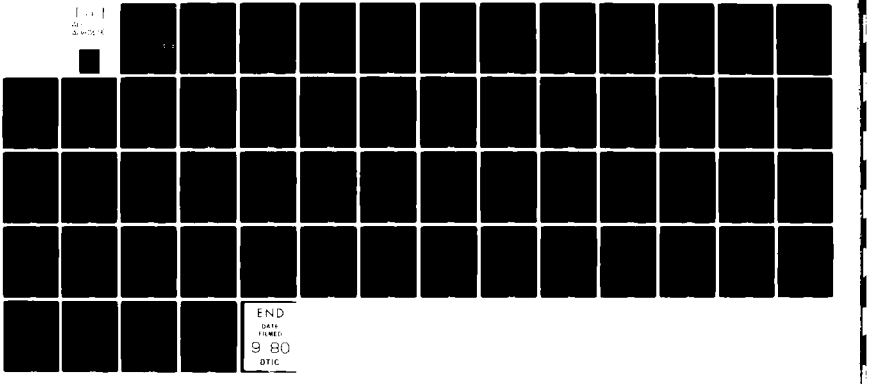
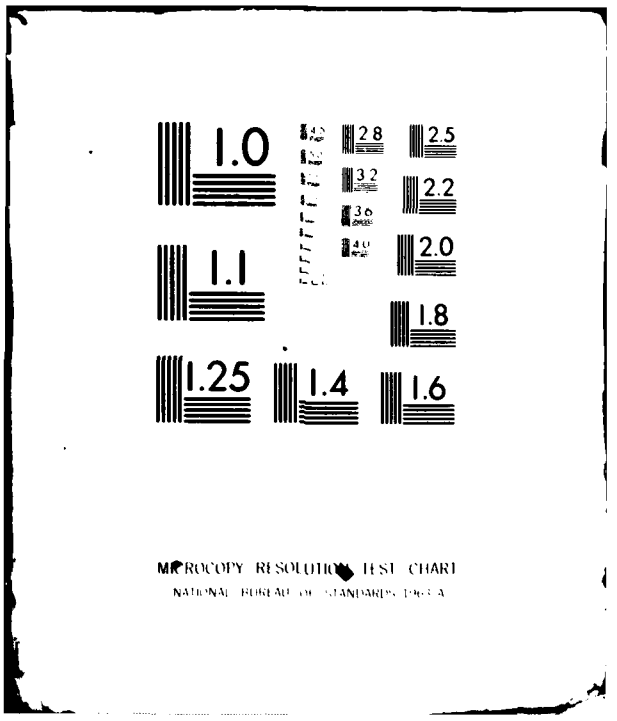
AD-A087 473 YALE UNIV NEW HAVEN CONN SCHOOL OF ORGANIZATION AND --ETC F/G 5/10
GROUP & INTERGROUP RELATIONS IN LIVING HUMAN SYSTEMS.(U)
JUN 80 C P ALDERFER N00014-79-C-0626
UNCLASSIFIED CPA-80-4 NL



END
DATE FILMED
9 80
DTIC


1.0
1.1
1.25
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.8
1.4
1.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

1. REPORT NUMBER CPA-80-4	2. GOVT ACCESSION NO. AD-A087 473
3. RECIPIENT'S CATALOG NUMBER ----	
4. TITLE (and Subtitle) Group & Intergroup Relations in Living Human Systems,	5. TYPE OF REPORT & PERIOD COVERED Technical
	6. PERFORMING ORG. REPORT NUMBER ----
7. AUTHOR(s) Clayton P. Alderfer (15)	8. CONTRACT OR GRANT NUMBER(s) N00014-79-C-0626
9. PERFORMING ORGANIZATION NAME AND ADDRESS Yale School of Organization & Management 56 Hillhouse Ave., New Haven, CT 06520	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 170-891
11. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research Programs Office of Naval Research (Code 452) Arlington, VA 22217	12. REPORT DATE (11) June 1980 13. NUMBER OF PAGES 51
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office) ----	15. SECURITY CLASS. (of this report) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

DTIC ELECTE S AUG 4 1980 D

18. SUPPLEMENTARY NOTES

----

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

living system	communication	cognitive formation	power
entropy	supra system	overbounded	leadership
subsystem	boundary permeability	intergroup relations	underbounded
affect	group	parallel processes	

20. (continued)

nostic process itself.

As presented in chapter one, the philosophy of clinical social science dictates that investigators examine themselves as well as the phenomena they study. Therefore the concepts presented here are intended for use not only by investigators to understand groups and social systems but also to observe and change themselves, if appropriate, as they conduct research. The theory applies to the researched and to the researcher.

The next chapter presents a theory of method for conducting organizational diagnoses, which specifies the work of diagnosis is and describes the developmental phases through which a complete diagnosis passes. The theory of diagnosis analyzes how an investigator might act most fruitfully to study what is conceptualized in this chapter. The theory of method also returns to the theory of phenomena in order to integrate the actions of investigators with the people and groups being studied.

Accession For
NTIS GRA&I
DDC TAB
Unannounced
Justification
By
Distribution/
Availability Codes
Dist. | Avail and/or special
A

Chapter Two

THEORY I:

GROUP AND INTERGROUP RELATIONS IN LIVING HUMAN SYSTEMS

This chapter begins the presentation of theory. In the preceding chapter we showed that the earliest studies of human behavior in organizations focused on substantive issues, but as the limitations of these hypotheses were found, investigators were driven to methodological revisions. Subsequently, methods became more clinical, and substantive understanding of social systems changed as a result.

As behavioral scientists grew more skillful in working with organizations, their methods also became useful for changing systems and, for some writers, increasingly took on the flavor of social technologies—often devoid of conscious theory (cf. Hornstein, Bunker, Burke, Gindes, and Lewicki, 1971). So, on the one hand, theory was developing without method and, on the other hand, method was proceeding without theory. To work on the split between method and theory, we proceed by setting out two theoretical positions, one on group and intergroup relations in organizations and the other on the methodology of diagnosis, and then by addressing their integration.

This chapter proceeds to describe three types of theory, all of which are deemed relevant to understanding groups and organizations. The first kind of theory takes concepts from the general theory of living systems (Miller, 1978). We do this because human organizations, their environments, and their subsystems belong to the larger class of all living systems. As

such, concepts appropriate to the analysis of all living systems should be relevant to the particular living systems that are human. The second kind of theory uses concepts that were especially developed to understand change dynamics in human systems—individuals, groups, and organizations (Alderfer, 1976a, 1976b, 1980). Unlike Miller (1978) who presents and works through the same set of concepts for seven different levels of system, we take the view that variations in level call for changes in concepts. The concepts used for analyses across the three primary levels provide a language and analysis for dealing with individuals, groups, and organizations as components, subsystems, systems, and suprasystems of one another. Third, we present a series of concepts to deal specifically with groups, the focal unit for the perspective presented in this treatment. Groups are living human systems, and they are also units in their own right. The work reviewed in the preceding chapter argues that phenomena calling for a "group view" of organizations have been observed for sometime. Yet the conceptual step to conceive of groups as the focal units of organizations has not been made clearly and decisively, desp te several strong suggestions (e.g., Roethlisberger and Dickson, 1939; Homans, 1950; Likert, 1961; Leavitt, 1974) in that direction. The group is the focal unit for this analysis, and, according to our view, requires concepts uniquely suited for itself. The concepts to be presented especially for group level analysis are consistent with the theoretical assumption that groups are also living human systems (Alderfer, 1977; Alderfer and Smith, 1980). We conclude the theoretical sections with an introduction to the concept of parallel processes in human systems, a formulation that provides a means for relating dynamics across

different system levels (i.e. individual, group, organization) and for relating the theory of phenomena (i.e. groups and intergroups relations) to the theory of diagnosis.

Properties of Living Systems

In the preface to his integrative work on Living Systems, Miller (1978) p. xiii) traces the origins of systems theory to Alfred North Whitehead's words, "The concepts of an organism includes . . . the concept of the interaction of organisms . . . There are also organisms of organisms . . ." In recognizing the diversity among contemporary system theorists, Miller (1978, p. xv) also sees the common thread among the different views as the fact that "all emphasize the interrelatedness of the parts in a whole, whether that be a nonliving system, a cell, an organism, or an organized interrelationship among societies." The theory of living systems is about interdependence and the relationships of parts to wholes.

The present theoretical statement concerns human systems ranging in level from individual through group to organization. It uses and develops concepts relevant to the three levels. It is concerned primarily with the subjective and behavioral properties of those units. From a much larger set of concepts proposed for the analysis of human systems, we choose here those that are deemed most useful for diagnosing human systems from a group and intergroup perspective (cf. Miller, 1978; Katz and Kahn, 1978; Miller and Rice, 1967; Rice, 1969).

System, Subsystem, and Suprasystem. According to Miller (1978, p. 16)

a system is a set of interacting units with relationships among them. "A concrete system is a non-random accumulation of matter-energy, in a region in physical space-time, which is organized into interacting interrelated subsystems or components . . ." (Miller, 1978, p. 17). For our purposes it is also necessary to distinquish between physical and biological systems, on the one hand, and social systems, on the other. Our emphasis in this book is on social systems rather than on physical or biological systems. Nevertheless, no social system is completely separable from physical or biological systems because human beings are basic components of social systems.

The theory of open systems proceeds by the analysis of levels. Accordingly, the universe is composed of a hierarchy of systems; each "higher" level is made up of systems from "lower" levels. Thus, organizations are composed of groups, and groups are made up of individuals. In this sense organizations represent a "higher" level than groups and groups which in turn are a "higher" level than individuals. Working within an open systems framework, writers should identify their level of reference. Then subsystems and suprasystems are defined respectively as those levels directly above and below the level of reference. In this work the level of reference is the group.[1]

---

[1] Picking the group as the level of reference is a choice of significance made with care. It is not necessarily obvious and may even be controversial. Among writers in organizational behavior who work from an open systems framework there is no consensus on the point. Miller and Rice (1967), for example, give the group a central role in their conceptual system, while Katz and Kahn (1978) do not. One key factor in whether or not the group becomes a reference level is the emphasis on change, especially planned change using behavioral science methods. The main focus of attention for Miller and Rice (1967) is change, and they have had sustained careers as organizational change agents. Change is a topic of interest for Katz and Kahn (1978), and while they share some experience in doing organizational consultation, neither of them has shown a sustained commmitment to practicing applied behavioral science with organizations. See Alderfer (1977c) for a discussion of data from change projects that calls for open systems thinking.

The suprasystem of a given system is the next higher level system in which the system is either a component or a subsystem. The difference between a component and a subsystem is that a subsystem is an identifiable unit that carries out a distinguishable function or process, while a component does not carry out a distinguishable process. An individual member, for example, is always a component of a group, but he or she may or may not be a subsystem, depending on the role that emerges for the person. A group leader, for example, would be a subsystem but an inactive member would not. A combination of individual members who join together to speak for certain issues would also be a subsystem, but random aggregates of members would not.

The immediate environment of a system is the suprasystem minus the system itself (Miller, 1978, p. 29). The total environment of a system is the suprasystem plus all higher level systems that contain it. Thus every system is embedded in higher level suprasystems. Until recently, conceptualizations of groups and intergroup relations in organizations have not shown this theoretical orientation (cf. Alderfer and Smith, 1980, for method, theory and data supporting this reorientation for the study of intergroup relations in organizations).

