, we need to select factors from above that are
> relevant to these objectives. Here we find that the conflict
> surrounding the issue of task vs. maintenance and the early
> formation of group norms are important to present aims, and
> thus require special attention.

D. Identify interactional factors that may be blocking or

otherwise not fulfilling given objectives.

On the basis of the above steps we can now diagnose the

learning needs of the present situation. By identifying factors

from above which appear to be hindering the learning process, we

can specify areas in which interventions might be usefully

applied to fulfill learning needs and thus to facilitate the

learning process. Guidelines in Section II-B above are pertinent

in this regard.

> Example: Since the group is just beginning to enter the
> third phase of development, the issue of group norms is not
> yet a crucial one for the group; it is unlikely that the
> current situation could be clarified by intervening in this
> aspect. If the group is to successfully pass into the third
> stage however, clarification of the task/maintenance issue
> will be an important prerequisite. The current group
> situation suggests that this factor is not being managed in
> a functional manner by the group, and may be blocking
> further development.

STEP THREE: Select an Appropriate Intervention

Having diagnosed the learning needs of the given situation, we can now take steps to select an appropriate intervention. This selection is aided by various guidelines outlined in the third portion of our model, and takes place in five major stages:

A. Determine the appropriate requirements for structure in the given situation.

All trainer interventions entail the imposition of some form of structure onto group interaction. A first consideration for intervention selection addresses the structural requirements of the situation. This is aided by guidelines in Sections I-C and III-A.

> Example: In the present situation, the group is actively working on its own development; they have clarified various issues concerning the role of the trainer and are now beginning to work toward the development of their own structure. Too much structuring by the trainer at this point might be detrimental to the group's development, so we require an intervention that will not impose constraints on group interaction.

B. Determine the principal trainer function to be served by the intervention.

In general, interventions serve to fulfill at least one of the five principal trainer functions. In selecting an intervention appropriate for a given situation, it is important to consider which of these functions is most useful. Guidelines

in Sections I-D and II-A are useful in this selection.

> Example: Given the state of group activity described above
> we can see that the group is in a state of high tension and
> conflict as a result of a developmental blockage. The
> trainer functions most appropriate here are thus: (1) the
> facilitation of group development, and (2) the reduction of
> tension.

C. Select an appropriate level of focus for the intervention

In accordance with overall laboratory objectives, and

taking into consideration the requirements of the situation, an

appropriate focus must be selected. The chosen focus should be

one which presents the most accessible and appropriate avenue

for fulfilling a particular function. Recommendations in Section

II-A are relevant to this question.

> Example: The issue presently occupying group attention is
> one which focuses on group-level dynamics; the entire group
> is involved in the conflict between sub-groups and it is the
> interactional patterns within the group as a whole which
> require attention. Thus an appropriate level of focus is
> group-level functioning.

D. Determine an appropriate 'leverage point' to affect the desired function and focus.

Here we are concerned with identifying some aspect of group

functioning, an individual member, sub-group, or activity for

example, which presents an effective avenue for introducing the

intervention. In selecting a leverage point, it is important to

identify an element of group functioning that is visible to

members and has a significant impact on the dynamics to be changed. Guidelines in Section II-B are relevent here.

> Example: In the present group the conflict is played out by dominant members acting as spokespersons for the sub-groups. These individuals are functioning as a focal point for more general concerns, and thus present a useful leverage point for intervention.

E. Select specific intervention behaviors to affect the desired change

Finally, on the basis of the above steps, we can select a specific form of behavior to enact the given intervention. Section III-B outlines several common forms of intervention and is useful in making this selection.

