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PERSONAL AND CONCEPTUAL KNOWLEDGE IN
EDUCATION AND ADMINISTRATION.

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THE UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

PERSONAL AND CONCEPTUAL KNOWLEDGE IN
EDUCATION AND ADMINISTRATION.

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
degree of
DOCTOR OF PHILOSOPHY

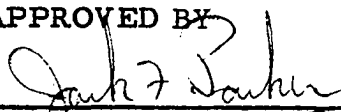

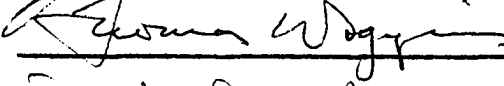

BY
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Norman, Oklahoma

1974

PERSONAL AND CONCEPTUAL KNOWLEDGE IN
EDUCATION AND ADMINISTRATION

APPROVED BY

DISSERTATION COMMITTEE

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PERSONAL AND CONCEPTUAL KNOWLEDGE IN
EDUCATION AND ADMINISTRATION:

CHAPTER I

INTRODUCTION

This dissertation contains two parts: an empirical part and a conceptual part. These two parts may be considered separately or together. The empirical part reports a study undertaken to compare the perceptions of professors of educational administration with those of practicing superintendents of schools concerning two dimensions of administrative skill: the personal dimension and the conceptual dimension. In general perspective, the question under investigation was: How are the artistic aspects of administration related to the scientific aspects in the perceptions of academicians and practitioners?

The conceptual part of the dissertation consists of two aspects. The first is a critical analysis of the relationships between the assumptions underlying both scientific and administrative methodologies. These relations are examined in historical perspective. The attempt is to show first that the assumptions of social science and administrations as they generally have been conceived

in this century are incompatible with one another. The attempt secondly is to show that this incompatibility need not continue--that science and administration may be conceived in such a way that they are compatible without violating either concept.

The second part of the conceptual portion represents a constructive analysis of educational administration. This analysis reintegrates the artistic and conceptual facets of both science and administration, and then permits the understanding that this evolved view of administration is actually coextensive with the fundamental educational process itself.

The empirical and conceptual portions of the dissertation are intimately related. The empirical study is based upon the theoretical premise, not that one dimension is more important than the other, but rather that one dimension may be more central than the other. Hence, central variables influence peripheral variables more than the converse. The proper strategy for the preparation of educational administrators is at issue. If the personal dimension is more central than the conceptual dimension, then beneficial changes in the personal dimension will have far-reaching implications for the administrator both as a conceptualizer and as a skilled performer in the field. If the personal dimension is more central while the conceptual dimension is beneficially changed, then the administrator may be as much frustrated as helped. In order to be helpful to administrators during their preparation, the central elements involved in administrative skill must be identified and influenced. Otherwise, the

administrator's education will be either ineffectual or it will be actually disintegrating to his performance in the field. (The centrality-peripherality rationale will be discussed further below.)

The conceptual endeavor in the dissertation also is hinged to the issue of centrality. Which dimension is the more central? Given that, how are the two dimensions functionally related? Given answers to these questions, how may one now construct a consistent cosmology for educational administration?

This dissertation seeks to answer the above questions in two ways: first, by discovering empirically how others in educational administration perceive the two dimensions as being related, and secondly by exploring the dimensions conceptually for their possibilities. It should be recognized that the conceptual endeavor is more extensive and deep-running than is required to support the empirical study per se. For this reason, the dissertation has been organized so that the reader, depending upon his purposes, may read either part alone or he may consider the two parts conjointly.

The remainder of this chapter consists of three parts: a synopsis of the empirical study and its findings, a discussion of the background and need for such a study, and a brief statement of its rationale. The critical and constructive analysis of educational administration will be presented in Chapters II and III.