Input, Transformation, Output. To survive and grow open systems must engage in transactions with their environments. They first take in matter, energy, and information, then transform those raw materials, and finally return their products, services, and waste to the environment in return for new raw materials and the right to continue to exist. Episodes in the life of human systems are these input-transformation-output cycles. The cycles mediate the relationships among the system, its suprasystem, and its subsystems. The suprasystem provides the inputs and reports feedback about the outputs. Subsystems that conduct the transformation processes are either reinforced and strengthened by environmental responses to outputs, or they are stimulated to change. Failure to correctly

receive and appropriately process information and meaning from the suprasystem to the subsystems threatens the life and growth of the system.

Entropy and Negative Entropy. Open systems differ from closed systems in their potential for reversing the buildup of entropy. According to the second law of thermodynamics, closed physical systems inevitably run down. The eventual end state of a closed system is complete disorder, attained with the passage of time as differential structures dissolve and all the elements arrange themselves in random order.

Open human systems do not necessarily run down as closed physical systems do. Because of exchange with environment, it is possible for open systems to reverse entropic process, build up negative entropy, and thereby counteract the forces tending toward decay and disorder. Depending on the type of system and the nature of its environment, some open social systems have the potential for prolonged or even indefinite life. Corporations, for example, by adjusting their products and services to changing social and economic needs, remaining constantly alert to new methods for obtaining their essential raw material, energy, and informational inputs, and planning for the succession of personnel in all essential positions create conditions where the system can live longer than the life span of any individual, group, product, or class of resources. In a like manner, constantly advancing technologies in health care (including organ transplants) and preventative medicine raise the possibility of indefinite human life.

In the field of group and organization studies there is a substantial body of literature testifying to the potency of entropic processes and to the possibility of reversing or retarding such processes through behavioral intervention. In its most general form this empirical work has shown a decreasingly favorable affective response to organizations by their members as a function of time with the system. The cumulative buildup of negative affect is taken as a sign of entropy for a variety of reasons. As unfavorable feelings accumulate without vehicles for their discharge or working through, a variety of systemic patterns follow. All information exchanges are shaped by the effects of the overall negative climate. Participants tend to withdraw from one another, if the system is highly controlled, or they engage in unproductive fights, if the system is loosely controlled. Energy available for work is lessened as individuals and groups become depressed, and the quality of work deteriorates as the quality of information decreases.

The range of measures, types of organizations, and spans of time showing this phenomenon have been robust. Perceived use of skills and abilities has been observed to decline in a very large private corporation over a period of seven years (Bray, Campbell, and Grant, 1974), in the U. S. Navy over a period of 3-1/2 years (Glickman, 1961), and in an upper class New England boarding school over a period of one year (Alderfer and Brown, 1975). Overall satisfaction with the system has been observed to decline over a period of a year in an American Indian Boarding School (Hammerschlag, Alderfer, and Berg, 1973), in a New England Boarding School (Alderfer and Brown, 1975) and in a commune (Brown and Brown, 1973). Moreover, in several of these studies the general decline in positive affect and in being able to use one's abilities effectively in the

system was also associated over time with a decrease in the quality of the interpersonal relationships among members. Bray, Campbell, and Grant (1974) report that assessment center ratings of behavioral flexibility, likeableness, and interpersonal skills decreased significantly over the eight year period for their sample of managers. When the original assessment of the managers had been made, the variable best predicting expected advancement was human relations skills. Eight years later, human relations skills was the second best predictor of actual advancement,[1] even though the average score on the variable significantly decreased over time. In a similar fashion Alderfer and Brown (1975) found that the perception of frequency of sarcastic behavior among students at the boarding school paralleled the pattern of general negative affect associated with time in the school. From these and other similar findings (e.g., Alderfer, 1967; Hammerschlag, Alderfer, and Berg, 1973) there are persistent empirical indications that the buildup of negative affect in the relationship between individuals and larger systems is at least in part tied to a deteriorating quality in the relationships between individuals. In the language of general systems: the buildup of entropy within the system is connected to the nature of the internal transactions among subsystems.

Several of the studies cited to show the effects of entropic buildup also identify on-going natural conditions that tend to moderate these effects. In Bray, Campbell, and Grant (1974), the investigators found that people who were promoted to higher level managerial positions showed a less marked decline in

[1] The difference in correlations between the best and second best predictor was .01 at the eight year mark.

In the field of group and organization studies there is a substantial body of literature testifying to the potency of entropic processes and to the possibility of reversing or retarding such processes through behavioral intervention. In its most general form this empirical work has shown a decreasingly favorable affective response to organizations by their members as a function of time with the system. The cumulative buildup of negative affect is taken as a sign of entropy for a variety of reasons. As unfavorable feelings accumulate without vehicles for their discharge or working through, a variety of systemic patterns follow. All information exchanges are shaped by the effects of the overall negative climate. Participants tend to withdraw from one another, if the system is highly controlled, or they engage in unproductive fights, if the system is loosely controlled. Energy available for work is lessened as individuals and groups become depressed, and the quality of work deteriorates as the quality of information decreases.

The range of measures, types of organizations, and spans of time showing this phenomenon have been robust. Perceived use of skills and abilities has been observed to decline in a very large private corporation over a period of seven years (Bray, Campbell, and Grant, 1974), in the U. S. Navy over a period of 3-1/2 years (Glickman, 1961), and in an upper class New England boarding school over a period of one year (Alderfer and Brown, 1975). Overall satisfaction with the system has been observed to decline over a period of a year in an American Indian Boarding School (Hammerschlag, Alderfer, and Berg, 1973), in a New England Boarding School (Alderfer and Brown, 1975) and in a commune (Brown and Brown, 1973). Moreover, in several of these studies the general decline in positive affect and in being able to use one's abilities effectively in the

system was also associated over time with a decrease in the quality of the interpersonal relationships among members. Bray, Campbell, and Grant (1974) report that assessment center ratings of behavioral flexibility, likeableness, and interpersonal skills decreased significantly over the eight year period for their sample of managers. When the original assessment of the managers had been made, the variable best predicting expected advancement was human relations skills. Eight years later, human relations skills was the second best predictor of actual advancement,[1] even though the average score on the variable significantly decreased over time. In a similar fashion Alderfer and Brown (1975) found that the perception of frequency of sarcastic behavior among students at the boarding school paralleled the pattern of general negative affect associated with time in the school. From these and other similar findings (e.g., Alderfer, 1967; Hammerschlag, Alderfer, and Berg, 1973) there are persistent empirical indications that the buildup of negative affect in the relationship between individuals and larger systems is at least in part tied to a deteriorating quality in the relationships between individuals. In the language of general systems: the buildup of entropy within the system is connected to the nature of the internal transactions among subsystems.

Several of the studies cited to show the effects of entropic buildup also identify on-going natural conditions that tend to moderate these effects. In Bray, Campbell, and Grant (1974), the investigators found that people who were promoted to higher level managerial positions showed a less marked decline in

[1] The difference in correlations between the best and second best predictor was .01 at the eight year mark.

their managerial attitudes than those who were not promoted, even though they showed the same basic decay in positive affect as those who were not promoted. In their commune study, Brown and Brown (1973) found that those who formed male-female pairs within the commune also showed less marked decline in satisfaction with the commune than those who did not form pair relationships, again, even though both the paired and non-paired people showed the same overall decline.

There is also evidence that the entropic processes can be retarded or reversed by planned behavioral intervention as well as by favorable naturally occurring events. Argyris (1965) showed how an intervention that called for executives to observe and reflect upon their own destructive interpersonal behavior resulted in changes in the overall pattern. Alderfer and Lodahl (1971) demonstrated how more attention to the "here-and-now" dynamics of intragroup behavior was associated with greater involvement, comfort with feelings, satisfaction, and transfer of learning. Finally, Alderfer and Brown (1975), in the boarding school study, showed that survey feedback of a diagnosis of the school was able to reverse--but only temporarily--the decline in involvement experienced by students as the academic year progressed.

The net effect of these studies is to show that entropic processes tied to human behavior and affect are common in living human systems. These processes can be retarded by naturally occurring events such as promotion or interpersonal pairing, and they can be reversed--temporarily or permanently--by planned behavioral intervention.

Boundaries and Boundary Permeability. All human systems have boundaries to regulate transactions between the system and its environment and to determine what is inside and outside of the system. Boundaries are the defining characteristic of systems, and permeability is a crucial property of system boundaries. Because open systems depend on transactions with their environments for survival and growth, there is an "optimal" degree of boundary permeability for each system-environment relationship (Alderfer, 1976a, b; Skynner, 1976). "Overbounded" systems show less boundary permeability than is optimal for the system's relationship to its environment, and "underbounded" systems show more boundary permeability than is optimal for the system's relationship to its environment. The primary threat to overbounded systems is that they become closed off to their environments and lose the capacity to respond adaptively to environmental changes and to reverse the buildup of entropy from within. The primary threat to underbounded systems is that they will become totally caught up in their environmental turbulence and lose a consistent sense of their own identity and coherence. Without adequate external boundaries, an underbounded system participates in entropic processes induced by the environment. Being underbounded is a greater threat to a human system's survival in the short run than being overbounded.

System boundaries are both physical and psychological. In the long run, if steady states occur, physical and psychological boundaries tend to become congruent (Alderfer, 1976b). In the short run, however, the congruence may be imperfect. Psychological boundaries tell more about the "here-and-now" of a system, but their condition is harder to detect than physical boundaries--

especially for an outsider. Interdependence among parts and among the attributes of parts is characteristic of all systems. The condition of system boundaries therefore strongly influences other system properties. When a system departs from optimal boundary permeability it begins to show a variety of "symptoms," which may be easier to identify initially than the actual boundary condition. The next section provides an analysis of the variables that define and sustain a system in underbounded or overbounded conditions. In moving from this section to the next, we change the terms of conceptual analysis. The section just completed was built around terms that are generally applicable to all living systems (Miller, 1978). The section to follow is based on terms uniquely suited to individuals, groups, and organizations as the distinctly human living systems.

Properties of Human Systems[1]

Optimal boundary permeability for a human system depends on the system, the environment, and the relationship between a system and its environment. A vital human system adjusts its boundaries to survive when it faces an unfavorable environment, and it changes its boundaries to grow when it confronts a favorable environment. In a context where the environment is hazardous or threatening to a system, optimal boundary permeability is less open than when the environment is more benevolent or supportive of the system. Figure 2-1 shows a set of curves that summarize these hypothetical relationships among system vitality, boundary permeability, and environmental hazards. As an illustrative example of these propositions, compare the optimal boundary permeability of a military unit under combat conditions with a research and develop-

[1]This section draws heavily on Alderfer (1980a).

ment group in a corporation facing a favorable market (cf. Janis, 1963; Burns and Stalker, 1961).

Insert Figure 2-1 here.

There are at least three bodies of literature in the behavioral sciences that provide support for the basic relationship between boundary permeability and system vitality. These studies may be organized by level of analysis--individual, group, organization. Although by no means using the same language or measures, these different bodies of work do seem to be dealing with similar underlying boundary phenomena at their respective levels of analysis. As a first approximation, we provide in Table 2-1 a listing of the various bodies of research and how they fit the boundary permeability analysis.