> Example: To fulfill the function of facilitating group development in a way that imposes a minimum of structure, which focuses on group-level dynamics, and which utilizes the two dominant members as a leverage point, we select an intervention which utilizes the feeding back of group process observations. One example of this type of intervention might be the following: "We seem to be divided into two groups, each with different ideas about what's important to do. Half of us want to discuss the risk-taking exercise, the rest prefer the one on feedback. Does the agrument between 'Bill' and 'Tom' (the two dominant antagonists) suggest anything to you about this split, or about what might be happening below the surface?"[5] Another approach might be: "We seem to be arguing, at one level, over which exercise to discuss, but I sense that something else is also happening. It looks to me as if 'Bill's'

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[5]This particular intervention was used in the actual group situation. Although the impact was actually an increase rather than a reduction in group tension, it did serve to mediate the conflict and to help the group face the task/maintenance issue. This later became the basis of group norms which explicitly recognized the equal importance of both task and maintenance concerns and which helped to dissolve the sub-group structure.

exercise and 'Tom's' exercise might mean more to the group
at the process level than is obvious at a content level. Any
comments?" By making observations about group functioning
and by focusing these on the two dominant members, we raise
the issues of task/maintenance to group attention, and at
the same time do not interfere drastically with the ongoing
process. Whether or not the intervention succeeds, and in
turn whether additional, follow-up interventions are
required, is then dependent upon how the group decides to
handle the new information and what changes they decide to
make on that basis.

Each of the above steps draws upon a portion of our

intervention model and allows us to make specific choices and

decisions leading to the formulation of appropriate

interventions for a given group situation. This procedure thus

exemplifies how the model can be employed as a basis for

intervention planning and guidance. It also demonstrates the

usefulness of the model in providing a bridge between the

theories of group functioning which allow us to describe

laboratory dynamics, and the actual practices of laboratory

training. While additional procedures might be formulated for

other purposes, the present discussion serves to show that, for

the planning of specific interventions, our model appears to be

successful. We can conclude therefore, albeit tentatively, that

our model provides a valid connection between theory and

practice and that it fulfills its intended function.

Conclusion

In this chapter we have drawn from earlier portions of the model a number of recommendations outlining various salient considerations for laboratory design and intervention. As guidelines for trainer action, these constitute the third and final component of our intervention model. By outlining a procedure through which these guidelines could be employed in the planning of specific interventions, we have shown that this portion of the model fulfills its principal function as an aid to practitioner action and that the final component of our conceptual bridge has been successfully completed.

VII. CHAPTER SEVEN: Evaluation and Conclusion

Introduction

We began this thesis by arguing that fundamental differences in the conceptual and theoretical needs of pure and applied social science have given rise to a divergence and separation of these areas in several fields. It was suggested that these differential requirements are at least partially responsible for a 'communication gap' between theory and practice in the field of laboratory education in which many of the practitioner's needs remain unmet. We proposed the development of a heuristic conceptual framework to bridge theory and practice as a means of addressing unmet requirements in this area, and set out to construct such a framework to fulfill these.

We began by outlining the principal requirements that a conceptual bridge would have to fulfill for various fields broadly conceived as 'educational' in nature, and by proposing a series of model building stages that would accomplish this for laboratory education. Abstracting from the work of J. Bruner (1966), we suggested a three-step procedure for constructing what we have termed a "model of intervention" - a conceptual

framework designed to establish a heuristic link between theories about group functioning and the methods used by practitioners to intervene in and influence group processes. The major part of this thesis has concentrated on the development of such a framework using that procedure.

Following a review and examination of background literature concerning laboratory education as an applied methodology, and then as an area of social research and theory, we began the construction of the model. The first step consisted of a re-casting of current group theory as a means of integrating the body of available research findings and providing a framework specifically addressing the laboratory context. Next, we examined this framework in light of conceptual accounts of the laboratory learning process as a means of drawing relationships between theories of group functioning and the specific change process that practitioners aim to enact in the laboratory setting. Finally, on the basis of these relationships, we derived a number of recommendations which were suggestive of particular action steps a laboratory practitioner might take as a means of designing and conducting training programs.