Synopsis

It has long been a part of the folklore of educational administration that professors tend to an overly intellectualized appreciation of administration discounting the realities of the field, whereas practitioners tend to take a view failing to appreciate the benefits of disciplined analysis. Lacking objective evidence either to support or to deny this notion, the simple suspicion or prejudice has probably been sufficient subtly to disrupt many classrooms and other meeting of professors and practitioners. Will this notion stand up under empirical investigation? If so, professors and practitioners would thus be in a position to deal with it more rationally, analytically, and understandingly. If not, they can put aside their prejudices and meet each other on a more realistic and objective basis. If professors and practitioners can begin with a realistic, objective appraisal of each other as groups, then the way may be cleared for a more rational discussion of the relations between the personal and conceptual dimensions in administrative skill. Hence, the study has sociological relevance for the relations between academicians and practitioners, and psychological and administrative relevance for the relations between the personal and conceptual dimensions of administrative skill.

In the present study, national samples of professors and practitioners were asked to rank order two sets of statements in terms of centrality in administrative skill. The first set contained statements of educational objectives for the entire curriculum in the preparation of

administrators. The second set contained statements pertaining to contributions individual professors may make to individual students of administration. In each set, half of the statements were drawn from the personal dimension and half from the conceptual dimension. On the basis of folklore, it was hypothesized that professors would give greater centrality to the conceptual statements in both sets and practitioners would give greater centrality to the personal statements.

It was found that professors gave about equal centrality to both dimensions regarding objectives for curriculum, but that they gave greater centrality to the personal dimension regarding professorial contributions. Practitioners, on the other hand, gave greater centrality to the personal dimension in both cases. Hence, overall, the personal dimension was perceived as more central in administrative skill.

Professors received a third set of statements not sent to superintendents. These statements pertained to personal and conceptual strengths considered to be related to the professor's own career-long efficacy. In this case, it was hypothesized that professors would give greater centrality to the personal dimension. This hypothesis was not supported. Professors gave much greater centrality to the conceptual dimension with respect to their own efficacy.

In general perspective, it was found that differences in perceptions of the centrality of the two dimensions between academicians and practitioners were surprisingly few. This finding runs counter to the stereo-

typed notion mentioned above, but is consistent with recent surveys of the field such as that by Goldhammer.¹ As groups, both professors and practitioners seemed inclined to understand the two dimensions in an integrated or at least mixed way, but as individuals considerable polarization in terms of the dimensions was found. The personal-conceptual dichotomy remains as a potent construct used in organizing persons' approaches to administration, but it does not divide us along professor-practitioner lines.

Background and Need for the Study

The term personal as used here refers to several aspects of awareness. These aspects may be placed under the broad headings of intuitive knowing, human encounter, and existential choice. The term conceptual as used here refers to systematic analytical thinking about the administration of educational organizations. While it is not a precisely accurate characterization of the general problem to be studied, the reader may find it useful at the outset to think in terms of comparing and relating the existential with the positivistic or empiricistic approach to educational administration. Another useful idea by way of orientation is the relation between administration as art and administration as science. A third idea is the relation between the practice and the theory of administration.

¹ Keith Goldhammer, et al., Issues and Problems in Contemporary Educational Administration (Eugene: Center for the Advanced Study of Educational Administration, University of Oregon, 1967).

These three issues, while not identical, have evoked considerable debate for many years in educational administration. Currently, many of the professions are concerned with these issues.

In this context, recent years have witnessed a growing interest on the part of many professors of educational administration in moving away from traditional content and technique in the preparation of administrators. Also evident has been a continuing general dissatisfaction on the part of practicing superintendents with their preparation. Farquhar has reviewed the literature dealing with the evolution of content in administrator preparation programs.¹ Wynn has reviewed the changing emphases in instructional technique in the preparation of administrators.² Hence, no comprehensive review of these bodies of literature need be undertaken here. It is necessary, however, to place developments in administrator preparation within the present context and to define the relevance of the present study.

In the mid-1950's, a movement began in educational administration which was to have a profound influence upon the discipline during the following two decades. Many thinkers accepted the view that educational administration as a discipline could adopt the cosmology and methodologies

¹Robin H. Farquhar, Preparing Educational Leaders: A Review of Recent Literature (Columbus, Ohio: University Council for Educational Administration, 1972).