Insert Table 2-1 about here.

The distinction between underbounded and overbounded systems, including the proposition shown in Figure 2-1, implies that the two conditions are "opposite ends" of a continuum. For observing static conditions, this inference is appropriate. But where dynamics are involved, extremely overbounded and underbounded systems may have more in common with each other than either does with optimally bounded systems. Consider, for example, the radical change that occurs when a person has an extreme psychotic episode (i.e., becomes underbounded) and later is confined (i.e., becomes overbounded through externally imposed boundaries). An analogous example at the organization level occurs between the states of a maximum security prison before and after an inmate riot. Prior to the breakdown of system boundaries the system is overbounded--maintaining tight and meticulous control over inmates--and after the riot breaks out, the system is competely changed to an underbounded

Figure 2-1. System Vitality as a Function of Boundary Permeability and Environmental Threat

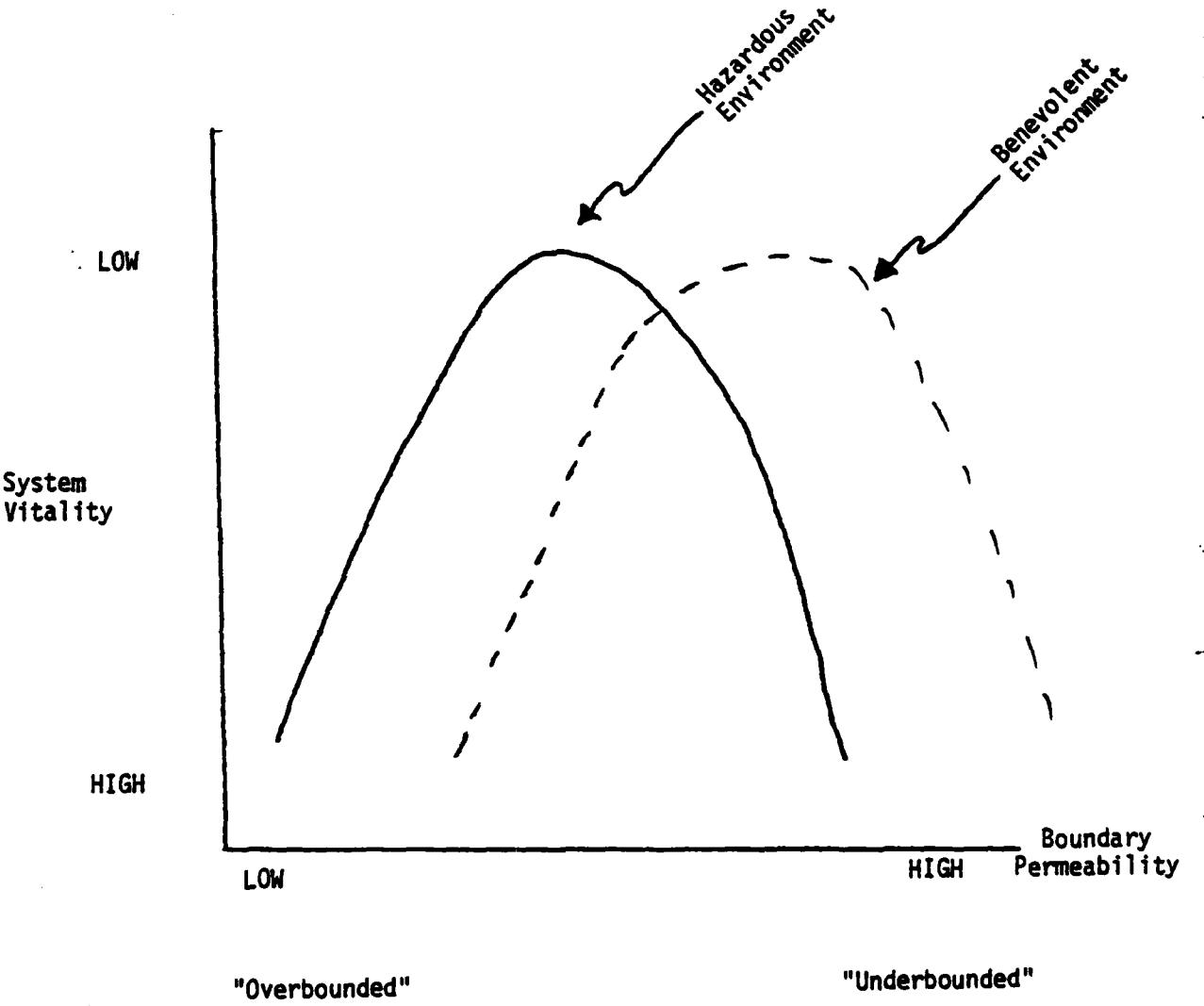


Table 2-1. Research Summary of Boundary Conditions by Level of Analysis

LEVEL OF ANALYSIS	BOUNDARY CONDITIONS		
	Underbounded	Overbounded	Optimally Bounded
Individual	o Fourth and Fifth Levels of Dyscontrol (Menninger, Mayman, Pruyser, 1963) o Identity confusion (Erikson, 1968)	o Second and Third Levels of Dyscontrol (Menninger et al, 1963) o Authoritarian personality (Adorno et al, 1950) o Closed mind (Rokeach, 1960)	o Mature personality (Jakoda, 1958) o Creative personality (Barron, 1965) o Self-actualizating person (Maslow, 1954)
Group	o Centrifugal Family (Beavers, 1977) o Undifferential family ego mass (Bowen, 1966)	o Centrifugal Family (Beavers, 1977) o Closed group (Ziller, 1965) o Constricted family (Skynner, 1976)	o "Good" group (Bion, 1961) o Highly effective group (Likert, 1961) o Healthy family (Beavers, 1977)
Organization	o Loosely coupled system (Weick, 1976) o *Underbounded system* (Alderfer, 1976a) o Underorganized system (Brown, 1979)	o Total institution (Goffman, 1961) o *Mechanistic system* (Burns and Stalker, 1961)	o Organic system (Burns and Stalker, 1961) o System 4 (Likert, 1967)

state. From a dynamic point of view, it is useful to recall that extremely underbounded and overbounded systems are closely related. Vascillation between the two states may be observed in many crisis situations. Overbounded, underbounded, and optimally bounded systems are terms derived from the degree of boundary permeability of human systems. Because boundaries define systems, the state of boundaries are associated with a wide variety of other system properties. The possibility of using the same set concepts to understand human systems at the three levels arises from the interpenetration of levels. Within each of the levels, there are concepts that reflect these dynamics. At the individual level, for example, there are the processes of introjection and projection (Storr, 1960). Via the process of introjection individuals take into their self concepts characteristics (both desirable and undesirable) of others with whom they have had significant relationships. By projection they attribute to others traits (again, both favorable and unfavorable) which they themselves possess. Similar processes may be observed through the operation of subgroups within small groups, and by the behavior of interest groups within organizations (cf. Bion, 1961, on subgroups within small groups and Pennings and Goodman, 1976, and Alderfer, 1977a on the operation of interest groups within and between organizations).

Several of the investigations summarized in Table 2-1 include analyses of a broad range of system properties (cf. Adorno et al, 1950, MacKinnon, 1965; Beavers, 1977, Goffman, 1961; Alderfer, 1976a). We use the following eleven variables to characterize the syndrome of properties associated with the different boundary conditions in living human systems: (1) goals, (2) authority relations, (3) role definitions, (4) cognitive formations, (5) affective distribution, (6) unconscious basic

assumptions, (7) communication patterns, (8) human energy, (9) material energy, (10) time span, and (11) primary intergroup conflicts.

Goals. The typical definition of organizations or groups makes reference to goals (Porter, Lawler, and Hackman, 1976). For some purposes, group and organizational goals provide the major source of legitimacy for their systems. Miller and Rice (1967) define the primary task (goal) of an organization or group as that work the system must do to survive in its environment. Yet the analysis of system goals from either a conceptual (e.g., Simon, 1964) or an empirical (e.g., Perrow, 1961) perspective is not a simple process. The goal structure of a system refers to the clarity with which goals can be stated and to the degree of system-wide consensus on the priority of goals. In the case of individuals, the question of goals is intimately tied to the sense of one's personal identity (Erikson, 1959). Underbounded and overbounded systems differ in their goal structure.

Underbounded systems have neither the clarity nor the degree of consensus in their goal structure that can be observed in overbounded systems. A sense of "meaninglessness" is not uncommon in underbounded systems. Members experience their system as floundering without a sense of direction. Individuals experience a lack of self ego identity. This lack of direction may arise either because people genuinely do not know what they are doing or because the conflict about goal priority is so severe that no direction among many competing orientations can be sustained long enough to bring genuine achievement. Overbounded systems, on the other hand, tend to show a clarity about goals and their priority that is both clear and unequivocal. Executives in business firms are prone to say "We are in business to make money," or "The ultimate test is the effect on the

'bottom-line' (of the profit and loss statement)." Increasing the clarity of goals or the degree of consensus about goal priority is associated with decreasing boundary permeability, and decreasing the clarity of organizational goals or increasing the disputes about goal priority is associated with increasing boundary permeability.

Authority Relations. The crucial place of boundaries in the survival and growth of human systems had led a number of theorists to link boundary management with authority (Edelson, 1964; Miller and Rice, 1967; Astrachan, 1970). According to this view, the major work of group or organization leaders is to define and adjust key organizational boundaries in order to promote the work of the system, and the crucial issue in the functioning of individual people is the management of the ego boundaries (Edelson, 1964; Landis, 1970; Rice, 1969).

In being a leader, teaching leadership, or consulting to leadership it is useful to conceptualize leadership, in part, as boundary management. But causality in human systems is rarely unidirectional; associations between variables are usually based on mutual causality (Buckley, 1967). Therefore, the condition of system boundaries influences the nature of authority relations within the system as well as visa versa. The nature of the authority available to leaders and/or the effort they must expend to increase their authority depends on boundary permeability. The behavior of formally designated leaders or of members representing a system reflects the forces of all the variables operating internally and externally on their unit (e.g., goals, roles, human energy, etc.). Thus the behavior of system representatives, including formally designated leaders, is both cause and effect of the total pattern system dynamics in a particular situation.

Authority relations in overbounded systems are typically highly centralized

and monolithic. Most resources are controlled from a single locus of authority, at the "top" of the organization. There is a unity of purpose, of direction, and of control that forms the basis of the traditional pyramidal organization (Gulick and Urwick, 1937). Much of the early work in organizational behavior identified the dysfunctions of the traditional pyramidal form (Argyris, 1957; March and Simon, 1958; MacGregor, 1960); and the first organizational development interventions were also designed to improve systems of this kind (Jaques, 1952; Argyris, 1962). The problems of overbounded systems are now reasonably well-known, and there is increasing evidence that behavioral science interventions have been designed to deal with the pathologies of such systems (Friedlander and Brown, 1974; Alderfer, 1977b).