With these stages completed, our goal of providing a heuristic framework to facilitate the development of specific guidelines for practitioner action from group theory appears to have been met. By providing a series of conceptual stages leading from theories of group dynamics to specific practices of

laboratory training, our intervention model seems to provide the linkage we argued for earlier, and thus to fulfill the requirements of the practitioner in this area.

As we initially suggested, the purpose of this thesis is to focus on and explore the model-building aspects of inquiry in this area. Within that context, our intentions have been fulfilled. No process of theory or model building is complete however without a thorough conceptual evaluation and empirical validation to establish the consistency and accuracy of the derived framework. Although space will not permit any formal process of verification here, it will be useful to outline several ways in which this could be accomplished. To conclude this paper then, we will suggest various ways in which verification could be undertaken, and briefly and informally examine the derived model, where possible, according to some of those procedures. It is important to recognize that this validation is necesarily incomplete and that it can only be suggestive of some of the results one might expect from a more thorough analysis. From an ethical standpoint, it is also essential to note that proper verification should precede extensive application of the model. The purpose of the present discussion is to demonstrate some of the approaches that might be taken in this regard and to anticipate some of the potential results of these.

Conceptual Evaluation

The principal criteria for the evaluation of models on a conceptual level are: (1) the degree of internal conceptual consistency within the model itself, (2) the consistency of the model with other related models or theories, and (3) the extent to which it provides a complete account of the phenomenon in question. Validation according to these criteria does not require any particular formats or procedures, but is often conducted on the basis of "thought experiments" in which one simply pursues in a logical fashion the implications of the given framework and assesses their soundness (Kaplan, 1964 p. 160). An example of how such experiments could be used to conceptually validate our intervention model is presented below.

When we constructed our intervention model, one of the key elements which helped to provide the bridge between theory and practice was the specification of relationships between group theory and the laboratory learning process. Within that component of the model we outlined how various interactional factors within the group affect learning. If the model is internally consistent, we would expect that variations in factors affecting group interaction should correspond logically to changes in the events which constitute the learning process.

To test this, let us take one particular factor - the provision of structure by the trainer - and see if such a correspondence is actually apparent. According to our conception

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of the learning process, imposed structure is required at different points in response to the group's learning needs: the unfreezing stage requires an initial removal of key structural elements, followed by an increase in structuring in the form of learning norms to reduce psychological threat; as the group begins to develop its own system of norms and relationships, the need for structure is again reduced, and in the final stage, structure is again important to affect refreezing. We expect therefore an alternation in imposed structure as the laboratory proceeds; and this is in fact suggested by our intervention guidelines. Thus, in terms of this particular factor, the model seems to be internally consistent. A full examination would require similar consideration of various other salient factors.

With respect to the consistency of the model with other related theory, the model appears to be on reasonably firm ground. Rather than initiating theoretical development 'from scratch', so to speak, the model is explicitly based on other conceptual frameworks. We have used for example, current theories of group development and experiential learning as a major basis for the present work. Since we have taken steps to incorporate these other models into our own, and have explicitly drawn connections between them, the issue of external consistency is unlikely to be a problem.

One possible criticism in this regard however might be that the current model is only valid to the extent that these other

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models provide an accurate and consistent framework. Since some inadequacies have already been identified in these models, both here and elsewhere (eg. Zander, 1979; Back, 1979), the current framework may suffer from the same deficiencies, although we have attempted to overcome some of these problems in the construction of the model. An evaluation of this aspect would require an overall examination of theory in this field and perhaps might suggest changes within the general conceptual framework of group dynamics as a whole. This however goes beyond the context in which the current model is proposed.

In the same way that the accuracy and consistency of other frameworks might affect our own, the completeness of other models will have a similar impact. As we suggested in our review of laboratory research, certain areas, the impact of external, contextual factors for example, appear to have been neglected by researchers. In the absence of clear evidence regarding these influences, it has been difficult to include such information within our framework. At the same time however, it is also impossible to know whether or not these factors have a significant enough impact to affect the completeness of the model. Perhaps the best that might be said at this point is that within the framework of research and theory that is currently available, the model appears to present a relatively complete account of the factors and processes which significantly affect laboratory dynamics and learning.