²Richard Wynn, Unconventional Methods and Materials for Preparing Educational Administrators (Columbus, Ohio: University Council for Educational Administration, 1972).

of the social sciences. Scientifically valid theories of educational administration could be developed, taught, and consequently applied by practitioners. Thus, not only could educational administration evolve as a scientifically oriented discipline in its own right, but it could incorporate relevant portions of the theory and research of the other social and behavioral sciences.¹

While much useful theory and research emerged from this trend toward developing a scientific basis for educational administration, so did numerous problems concerning programs for the preparation of administrators. The abstract focus of the theoretical and technical approaches led many to reassert the place of existential and/or human relations concerns in preparation programs.²

As a consequence of these developments, as Boyan has pointed out, preparation programs have lacked a conceptual Gestalt around which all of the disparate aspects could become organized.³ On the other hand,

¹ See, for example, A. P. Coladarci and Jacob W. Getzels, The Use of Theory in Educational Administration (Stanford: Stanford University School of Education, 1955; Roald Campbell and Russell (eds.), Administrative Behavior in Education (New York: Harper and Row, Publishers, 1957).

² See, for example, William F. O'Neill, "Existentialism and Education for Moral Choice," Phi Delta Kappan, XLVI (October, 1964), 48-53; Harry J. Hartley, "Humanistic Existentialism and the School Administrator," in Toward Improved Urban Education, ed. by Frank W. Lutz (Worthington, Ohio: Charles H. Jones Co., 1970).

³ Norman J. Boyan, "Problems and Issues of Knowledge Production and Utilization," in Knowledge Production and Utilization in Educational Administration, ed. by Terry L. Eidell and Joanne M. Kitchel (Eugene:

the concrete situation in which the administrator often finds himself today has become so complex and stressful that the patience required by a scientific analytical modus operandi has sometimes seemed impractical.¹

Thus the problem becomes clear: How may valid, task relevant information and efficacious modes of information processing be inculcated into prospective administrators such that the aims of education are furthered? This dilemma has been addressed in three ways. First, attempts have been made to broaden the content of courses in educational administration to include more of the social sciences and humanities.² Recently, however, the incorporation of social science in the curriculum has drawn criticism.³ Some students of the problem have concluded that

Center for the Advanced Study of Educational Administration, University of Oregon, 1968).

¹Goldhammer, et al; Van Miller, "The Superintendent of Schools," in Preparation Programs for School Administrators, ed. by Donald J. Lue and Herbert C. Rudman (East Lansing: Michigan State University, 1973).

²James G. Harlow, "Purpose Defining: The Central Function of the School Administrator," in Preparing Administrators: New Perspectives, ed. by Jack Culbertson and Stephen P. Hencley (Columbus, Ohio: University Council for Educational Administration, 1962).

³See the following sources: Keith Goldhammer, "Implications for Change in Training Programs," in Knowledge Production and Utilization in Educational Administration, ed. by Terry L. Eidell and Joanne M. Kitchel (Eugene: Center for the Advanced Study of Educational Administration, University of Oregon, 1968), p. 175; Luvern L. Cunningham and Raphael O. Nystrand, "Toward Greater Relevance in Preparation Programs for Urban School Administrators," Educational Administration Quarterly, V (Winter, 1969), 17; Luvern L. Cunningham, Lawrence W. Downey and Keith Goldhammer, "Implications for Administrator Training Programs," in The Social Sciences and Educational Administration, ed. by Lawrence W. Downey and Frederick Enns (Edmondton, Canada: University of Alberta, 1963);

prospective professors and practitioners of administration would be better served by differentiated preparation programs.¹

A second way out of the dilemma has been conceived in terms of developing new systems of knowledge utilization. This approach seeks to deal with the knowledge into practice problem in institutional rather than personal terms.² This approach is epitomized by the work of Boyan.³