Controversy surrounds research on psychotherapy with individual neurotics. For some investigators (e.g., Eysenck, 1952, 1965) the cumulative effects of numerous evaluative studies point to no effect, while for others (e.g., Meltzoff and Kornreich, 1970) the higher the quality of the research, the more likely it is to demonstrate positive results. When the studies are further analyzed by personality traits of clients, more favorable results are found for individuals who show less dogmatism and more ego strength (Vacchiano, Strauss, Hochman, 1969; Barron, 1963). The movement to work with families of disturbed individuals reflects the impact of systems thinking on the malfunctioning of individuals as well as on groups and organizations (cf. Skynner, 1976; Beavers, 1977).

Authority relations in underbounded systems are typically fragmented and unclear. Instead of a single authority source to whom all must ultimately answer, there are multiple authorities and/or none to whom some people intermittently report. Responsibility for work may rest with several individuals and groups or with no one. There is less systematic research on underbounded systems (e.g., Brown and Brown, 1973) and far less consensus on how to conceptu-

alize and evaluate the phenomena (Weick, 1976). Within the organization development literature, there is a growing list of "failures," which may be understood, in part, as the result of applying interventions designed for overbounded systems to underbounded problems (cf., Brown, Aram, Bachner, 1974; Firestone, 1977; Berg, 1977). Therapy with the families of schizophrenics represents an analogous development in dealing with the pathologies of the most severely underbounded individuals (Beavers, 1977).

Role Definitions. Individuals in groups and organizations develop patterns of role behavior based upon the expectations placed upon them by the organization modified by their own personal values, beliefs, abilities and group memberships (Levinson, 1959; Alderfer, 1977a; Katz and Kahn, 1978). The clarity and consistency of organization expectations is in part a function of boundary permeability. Role expectations in overbounded systems tend to be highly precise, detailed, and restrictive. Role expectations in underbounded systems tend to be unclear, incomplete and conflicting.

Thus the psychological costs to individuals for occupying organizational positions in overbounded and underbounded systems are different. In overbounded systems people feel confined and restricted. Incumbents experience lack of creativity and stimulation, especially at lower levels in the organization where the full force of the organizational structure impacts the individual (Argyris, 1957). In underbounded systems people feel fragmented and isolated. Incumbents lack a clear sense of direction in their work and may seem immobilized. There may be a lack of explicit expectations from others or a great diversity of conflicting demands from multiple and uncoordinated sources. The different dynamics of authority relations in underbounded and overbounded systems are directly related to the different kinds of problems with role definition in each type of system.

Cognitive Formations. All individuals face the problem of understanding why things happen as they do in their systems. People need a set of beliefs, or a rudimentary theory, to explain what they experience, to help them interpret events that occur, and to aid them in deciding how to behave (Billig, 1976). Without such a framework they would be overwhelmed by confusion and beset by meaninglessness. Their personal theory may come from a variety of sources and may be more or less conscious. An organization or group may attempt to play a major or minor role in influencing members' personal theories of how the system works. Groups tend to develop their own language (or elements of language, including social categories), condition their members' perceptions of objective and subjective phenomena, and transmit sets of propositions--including theories and ideologies--to explain the nature of experiences encountered by members and to influence relations with other groups (Sherif and Sherif, 1969; Blake, Shepard, and Mouton, 1964; Erikson, 1968; Tajfel, 1971; Billig, 1976).

Overbounded and underbounded systems differ in the nature of the cognitive formations held by members. Overbounded systems are more likely to leave a single coherent body of theory or ideology[1] that members are expected to master and to use in their work for the system. Typically new members are taught "the company line" early in their careers. As people remain in the organization and move upward in the hierarchy they are expected to teach others about the organization's theory. Innovations in the organization must be worked through the existing theory, or the theory must be modified to allow for the innovation. Usually both processes happen. One way to bring about change in an overbounded system is to act in new ways and later explain that the system's theory must be

[1]The difference between theories and ideologies is that theories can be disconfirmed and ideologies cannot. But even among scientists, theories change slowly (cf. Kuhn, 1962), and among politicians ideologies undergo revision, based on changing empirical conditions.

changed because "we actually behave differently around here."

Underbounded systems often have no theory at all, or multiple theories prevail without adequate mechanisms for identifying or resolving differences among them. When there is no theory to teach new members, the system lacks an integrating framework and change may require the development of a coherent statement of mission or policy. When there are multiple theories, the system needs mechanisms for dealing with the differences in order for a greater sense of intellectual understanding to emerge. Usually the multiple theories are associated with the various warring groups whose conflict keeps the system in constant turmoil. The cognitive confusion characteristic of schizophrenics shows similar phenomena at the individual level. Finding means to deal with the cognitive divergence reduces boundary permeability and aids the system to establish a greater sense of wholeness.

Affect Distribution. Individuals and groups, as open human systems themselves and as subsystems within larger organizational systems, have affective lives. People have feelings about the conditions in which they find themselves, and they are influenced by the emotions of others with whom they interact. Human beings experience a variety of emotions including anxiety, joy, fear, love, anger, contentment, despair, and so on. People may withhold or explicitly exchange their feelings. Whether spoken or not, signs of the feelings within a system are usually apparent to a trained observer. Although human affairs typically involve a mix of emotions--both favorable and unpleasant--there is usually a detectable balance of feeling within a system, and overbounded and underbounded systems differ in their respective affective balances.

The balance of feeling within an overbounded system is typically positive. In part this is because the short term future of an overbounded system tends to

be favorable. The system is not facing imminent chaos; its survival is not threatened. But a positive affective balance in overbounded systems is also partially the result of repressive forces within the system. The effect of a monolithic authority structure mutes internal criticism and tends to direct negative affect outward rather than inward. This phenomena has been called "group think" when it is found in decision-making groups (Janis, 1972). At the individual level, it is also characteristic of the authoritarian personality (Adorno, et al., 1950).

The balance of feeling within an underbounded system is typically less favorable. Chaos and disorganization are immediately observable. People usually do not have much confidence in themselves or in the system, and there is often a significant underlying feeling of futility. These characteristics are readily observed in individual schizophrenics (Edelson, 1964), in severely disturbed families (Beavers, 1977), and in underbounded organizations (Hammerschlag, Alderfer, and Berg, 1973; Brown and Brown, 1973).

Increasing boundary permeability in overbounded systems permits the emergence of negative feelings that had been previously hidden. Depending on how this process is managed people may feel released and euphoric or guilty and depressed (Slater, 1966). Typically change toward a fuller balance of positive and negative emotions increases the available energy in a system. Decreasing boundary permeability in underbounded systems helps to let positive feelings emerge. People learn that they share common concerns, are influenced by common processes, and can cooperate to control the chaos that previously threatened to overwhelm their system (Alderfer, 1977a). The effect of decreasing boundary permeability in an underbounded system, like the effect of increasing boundary permeability in an overbounded system, results in the system as a whole

being one where both positive and negative emotions can be observed. Conversely, allowing negative feelings to emerge in an overbounded system will increase boundary permeability, and promoting the discovery of positive feelings in an underbounded system will decrease boundary permeability.

Unconscious Basic Assumptions. The affective pattern in human systems may include unconscious as well as conscious feeling. Individuals in groups, for example, may be observed to be acting as if certain relationships existed among themselves or between them and the group leader (Bion, 1961). The term to conceptualize the prevailing state of a group's "as if" life is basic assumption. Basic assumptions operate outside the explicit awareness of system members and are useful in explaining why a system seems to act at variance with its stated goals. Why does a school fail to educate children? Why does an integrating group fail to come together?

The basic assumptions of groups in overbounded systems are different than the basic assumptions of groups in underbounded systems. Deriving from the authority structure basic assumption dependence tends to be prevalent in overbounded systems. Members act as if they have come together to have their needs gratified by an all powerful leader. Basic assumption flight-fight tends to be prominent in underbounded systems. Members act as if they must flee from the threats they represent for each other or they engage in persistent unproductive conflict. Observers can detect which basic assumption seems to be prevalent in a group by observing their own emotions. Changes in the boundary permeability of a system are accompanied by change in the basic assumption life of the system.

Communication Patterns. Communication problems are ubiquitous in groups and organizations that are functioning suboptimally. The issue common to all commu-

nication problems is that valid information is not being given and received as needed to do the organization's work. Information may be distorted by the sender or receiver, or there may simply be no exchange at all between senders and receivers.

Overbounded and underbounded organizations differ in the nature of their communications problems. The authority and role relations among individuals and groups in overbounded systems are designed to establish communication links among parties and to make it possible for people to meet together when necessary. Typical problems in overbounded systems arise because people distort the information that is exchanged in order to present their own position in the best possible perspective. Criticism of one's own position tends to be minimized. Bad news is withheld from senior officials as much as possible. These dynamics follow directly from the affective patterns in overbounded systems and apply in like manner to the defenses of rigid personalities.

Communication problems in underbounded systems arise from difficulties in identifying who should talk with whom, in establishing communication links among key parties, and in bringing people together to discuss issues of common concern. The unconscious basic assumptions of underbounded systems further support this pattern. When it is possible to solve these problems, which then permits exchange of information to take place, the quality of exchange is also different in underbounded systems. Interaction patterns in general are more varied. Withdrawal and lack of exchange may alternate with outbreaks of simultaneous talking. Conflict is never far below the surface and may show in extreme form when elements of an underbounded system meet.

Human Energy. All open systems rely on human energy for a significant portion of their work. The power of an organization and of the individuals and groups

within an organization depends on the state of human energy in the system. System boundaries provide a means for confirming or releasing human energy and or for effectively channeling or ineffectually diffusing it. In overbounded systems, human energy is often confined waiting to be released into well established channels to do organizational work. In underbounded systems human energy is more diffuse and difficult to channel toward system goals.

In overbounded systems, the effect of increasing boundary permeability is to release human energy for work, while the consequences of decreasing boundary permeability is further to restrict available energy. In underbounded systems, the effect of increasing boundary permeability is to diffuse available human resources, while the effect of decreasing boundary permeability is to harness energy for organizational objectives. The process of increasing boundary permeability usually takes less energy than the process of decreasing boundary permeability.

Material Energy. Changes in the territory or technology of open systems, often brought on by economic changes, have effects on psychological boundaries (Trist, Higgin, Murray, and Pollack, 1963). If the economic condition of a system significantly worsens, its territory and technology will be threatened. It may be less able to attract people; it may have to eliminate people from the system in order to survive; or it may be unable to obtain adequate material energy. Conversely, if the economic position of a system improves it has the potential for improving its territory and technology and for heightening its attractiveness to members and potential members.

As a result of these dynamics, underbounded systems are more likely to be facing economic difficulties than overbounded systems. Underboundedness may "cause" financial problems, or vice versa. A system unable to organize itself

for sustained work is likely to miss opportunities for economic gain or to waste resources it already has. A system confronted with economic hardship from outside will find its psychological boundaries threatened as it struggles for survival. These phenomena have been especially noted in the families of schizophrenics and for individuals who are themselves severely disturbed (Myers and Roberts, 1959; Beavers, 1977). The effects of a poor financial condition make it increasingly difficult for system members to cooperate in order to solve financial problems because they anticipate being asked to leave, or they feel they must seek alternative forms of material energy and therefore choose to leave.