On the whole then, except for certain deficiencies in the data base from which we have been working, the model appears to be conceptually valid. Within the specified context of available theory and research, the modeling procedure has given rise to a conceptual framework that is both internally and externally consistent, and relatively complete.

Toward Empirical Evaluation

To validate the model empirically would entail an examination of the extent to which it accurately reflects actual events and processes within the laboratory context and provides a useful basis for the derivation and formulation of effective interventions. The limited focus of this thesis does not permit a detailed examination of the model in this respect; however we will outline some potential methods through which this could be accomplished.

Perhaps the most obvious strategy for this type of evaluation would be to set up laboratory programs based on the model, to have trainers follow the given guidelines to generate various interventions, and then to measure the outcomes of this process. While this approach might very well provide an assessment of the model, it raises a number of ethical questions concerning experimentation with human subjects. If the model were inaccurate and inappropriate, the experiment could produce negative effects on the participants.

A number of other strategies are available however which, although not as conclusive, would provide provide a basis for preliminary evaluation before engaging actual human subjects. One approach, for example, would be to take documented cases of laboratory activities and interventions and determine whether or not the model is useful in providing a coherent analysis of these. Since one of the major purposes of the model is to provide conceptual linkages between theory and actual practice, this approach would help to assess the coherence and completeness of these links. Such examples as that provided in Chapter Six to illustrate an intervention planning procedure might serve this purpose.

Another approach might be to devise a set of observation categories based on the model, which, at least theoretically, would provide a complete and accurate means of characterizing intervention behavior. If the model did in fact provide a meaningful conceptual link between theory and methods of practice, we could expect high levels of agreement and correspondence among several observers using such categories to analyse specific interventions. Significant disagreements would indicate that the derived categories are insufficient to describe the given behavior, or that the distinctions made in the model do not accurately capture salient aspects of intervention. In either case the validity of the model would be called into question.

A final means of testing the model empirically would be to provide experienced trainers with hypothetical group situations and ask them to devise appropriate interventions on the basis of the model. Again, if the model were useful as a means of relating theory to practice, we would expect agreement and correspondence among several trainers on this task. Of course the specific behavioral tactics would be expected to vary from trainer to trainer in such a case as a result of individual style preferences, but on the whole, we should expect that the general functions served, and more importantly, the rationale given for particular interventions should be relatively consistent. Strong disagreements would again tend to negate the validity of the model.

None of these methods would be capable of providing conclusive verification; however each would help to support the overall consistency of the model in terms of actual intervention practices in the laboratory context. Since the development of the model has drawn upon typical laboratory practice as one of its principal underlying components, and appears to be conceptually valid, one might expect that many of these tests would show positive results. Until such examinations have been conducted however, the model remains hypothetical and open to empirical test.

Conclusion

Although we cannot draw any firm conclusions concerning the specific intervention guidelines suggested by the model, it may be useful to comment on the value of the general method of model-building that we have used. We set out initially to explore the problem of developing a conceptual framework that would serve to bridge theory and practice in the area of laboratory education. A particular model-building methodology was suggested as a means of accomplishing this, and we have focused our attention on the actual construction of an 'intervention model' according to this framework. Let us review what has been accomplished in pursuing this approach.

The first stage of model construction required that we reformulate current theory and research in the area of group dynamics in a way that would specifically address the laboratory context. In doing this we were able to not only pull together various theoretical accounts of group functioning into a single model, but to incorporate into that model a significant amount of recent research which has not yet been fully integrated into current theory. The structure of group theory we have developed here, although it is specific to only one context, thus represents a significant synthesis of material which has previously been diffuse and unconnected. In itself, this synthesis fulfills a number of important theoretical requirements for the effective application of group theory.