Time Span. Systems vary in the span of time over which they concern themselves. Some organizations are capable of thinking and planning ahead, while others are much more short-term oriented. Overbounded and underbounded systems vary in the time perspective of their management. Because of their more certain authority relations and their more secure material condition, overbounded systems tend to have longer time perspectives than underbounded systems. Because the threat of dissolution regularly confronts underbounded systems, they tend to have a much shorter time perspective. As the boundaries of a system become more secure, the time perspective of members tends to lengthen. Organizations whose boundaries are too secure (i.e., overbounded) risk difficulties from the build up of unsolved short-term problems because members focus excessively on the future.

Primary Intergroup Conflicts. Within any human system some degree of intergroup conflict is inevitable. Depending on the nature of the system and its environment, the characteristics of the conflict may vary by level and subject matter. By level, the differences may appear as conflicting

elements of individual identities (Erikson, 1959), as subgroups within small groups (Bion, 1959), or as clearly manifest intergroup rivalry (Alderfer, 1977a; Rice, 1969). By subject matter the conflicts may express differences that arise from elements of individual and group identities (e.g., family, ethnicity, age, sex) or from memberships assigned to individuals by larger social systems (e.g., functional task assignment, position in a hierarchy).

Overbounded systems tend to have their primary intergroup conflicts among task groups, and underbounded systems tend to have their primary conflicts among identity groups. When organizational structure can significantly shape environmental dynamics, task group boundaries are more powerful than identity group boundaries. When environmental forces overwhelm organizational boundaries, identity group conflicts dominate task group conflict. In the former situation, the organization loses the richness available from cultural diversity and individuals find significant portions of their identities denied. In the latter case, struggles among identity groups prevent the organization from achieving a sustained sense of direction; its task effectiveness suffers; and individuals lose the gratifications of real achievement. Thus, strengthening the boundaries of identity groups in overbounded systems provides a useful counterforce to the suppression of group identities in these organizations. Conversely, strengthening the boundaries of task groups in underbounded systems permits a clearer sense of purpose to be obtained and a greater degree of task accomplishment to be achieved. Because of the interdependence between task and identity groups in most organizations, change in the boundaries of one type of group will have implications for the boundaries of the other type of group (Alderfer, 1977a).

As the focal unit for group relations and organizational diagnosis, the group is itself a living human system. A group may be underbounded, overbounded, or optimally bounded. The state of group dynamics within or among human systems both shapes and is shaped by the boundary conditions of its subsystems and its suprasystem.

Properties of Group and Intergroup Relations

Behavioral scientists have shown a variety of ambivalent reactions to groups and to the relationship of groups to individuals and organizations. As we have already seen, the earliest studies of human behavior in organizations were led to methods and concepts for analyzing group effects in organizations. Hackman (1976) provides a thoughtful review of group effects on individuals. Subsequent participant observation studies within organizations continued to uncover intergroup conflicts in a variety of kinds of organization, but, even though the data were rich, the subsequent investigators, like their predecessors, did not formulate an intergroup perspective on organizations. Sayles and Strauss (1953), Whyte (1955), Sayles (1958), Dalton (1959), Crozier (1964), Strauss (1962, 1964), and Blake, Shepard, and Mouton (1964) report studies that offer rich intergroup data but fail to formulate an intergroup theory of organizations. More recently a new awareness of intergroup relations has arisen as behavioral scientists have become more active in changing organizations. (Walton, 1969; Burke, 1972; Lawicki and Alderfer, 1973; Alderfer and Brown, 1975; Alderfer, 1977b; Berg, 1977; Nadler, 1978; Alderfer, Alderfer, Tucker, and Tucker, 1980). Moreover, until recently the difficulties associated

with doing field research on intergroup relations in organizations--though well documented in the methodological literature--have also rarely been analyzed by explicit use of intergroup theory (cf. Kahn and Mann, 1952; Adams and Preiss, 1960; Becker, 1967; Merton, 1972; Kidder and Stewart, 1975). Throughout all of these developments--despite the recognition of group effects and the utility of group methods--there remains no widespread theoretical understanding of groups as living human systems embedded in organizations (Wells, 1980; and Alderfer and Smith, 1980).

Therefore, the key terms described here, which both stand on their own and inform our methods, include a definition of groups in organizations and a general framework for explaining intergroup dynamics in organizations.

Definition of Groups in Organizations. Within the social psychology literature there is no shortage of definitions of groups, but there is also no clear consensus among those who propose definitions (Cartwright and Zander, 1968). Because much of the work leading to these definitions has been done by social psychologists studying internal properties of groups in laboratories, the resulting concepts have been comparatively limited in recognizing the external properties of groups. Looking at groups in organizations, however, produces a definition that gives more balanced attention to both internal and external properties (Alderfer, 1977a).

> A human group is a collection of individuals (1) who have significantly interdependent relations with each other, (2) who perceive themselves as a group reliably distinguished members from non-members, (3) whose group identity is recognized by non-members, (4) who, as group members acting alone or in

concert, have significantly interdependent relations with other groups, and (5) whose roles in the group are therefore a function of expectations from themselves, from other group members, and from non-group members.

This idea of a group begins with individuals who are interdependent, moves to the sense of group as a significant social object whose boundaries are confirmed from inside and outside, recognizes that the group-as-a-whole is an interacting unit through representatives or by collective action, and returns to the individual members whose thoughts, feelings, and actions are determined by forces within the individual and from both group and non-group members. This conceptualization of a group makes every individual member into a group representative wherever he or she deals with members of other groups and treats transaction among individuals as at least in part an intergroup event (Rice, 1969; Smith, 1977).

Intergroups in Organizations. Every organization consists of a large number of groups, and every organization member represents a number of these groups in her or his dealing with other people in the organization. The full set of groups in an organization can be divided into two broad classes: identity groups and organizational groups. An identity group may be thought of as those who share some common biological characteristic (such as sex), have participated in equivalent historical experiences (such as migration), currently are subjected to certain social forces (such as unemployment) and as a result have similar worldviews. As people enter organizations they carry with them their ongoing

membership of identity groups based on variables such as their ethnicity, sex, age and family. An organizational group may be conceived of as one whose members share (approximately) common organizational positions, participate in equivalent work experiences, and, as a consequence, have similar organizational views. Organizations assign their members to organization groups based on division of labor and hierarchy of authority. One critical factor in understanding intergroups in organizations is that identity group membership and organization group membership are not independent. Depending on the nature of the organization and the culture in which it is embedded, certain organizational groups tend to be populated by members of particular identity groups. In the United States, for example, upper management positions tend to be held by older white males, and certain departments and ranks tend to be more accepting of females and minorities than others (Loring and Wells, 1972; Purcell and Cavanagh, 1972).

Considering the definition of a human group given above, we can observe how both identity groups and organization groups fit the five major criteria. First, identity group members have significant interdependencies because of their common historical experience, and organization groups because of their equivalent work or organizational experiences. Second, organization and identity group members can reliably distinguish themselves as members from non-members on the basis either of ethnicity, sex, etc. or location in the organization. However, the precision of this identification process can vary depending on both the

permeability of group boundaries and the fact that many groups overlap significantly with individuals having multiple group memberships. A similar point applies to the third definitional characteristic, the ability of non-members to recognize members; this again will vary depending on the permeability of the group's boundaries. The less permeable the boundaries, the more easily recognizable are members. The fourth and fifth aspect of the definition are highly linked when applied to identity and organizational groups. For example, members may be more or less aware of the extent to which they are acting, or being seen, as a group representative when relating to individuals from other groups. Every person has a number of identity and organization group memberships. At any given moment he or she may be simultaneously a member of a large number, if not all, of these groups. However, the group made focal at the moment will depend on who else representing which other groups is present and what identity and organizational group issues are critical in the current intergroup exchanges. A white person in a predominantly black organization, for example, can rarely escape representing "white people" at some level, no matter what her or his performance may be. But place that same white person in a predominantly white organization, and it is unlikely that he or she will be seen as representing "white people," but rather some other group, such as a particular hierarchical level. Rarely are individuals "just people" when they act in organizations. When there are no other group representatives present, individuals may experience themselves as "just people" in the context of their own group membership, but this subjective experience will quickly disappear when once the individual is placed in a multiple group

setting. How group members relate to each other, within their group, and the expectations placed upon them by others, is highly dependent on both the nature of the intra and intergroup forces active at that time.

The concepts of identity and organizational groups do not permit an exhaustive listing of the elements in either set. In any particular setting, the relevant identity and organizational groups can be determined only by detailed study using intergroup methods. But it is possible to specify the more frequently observed identity and organizational groups and to note major issues around which those intergroup relations develop.[1]

Identity Groups. The essential characteristics of identity groups is that individuals join them at birth. While there is little choice about physical membership in identity groups, there is some degree of "negotiation" about psychological membership. A person may behave, think, and feel more or less as if he or she were a member of an identity group. Identity group membership precedes organizational group membership. The identity groups to which we give attention are gender, ethnicity, family, and age.

Gender differences between men and women in organizations reflect the effects of unequal influence, stereotypical perceptions, and sexuality. Although we are living in an era of significant social change, the historical and contemporary relationships between men and women in the United States are unequal. In general, women tend to have less access to a variety of

[1]The treatment given to each of these in the following paragraph is inevitably incomplete. A more extended analysis of ethnicity, gender, and age as they relate to organizations and of organization groups may be found in Alderfer (1977a), which also includes extended bibliography. Guzzo and Epstein (1979) provide an analogous bibliography on family businesses and Paolino and McCrady (1978) present a most useful collection of essays on families. Since the aim of the present work is methodological, the purpose of this section is to alert diagnosticians to the possible effects of various identity groups, not to present a fully developed theory of identity or organizational groups.

resources (e.g., income, position, and information) than men. There are views held by many men about the fitness of women for certain kinds of responsbilities, and there are increasingly successful efforts on the part of women and men to identify and change the consequences of these perceptions both for themselves and for the total culture. Research on female-male dynamics in organizations has documented structural, interpersonal, and personal effects of the power and perception inequities between men and women (cf. Kanter, 1977; Filene, 1974).

Male-female dynamics in organizations are also determined by sexual dynamics, an area on which there has been less research for understandable reasons. There are cultural taboos against discussing sexual behavior, except under relatively narrowly defined circumstances (e.g., with one's sex partner, in a therapy setting, or as part of legal proceedings to determine whether sexual harrassment has occurred). But these prohibitions and inhibitions do not keep sexual feelings from arising and influencing the behavior and perceptions of men and women in organizations.

Ethnic differences are closely tied to the historical relationship between the most numerous ethnic groups in a region (van den Berghe, 1972; Te Selle, 1973; Glazer and Moynihan, 1975). Specific kinds of work and organizational roles tend to be available only to members of particular ethnic groups. A struggle among ethnic groups for control of material, positional, and informational resources is more visible at some times (e.g., when violence breaks out or when non-violent demonstrations occur) than at others (e.g., when surface appearances suggest peace). The potential for

serious conflict among ethnic groups is present as long as access to resources is understood to be inequitably distributed, and group members believe that their ethnic identity is the basis for their not receiving or losing access to resources. In the United States the most severe ethnic conflicts have been between blacks and whites (Kerner, et al., 1968).

As a result of cultural traditions and contemporary experience, ethnic groups develop different ways of explaining what happens to themselves and to others: they have different "theories" to explain the world. Dominant groups tend to assume that their theories are correct. They either define other groups views as wrong, or they remain largely unaware that alternative theories exist. Less dominant groups tend to be aware of both majority and minority theories, and they expect their theories to be ignored or devalued by dominant groups (Billig, 1976).

Family groups play an especially prominent role in business enterprises that were built around the contributions of family members (cf. Sofer, 1961; Miller and Rice, 1967). Family groups become a significant force shaping intergroup relations after the business grows to the point where non-family people are necessary to maintain or enhance the human capacities of the organization. When a substantial proportion of non-family members become organization members, then the intergroup relationship between family and non-family people takes on the dynamics of an overbounded system (i.e., the family) dealing with an underbounded system (i.e., the non-family). Family members face questions about whether they wish to share or give up control of the

enterprise to non-family members. Non-family members struggle with whether they wish to remain psychologically outside the family or strive to earn the status of adopted daughters or sons, thereby enhancing their influence as individuals while maintaining the dominance of the founding family.

The pattern of relations between family and non-family members is also related to generational intergroup dynamics. Non-family members often must compete with daughters and sons of the entrepreneur for positions of influence in the enterprise. Children of the entrepreneur, depending on the nature of their family relationships, must struggle more or less with their parents about whether they stay or leave the business and with the implications of that decision for their standing in the family and in the business.

Generational groups, unlike the other identity groups, have the property that everyone who lives long enough will inevitably belong to several. As a result, members of older groups have the potential for developing empathy for members of younger groups because they inevitably have had some of the same experiences. But members of younger groups, because of their more limited experience, have far less potential for understanding the experiences of members of older groups. Levinson, et al. (1978), for example, have noted the rather profound ways that individuals do not understand the significance of life events until they have passed through identifiable life phases.

The patterns of dominance and subordination characteristic of generational groups are also unique in relation to other identity groups. In the United States' culture, members of the middle age group (roughly late 30's to late 50's) tend to dominate both younger and older groups. But the younger people contend with their subordination knowing that at least some of their members will reach

more influential positions, while the older people face the reality that influence is determined to decrease with the passage of time. Generational groups tend to be bound together by their members sharing a common historical experience, which in some material and symbolic way resulted in their members sharing some common deprivation (Feurer, 1969). The loosely defined ideology that evolves from the generational experience provides the rationale both for one generational group rebelling or resisting another and for one group dominating the others.

Organization Groups. The essential characteristic of organization groups is that individuals belong to them as a function of negotiated exchange between the person and the organization. Often the exchange is voluntary, as when a person decides to work to earn a living or volunteers to work for a community agency. But the exchange may also be involuntary as when children must attend schools, draftees must join the military, and convicted criminals must enter prisons. Regardless of whether the exchange about entry is mainly voluntary or involuntary, becoming an organization member assigns a person to membership in both task group and a hierarchical group. When a person stops being an organization member for whatever reason he or she also gives up membership in the task and hierarchical groups. In this way task and hierarchical group memberships differ from identity group affiliations.

Task group membership arises because of the activities (or, in some unusual cases such as prisons or hospitals, the inactivities) members are assigned to perform. The activities typically have a set of objectives, role relationships and other features that shape the task group members' experiences. As a result people develop a perspective on their own group, other groups, and

the organization-as-a-whole, which in turn shapes their behavior and attitudes.

Membership in task groups also tends to be transferable from one organization to another because people can carry knowledge and skill necessary to perform particular tasks with them if they leave one system and attempt to join another. As a function of developing and maintaining certain knowledge and skills people may belong to known professional or semi-professional organizations outside their employing (or confining) organizations. Support from these "outside interest groups" may help a person achieve more power within the system where he or she is working, and they may make it more possible for the person to leave the one system and join another.

Hierarchical group membership is assigned by those in the system with the authority to determine rank in the system. The determination of a member's hierarchical position in an organization is typically a carefully controlled, and often highly secret, process. A person's place in the hierarchy determines her or his legitimate authority, decision-making autonomy, and scope of responsibility. Group effects of the hierarchy arise from the nature of the work required of people who occupy the different levels, from the various personal attributes that the work calls for from incumbents, and from the relations that develop between people who occupy different positions in the hierarchy (Smith, 1974; Oshry, 1977).

People at the top of the hierarchy carry the burden of responsbility for large segments of the institution (or for the whole organization). They have access to more resources than lower ranking members, including substantial

autonomy in determining how to define and conduct their assignments. They also tend to maintain a larger network of relationships with key people outside the institution than lower ranking members.

By the very nature of the hierarchy people at or near the top have more potential power than lower ranking people. However great their actual power, higher ranking people tend to be seen as possessing more power by lower ranking members than they experience themselves as being able to use effectively. The world faced by higher ranking people is typically very complex, and the untoward effects of mis-using their power is often much clearer to them than to lower ranking people, who typically face less complex environments.

The positional attributes of higher ranking people affects communication with people below them in the system. Because there are hazards to bearing bad news, lower ranking people tend to censor information flowing upward so that it has a positive flavor. Because of the complexity of their work and the public visibility of controversial events, higher ranking people naturally prefer good news. Thus, an unwitting collusion develops between higher and lower ranking people, which tends to keep higher ranking people better informed about good news than about bad.

People in the middle of the organization have the task of holding together an easy alliance between the highest and lowest ranking members. They are truly people in the middle. They are more in touch with the concrete day-to-day events than those above them, and they have more power, authority, and autonomy than those below them. They are aware of the tensions and pressures faced by those at the top, and they can be conscious of the deprivations and struggles faced by those below them. They must exercise some control over those below them in

the system, and they must satisfy those above them. if they are to retain their positions.

The middle holds the system together by dispensing rewards and punishment downward, and by exchanging information upward. They send information upward on the basis of judgments of what serves the joint needs of upper and middle people. The exercise of control is a balancing process: too much restriction foments rebellion and too little permits chaos. The balance of rewards and punishments depends on the quality of interaction between middle and lower people. The more the affective balance is positive, the more rewards are used to influence behavior (and conversely). The more the affective balance is negative, the more punishments are used to shape behavior (and conversely).

People at the bottom of the system execute the concrete work for which the system was created. In terms of material needs and formal influence, they are the most deprived (Argyris, 1957). They have fewer material resources, and, as individuals working alone, wield less power than any other class of individuals in the system. There is a sense of anonymity about being at the bottom of large systems--a consequence that encourages people to lose their individuality in groups and not to feel responsible for their actions.

The bottom of the system copes with their relative deprivation and alienation by both passive and aggressive means. When times are "calm" they withhold some of their potential involvement in objectives set for them by middles in order to retain a medium of control over their lives. They may also covertly undermine vulnerable parts of the larger system.

When times are "turbulent" they organize and openly resist initiatives and structures set out by the middles (Brown, 1978). A portion of the lower group also identifies with the middle and upper groups; they are most susceptible to the rewards and punishments offered by the middle, and they often share and support the control of their "peers" by the middle group (Bettelheim, 1960).

No one who belongs to an organization escapes the effects of hierarchy. Finer differentiations than the three offered here (e.g., upper upper, lower middle, etc.) can be made, but the most prominent effects of hierarchy can be observed using the three level distinction. The effects of hierarchy are "system" characteristics; anyone occupying a particular position in the hierarchy will tend to show the traits associated with that level.

Embedded Intergroup Relations. Any intergroup relationship occurs within an environment shaped by the characteristics of the suprasystem in which it is embedded. In observing an intergroup relationship one has several perspectives:

(1) the effects on individuals who represent the groups in relation to one another,

(2) the consequences for subgroups within groups as the groups deal with one another;

(3) the outcomes for groups-as-a-whole when they relate to significant other groups; and

(4) the impact of suprasystem forces on the intergroup relationship in question.

Regardless of which level one observes, the phenomena of "interpenetration"

among levels will be operating. Individuals carry images of their own and other groups as they serve in representational roles. Subgroup splits within face-to-face groups reflect differing degrees of identification and involvement with the group itself, which are in turn shaped by the group-as-a-whole's relationship to other groups. Then the group-as-a-whole develops a sense--which may be more or less unconscious--of how its interests are cared for or abused by the suprasystem. The concept of embedded intergroup relations applies to both identity and task groups (Alderfer and Smith, 1980).

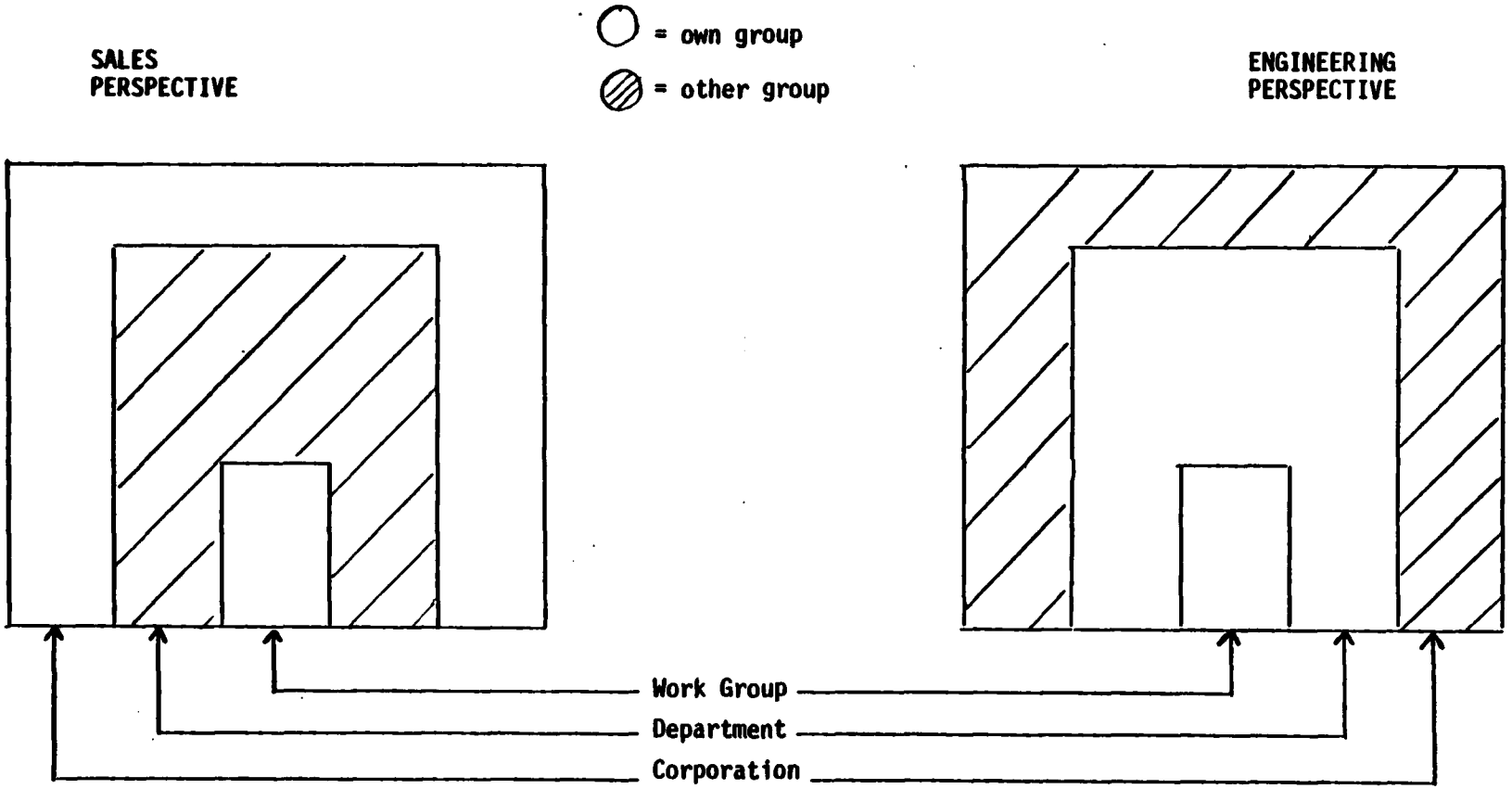
Figure 2-2 provides a diagram to illustrate how to think about embedded intergroup relations from a system's perspective. The picture shows how to construct an embedded intergroup analysis from an understanding of a particular group's place in a given social system. As group members look toward the suprasystem, they make assessments as to whether their own or another group is in control of distributing scarce resources. When one's own group is in charge or has significant influence, the situation is less hazardous than when the other group dominates. The effects of one's own group occupying in favorable position in a system may be muted by being at a relative disadvantage in the suprasystem (Alderfer and Smith, 1980).