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The second stage of model development undertaken here is perhaps the key component of the model and the locus of the most important accomplishments of this thesis. It is here that we have been able to make explicit a number of relationships between the factors and processes affecting group functioning and the particular process of learning provided by laboratory programs. The overall parallel drawn between learning processes and the various stages of group development provides a major conceptual link between these two phenomena and is a significant addition to both theory and practice. One could not say that this thesis has <u>discovered</u> these relationships, for group practitioners have been applying these connections for years; the purpose of this work has been to <u>clarify</u> those relationships, to make them explicit, and to place them within a coherent conceptual system. On this basis the practitioner can better understand the effectiveness of particular interventions, can conceptually evaluate trainer behavior, and perhaps can invent new forms of action for this context. In this way some of our principal goals in bridging theory and practice are met in this second stage of model development.

The final component of the model, the specification of particular guidelines for practitioner action, is essentially an extension of the relationships explicated earlier. The value of this part of the model lies not so much in the particular recommendations made, although for some trainers these might

present significant new ideas, but in demonstrating that the model does in fact lead to specification of particular strategies for trainer intervention and that these are consistent with current methods of practice. The fact that we are able to draw such implications from the model is an important test of the viability of the modeling method in use, and shows that this method does in fact fulfill the requirements that it was to address.

It is apparent then, that within the context of laboratory education, the procedure we have used to construct our intervention model has been successful in providing the kind of conceptual bridge we set out to build. By following this procedure we have been able to formulate a framework which explicitly links group theory and laboratory practice and thus fulfills some of the principal conceptual needs of the laboratory practitioner. Although the specific intervention guidelines we have drawn remain to be empirically tested, the conceptual consistency apparent in the model as a whole suggests that this procedure is useful in providing a coherent system of connections between pure theory and its application in this field - bringing together, in effect, the science of group theory and the art of laboratory practice.

With the value of this modeling procedure tentatively established in the context of laboratory education, it is interesting to speculate about additional applications in other

fields. Since the overall procedure was derived originally from education, and our own model-building has been in an area that could be viewed as education in a broader sense, other teaching contexts are an immediate possibility for additional applications. Here, one would be drawing on a different, and perhaps broader field of theory and research, and would be concerned with a somewhat different process of learning and change. Nonetheless, with appropriate attention to these differences, a similar model could be formulated to act as a bridge between educational theory and teaching practices, and so to fulfill the conceptual needs of the instructor.

One can easily imagine additional models in still other fields - in psychotherapy, for example, or social work, or organizational consulting, all of which are 'educational' in the sense suggested earlier. In each particular case the essential steps outlined by the overall framework could provide a basis for conceptually linking the theories used to explain relevant phenomena and the practices used to implement change in those phenomena. Practitioners in each field could in turn benefit from the provision of an integrated framework and perhaps might devise more appropriate and more effective methods of practice. While it is unlikely that the current modeling procedure could adequately address all applied social science fields, it could be potentially valuable for bridging theory and practice in a variety of fields which utilize direct practitioner intervention

to affect some form of education in specific clients.

On a more abstract level however, one might also envision the possibility of formulating a general theory of intervention which would provide for an even broader range of applied social sciences what the present model does for laboratory education. If it were possible to identify the characteristics of intervention in general - perhaps in the form of factors and processes affecting interaction and relationships between intervenor and client in any particular case - major advances might be possible in several aspects of social theory and practice. The integration of theory and practice at this abstract level could have significant potential for ameliorating several problems currently facing these areas. The tremendous economic and human costs of poorly formulated social programs for example might be significantly reduced if more appropriate means of devising such programs were available. Although by no means a panacea, such a development could have major implications for improving the effectiveness of applied social science as a whole, and making more productive use of our theoretical knowledge.

In sum then, to use a metaphor we introduced earlier, the modeling method we have explored here appears to be a useful means of bridging communication gaps between the pure theorist and the practitioner of applied social science. Whether or not this helps to improve either theory or practice remains to be

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seen. Our work has been to open the channel; whether or not the channel works efficiently or is used to capacity remains an open question.

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