---

[1] The embedded intergroups perspective complements and contrasts with much of the intergroup analysis most often found in social psychology (cf. especially Sherif and Sherif, 1969; Blake, Shepard, and Mouton, 1964). This social psychology perspective tends to treat groups and their representatives as equal in most important respects and generally overlooks suprasystem effects. Thus it does not take account of either the hierarchical or embedded phenomena that tend to be present in natural settings (cf. van den Berghe, 1972; and Billig, 1976 for sociological and social psychological alternatives).

Figure 2-2. Analysis of Embedded Intergroup Relations

Example: The relationship between sales and engineering work groups in a department dominated by engineers, which in turn is in a corporation dominated by sales.



Insert Figure 2-2 here

In the particular example shown in Figure 2-2 the relationship is between two task groups, sales and engineering. Both groups do work that is essential for their corporation and, since they are "functional" groups, might be conventionally viewed as having about equal standing in the corporation. But closer examination would probably reveal a pattern of differences, perhaps like that shown in the diagram. Any understanding of the relationship between the groups would be limited if it did not take account of different patterns of embeddedness for the groups.

Parallel Processes and Microcosm Groups

In his analysis of living systems, Miller (1978, pp. 29-30) identified a particular kind of relationship between a system (regardless of level) and its environment.

> In order to survive, the system must interact with and adjust to its environment, the other parts of the suprasystem. These processes alter both the system and its environment. It is not surprising that characteristically living systems adapt to their environment and, in return, mold it. The result is that, after some period of interaction, each in some sense becomes a mirror of the other.

We use the term parallel processes to characterize the dynamics through which subsystems, systems, and suprasystems mutually adjust and influence one another to produce the kind "mirror" phenomena that Miller describes. The embedded

nature of groups in living human systems provides the structure within which parallel processes occur. For the purposes of this work, we are concerned with parallel process in human systems (i.e., individual, group, and organization), and we take the group as a focal unit. Thus specific individuals or combinations of individuals within a group would be subsystems; the group itself would be the focal system; and other groups and organizations would be the suprasystem.[1]

The operation of parallel processes provides a means for groups to learn about organizations both passively and actively. In a passive mode, the diagnosing group learns about the system it is studying by interacting with the system and then observing how its own dynamics change to reflect the system being diagnosed. In an active mode, the diagnosing group creates a microcosm group to mirror the system characteristics it wishes to study, and then observes both the microcosm group and itself to understand the system being studied.

The concept of microcosm group follows directly from the definition of groups in organizations given above and from the propositions about human systems. Using the proposition that all individuals are group representatives, the microcosm group may be designed to show the relations among the groups in or among organizations through the interpersonal relationships among its members

[1] Experience tells us that the concept of parallel processes may not be easy to understand or appreciate. The reader may find it helpful simply to accept the idea of parallel processes as a working hypothesis (as indeed are all the concepts in the chapter) at this point and suspend judgment until the data and analyses given in chapters 7, 8, 9, 10, and 11 have been examined. We believe that the operation of parallel processes are very important to understand and to use in order to conduct organizational diagnosis using group methods.

(Alderfer, 1977b). The group boundaries, goals, affective patterns, cognitive formations, leadership behavior, etc. found in the microcosm group may then be interpreted in part as a mirroring of the analogous dynamics found in the larger system within which it is created (Alderfer, 1976a, 1977b; Steele, 1975; Cooper, 1976; Doehrman, 1976; Searles, 1955; Sachs and Shapiro, 1976). Since the purpose of the microcosm group is to create a structure that will allow observation of particular intergroup relationships within or among organizations, it is important that the people chosen as microcosm group members be assembled to both meet the definitional requirements of a group in general and to enable the critical intergroup processes to be heightened in the within small group context. For example, if an organization is torn by interracial conflict, the microcosm group needs to have the major parties to the conflict represented in sufficient numbers and in balanced proportion so that no one subgroup of intergroup representatives feels its perspective is more or less valid than any other perspective. If sexism or management/union delineations are also prevalent organization forces, then representatives of these intergroups should be included in the microcosm group according to the same prescription of balance.

CONCLUSION

Understanding group and intergroup relations in living human systems takes three orders of conceptual framework. The first pertains to those aspects of groups that share properties with all living systems. The second deals with properties of three levels of human systems--individuals, groups, and organizations. And the third uses concepts uniquely suited to the phenomena of group and intergroup relations in organizations. The concept of parallel processes explains interdependence of phenomena at the different levels of analysis and provides a means to relate dynamic processes in human systems and in the diagnostic process itself.

As presented in chapter one, the philosophy of clinical social science dictates that investigators examine themselves as well as the phenomena they study. Therefore the concepts presented here are intended for use not only by investigators to understand groups and social systems but also to observe and change themselves, if appropriate, as they conduct research. The theory applies to the researched and to the researcher.

The next chapter presents a theory of method for conducting organizational diagnoses, which specifies the work of diagnosis is and describes the developmental phrases through which a complete diagnosis passes. The theory of diagnosis analyzes <u>how</u> an investigator might act most fruitfully to study <u>what</u> is conceptualized in this chapter. The theory of method also returns to the theory of phenomena in order to integrate the actions of investigators with the people and groups being studied.

REFERENCES

Adams, R.N. and Preiss, J.J. (eds.) Human Organization Research. Homewood, Illinois: Dorsey, 1960.

Adorno, T.W., Frenkel-Brunswik, E., Levinson, D.J., and Sanford, R.N. The Authoritarian Personality. New York: Harper and Brothers, 1950.

Alderfer, Clayton, P. Boundary Relations and Organizational Diagnosis. In H. Meltzer and F.W. Wickert (eds.) Humanizing Organizational Behavior. Springfield, Illinois: Thomas, 1976a, pp. 109-133.

Alderfer, Clayton P. Change Process in Organizations. In M.D. Dunnette (ed.) Handbook of Industrial and Organizational Psychology. Chicago: Rand-McNally, 1976b, pp. 1591-1638.

Alderfer, Clayton P. Group and Intergroup Relations. In J.R. Hackman and J.L. Suttle (eds.) Improving Life at Work. Santa Monica, California, 1977a, pp. 227-296.

Alderfer, Clayton P. Improving Organizational Communication through Long-Term Intergroup Intervention, Journal of Applied Behavioral Science, 1977b, 13, 193-210.

Alderfer, Clayton P. Organizational Change and Open Systems Theory. In B.J. Wolman (ed.) International Encyclopedia of Neurology, Psychiatry, Psychoanalysis, and Psychology. New York: Van Nostrand, 1977a, 8, 137-140.

Alderfer, Clayton P. Consulting to Underbounded Systems, In C.P. Alderfer and C.L. Cooper (editors) Advances in Experiential Social Processes, Vol. 2 New York: Wiley, 1980, pp. 267-295.

Alderfer, Clayton P., Alderfer, Charleen, Tucker, Leota, and Tucker, Robert. Diagnosing Race Relations in Management, Journal of Applied Behavioral Science, 1980, 16, 135-166.

Alderfer, Clayton P. and Brown, L. Dave. Learning from Changing: Organizational Diagnosis and Development. Beverly Hills, California: Sage, 1975.

Alderfer, Clayton P. and Smith, K.K. Studying Intergroup Relations Embedded in Organizations, 1980, under review.

Argyris, Chris. Personality and Organization. New York: Harper, 1957.

Argyris, Chris. Interpersonal Competence and Organizational Effectiveness. Homewood, Illinois: Dorsey, 1962.

Asfrachan, Boris M. Towards a Social Systems Model of Therapeutic Groups, Social Psychiatry, 1970, 5, 110-119.

Barron, Frank, The Psychology of Creativity, In T. Newcomb (editor) New Directions in Psychology II, New York: Holt, Rinehart, and Winston, 1965, pp. 1-134.

Beavers, W. Robert, Psychotherapy and Growth: A Family Systems Perspective. New York: Brunner/Mazel, 1977.

Becker, Howard S. Whose Side Are We On? In W. J. Filstead (ed.) Qualitative Methodology. Chicago: Markham, 1967, pp. 15-26.

Berg, David N. Failure at Entry. In P. H. Mirvis and D. N. Berg (eds.) Failures in Organization Development and Change. New York: Wiley, 1977, pp. 33-56.

Bellelheim, Bruno. The Informed Heart. New York: Free Press, 1960.

Billig, M. Social Psychology and Intergroup Relations, London: Academic Press, 1976.

Bion, Wilfred J. Experiences in Groups. New York: Basic Books, 1961.

Blake, R.R., Shepard, H.A., Mouton, J.S. Managing Intergroup Conflict in Industry. Houston: Gulf, 1964.

Bray, Douglas W., Campbell, Richard J. and Grant, Donald L. Formative Years in Business. New York: Wiley, 1974.

Brown, L. Dave. Toward a Theory of Power and Intergroup Relations. In C. L. Cooper and C. P. Alderfer (eds.) Advances in Experiential Social Processes, Vol. 1 London: Wiley, 1978, pp. 161-180.

Brown, L. Dave, Aram, J.D. and Bachner, D.J. Interorganizational Information-Sharing: A Successful Intervention that Failed. Journal of Applied Behavioral Science, 1974, 10, 533-554.

Brown, L. Dave and Brown, Jane C. The Struggle For an Alternative: A Case Study of a Commune. Human Organization, 1973, 32, 257-266.

Buckley, Walter. Sociology and Modern Systems Theory. Englewood Cliffs: Prentice-Hall, 1967.

Burns, T. and Stalker, G.M. The Management of Innovation. London: Tavistock, 1961.

Cartwright, D. and Zander, A. Group Dynamics, 3rd Edition. Evanston: Row-Peterson, 1968.

Cooper, Lowell. Mirroring: One Vehicle to Organizational Clarity, International Journal of Social Psychiatry, 1976, 22, 1041-1048.

Crozier, Michel. The Bureaucratic Phenomenon. Chicago: University of Chicago, 1964.

Dalton, Melville Men Who Manage. New York: Wiley, 1959.

Doerhrmann, M.J. Parallel Processes in Supervision and Psychotherapy, Bulletin of Menninger Clinic, 1976, 40, 3-104.

Edelson, Marshall. Ego Psychology, Group Dynamics, and The Therapeutic Community. New York: Grune & Stratton, 1064.

Eysenck, H.J. The Effects of Psychotherapy: An Evaluation, Journal of Consulting Psychology, 1952, 16, 319-324.

Eysenck, H.J. The Effects of Psychotherapy: International Journal of Psychiatry, 1965, 1, 99-142.

Feurer, L.S. The Conflict of the Generations. New York: Basic Books, 1969.

Filene, Peter G. Him, Her, Self. New York: Harcourt, Brace, Joranovich, 1974.

Firestone, W. A. Participation and Influence in the Planning of Educational Change, Journal of Applied Behavioral Science, 1977, 13, 167-183.

Friedlander, Frank and Brown, L. Dave. Organization Development, Annual Review of Psychology, 1977, 25, 313-341.

Glazer, Nathan and Moynihan, Daniel P. Ethnicity: Theory and Experience. Cambridge, Mass.: Harvard, 1975.

Glickman, Albert S. The Career Motivation Survey: Overall Attitude and Re-enlistment Trends. U.S. Navy Personnel Research, June 1961.

Gulick, L. and Urwick, L. (eds.) Papers on the Science of Administration. New York, 1937.

Guzzo, Richard A. and Epstein, Gregg, Behavioral Issues in Family Businesses: An Annotated Bibliography. Montreal: School of Management, McGill University, 1979.

Hackman, J. Richard, Group Influences on Individuals, In M. D. Dunnette (ed.) Handbook of Industrial and Organizational Psychology, 1976, pp. 1455-1526.

Hammerschlag, Carl A., Alderfer, Clayton P. and Berg, David N. Indian Education: A Human Systems Analysis, American Journal of Psychiatry, 1973, 130, 1098-1102.

Homans, George, The Human Group. New York: Harcourt, Brace, and World, 1950.

Hornstein, Harvey A., Bunker, Barbara B., Burke, W. Warner, Gindes, Marion, and Lewicki, Roy (eds.) Social Intervention: A Behavioral Science Approach. New York: Free Press, 1971.

Jahoda, Marie. Current Concepts of Positive Mental Health. New York: Basic Books, 1958.

Janis, Irving L. Group Identification Under Conditions of External Danger, British Journal of Medical Psychology, 1963, 36, 227-238.

Janis, Irving L. Victims of Groupthink. Boston: Houghton Mifflin, 1972.

Jaques, Elliot. The Changing Culture of a Factory. London: Tavistock, 1952.

Kahn, Robert L. and Mann, F.C. Developing Research Partnerships, Journal of Social Issues, 1952, 8, 4-10.

Kanter, Rosabeth, Men and Women of the Corporation. New York: Basic Books, 1977.

Katz, Daniel and Kahn, Robert L. The Social Psychology of Organizations, 2nd Edition, New York: Wiley, 1978.

Kerner, O. and Lindsay, J. Report of the National Advisory Commission on Civil Disorders. New York: E. P. Dutton, 1968.

Kidder, L.H. and Stewart, V.M. The Psychology of Intergroup Relations: Conflict and Consciousness. New York: McGraw-Hill, 1975.

Landis, Bernard. Ego Boundaries. New York: International Universities Press, 1970.

Leavitt, Harold J. Suppose We Took Groups Seriously, In E. L. Cass and F. G. Zimmer (eds.) Man and Work in Society. New York: Van Nostrand Reinhold, 1975.

Levinson, Daniel J. Role, Personality, and Social Structure in the Organizational Setting, Journal of Abnormal and Social Psychology, 1959, 58, 170-180.

Levinson, Daniel J., Darrow, Charlotte N., Klein, Edward B., Levinson, Maria B. and McKee, Braxton, The Seasons of A Man's Life. New York: Alfred A. Knopf, 1978.

Likert, Rensis. New Patterns of Management. New York: McGraw-Hill, 1961.

Loring, R. and Wells, T. Breakthrough: Women into Management. New York: Van Nostrand-Reinhold, 1972.

MacGregor, Douglas, The Humanside of Enterprise. New York: McGraw-Hill, 1960.

MacKinnon, D.W. The Nature and Nurture of Creative Talent, American Psychologist, 1962, 17, 484-495.

March, James G. and Simon, Herbert A. Organizations. New York: Wiley, 1958.

Maslow, A.H. Motivation and Personality. New York: Harper, 1954.

Meltzoff, J. and Kornreich, M. Research in Psychotherapy. New York: Atherton, 1970.

Menninger, Karl, Mayman, Martin, and Pruyser, Paul, The Vital Balance, New York: Viking, 1963.

Merton, Robert K. Insiders and Outsiders, American Journal of Sociology, 1972, 78, 9-47.

Miller, James G. Living Systems. New York: McGraw-Hill, 1978.

Miller, Eric J. and Rice, A.K. Systems of Organization. London: Tavistock, 1967.

Myers, Jerome K. and Roberts, Bertram H. Family and Class Dynamics in Mental Illness. New York: Wiley, 1959.

Nadler, David A. Consulting with Labor and Management: Some Learnings from Quality-of-Work-Life Projects, In W. Warner Burke (ed.) The Cutting Edge: Current Theory and Practice in Organization Development. LaJolla, California: University Associates, 1978, pp. 262-277.

Oshry, Barry, Power and Position. Boston: Power & Systems Training, Inc., 1977.

Paolino, Thomas J. and McCrady, Barbara S. Marriage and Marital Therapy. New York: Brunner/Mazel, 1978.

Pennings, Johannes M. and Goodman, Paul S. Toward a Workable Framework. In Paul S. Goodman and Johannes M. Pennings (eds.) New Perspectives on Organizational Effectiveness. San Francisco: Jossey-Bass, 1977, pp. 146-184.

Perrow, Charles, The Analysis of Goals in Complex Organizations, American Sociological Review, 1961, 26, 854-866.

Porter, L.W., Lawler, E.E., and Hackman, J.R. Behavior in Organizations, New York: McGraw-Hill, 1977.

Purcell, T.V. and Cavanagh, G.F. Blacks in the Industrial World. New York: Free Press, 1972.

Rice, A.K. Individual, Group, and Intergroup Processes, Human Relations, 1969, 22, 565-584.

Roethlisberger, F.J. and Dickson, W.J. Management and the Worker. New York: Wiley, 1939.

Sachs, D.M. and Shapiro, S.H. On Parallel Processes in Therapy and Teaching, Psychoanalytic Quarterly, 1976, 45, 394-415.

Sayles, L.R. Behavior of Industrial Work Groups. New York: Wiley, 1958.

Sayles, L.R. and Strauss, George. The Local Union: Its Place in the Industrial Plant. New York: Harper, 1953.

Searles, Harold F. The Informational Value of the Supervisor's Emotional Experiences. Psychiatry, 1955, 18, 135-146.

Sherif, M. and Sherif, C. Social Psychology. New York: Harper and Row, 1969.

Simon, Herbert A. On the Concept of Organizational Goal, Administrative Science Quarterly, 1964, 9, 1-21.

Skynner, A.C. Robin, Systems of Family and Marital Psychotherapy. New York: Brunner/Mazel, 1976.

Slater, Phillip, Microcosm. New York: Wiley, 1966.

Smith, K.K. Behavioral Consequences of Hierarchical Structures. Yale University, Unpublished Doctoral Dissertation, 1974.

Smith, K.K. An Intergroup Perspective on Individual Behavior. In J.R. Hackman, E.E. Lawler, and L.W. Porter (eds.) Perspectives on Behavior in Organizations. New York: McGraw-Hill, 1977, pp. 359-372.

Sofer, Cyril. The Organization from Within. London: Tavistock, 1961.

Steele, Fritz. Consulting for Organizational Change. Amherst, Mass.: University of Massachusetts, 1975.

Storr, Anthony. The Integrity of the Personality. Baltimore, MD., Penguin, 1960.

Strauss, George. Tactics of Lateral Relationships: The Purchasing Agent, Administrative Science Quarterly, 1962, 7, 161-187.

Strauss, George. Workflow Frictions, Interfunctional Rivalry, and Professionalism: A Case Study of Purchasing Agents, Human Organization, 1964, 23, 137-149.

Te Selle, Sallie (ed.) The Rediscovery of Ethnicity. New York: Harper, 1973.

Trist, Eric L., Higgin, G.W., Murray, H. and Pollock, A.B. Organizational Choice, London: Tavistock, 1963.

Vacchino, R.B., Strauss, P.S. and Hochman, L. The Open and Closed Mind: A Review of Dogmatism. Psychological Bulletin, 1969, 71, 261-273.

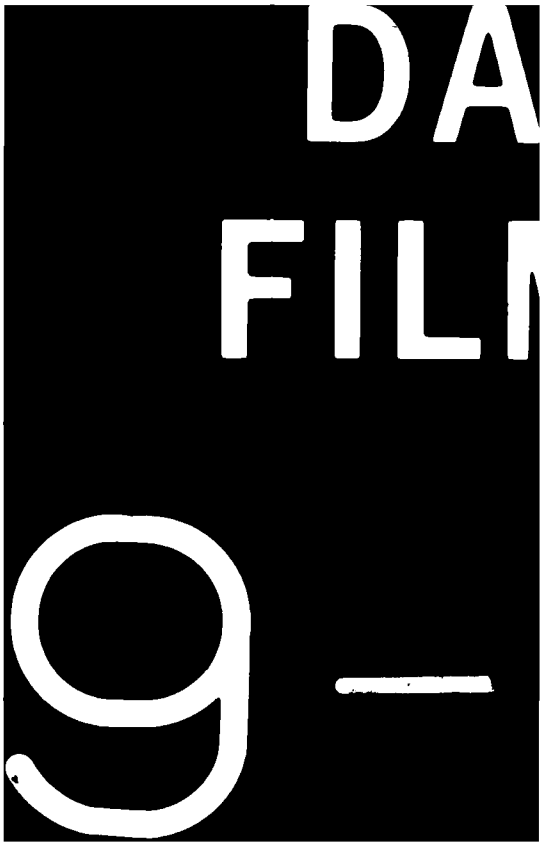
Van Den Berge, Pierre (ed.) Intergroup Relations. New York: Basic Books, 1972.

Weick, K.E. Educational Organizations as Loosely Coupled Systems, Administrative Science Quarterly, 1976, 21, 1-19.

Wells, Leroy, Jr. The Group-as-a-Whole. In C. P. Alderfer and C. L. Cooper (editors) Advances in Experiential Social Processes, Vol. 2, London: Wiley, pp. 165-199.

Whyte, W.F. Money and Motivation. New York: Harper, 1955.

Ziller, R.C. Toward a Theory of Open and Closed Groups. Psychological Bulletin, 1965, 64, 164-182.


DA
FILM
9 —