The third approach to the problem has been through the growing use of reality-oriented instructional methods. These methods include internships, practicums, cases, seminars, in-basket techniques, games, simulations, role-playing exercises, and various human relations training methodologies. Students have been generally more enthusiastic about reality-oriented instructional methods than conventional methods. However, a number of problems concerning the efficacy of these techniques remain. These problems have been discussed at length by Wynn.⁴

Boyan, 35; Erwin R. Miklos, "The Behavioral Sciences and Educational Administration: Some Reconsiderations," in Educational Administration: International Perspectives, ed. by George Baron, Dan H. Cooper and William G. Walker (New York: Rand-McNally, 1969).

¹ Jack A. Culbertson and Robert H. Farquhar, "Content in Administrator Preparation," UCEA Newsletter, XII (April, 1971), 11.

² Terry Eidell and Joanne Kitchell (eds.), Knowledge Production and Utilization in Educational Administration (Eugene: Center for the Advanced Study of Educational Administration, University of Oregon, 1968).

³ Boyan, "Problems and Issues of Knowledge Production and Utilization."

⁴ Wynn, Unconventional Methods and Materials for Preparing Educational Administrators.

It becomes clear, then, that the relations between the personal, experiential aspects of administration and the conceptual, analytical aspects remains a problematical issue. The present study is an effort to make manifest the perceptions of practitioners and professors concerning this problem. Do professors and practicing superintendents share a more or less common conceptual Gestalt with respect to the aspects of administrative skill? Do professors and practitioners share Gestalts among themselves which differ between groups?

Conceptual Rationale for the Empirical Study

The conceptual rationale for the present study is quite simple. The rationale rests upon the notion that the human psyche is composed of (a) structures and (b) modes of information processing. Certain of these structures and modes have the effect of organizing others. Those structures and modes which are central organize those which are peripheral. That is, all of the elements which comprise the psyche are not equivalent structurally or functionally with respect to the total functioning of the psyche and behavior which results. Virtually all psychodynamic theories of psychology and some cognitive theories of psychology rest upon this notion. Some of the psychodynamic theories which can be interpreted as being based upon the concept of centrality-peripherality include those of Sigmund Freud, Alfred Adler, Otto Rank, Carl Jung, Karen Horney, Harry Stack Sullivan, Frederick Perls, Carl Rogers, Arthur Combs and Donald Snygg, and George Kelly. All of these theories have found support via a

variety of scientific methodologies.

The content of any of these theories is not at issue for the present empirical study. This study is not a test of any of these theories. The present study requires only the central assumption of these theories, namely, that the structures and modes of information processing which comprise the human psyche may be studied in terms of the dimension of centrality-peripherality. This study is descriptive and atheoretical in that it attempts simply to describe the empirical fact of how professors and practitioners perceive the centrality of elements of administrative skill which have been derived from the personal and conceptual dimensions. Concerning the basis of the empirical study, it is of no consequence whether the perceptions of any of the respondents are correct or incorrect in any theoretical context. Hence a review of psychodynamic literature would not be germane. The interested reader may consult Calvin S. Hall and Gardner Lindzey's Theories of Personality for highly regarded synopses of most of the theories cited above.¹ Rather than attempting to guide the reader at this point to the original sources of the theories cited, many of which appear in scattered form over many volumes of the authors' works, and even then not focusing explicitly on centrality-peripherality, it is suggested that the interested reader consult the conceptual portion of this dissertation wherein most of the theories are cited and referenced

¹(New York: John Wiley and Sons, 1957).

within a specific, integrated context.

The method and design of the empirical study are presented in Chapter IV and the results in Chapter V. The reader may turn there directly if he wishes to follow up on this introductory chapter. Or, he may proceed through the conceptual analyses of Chapters II and III before returning to the empirical study. Both parts are considered together in Chapter VI.

CHAPTER II

SOCIAL SCIENCE COSMOLOGY AND EDUCATIONAL ADMINISTRATION: A CRITICAL ANALYSIS

Preface to the Conceptual Inquiry

The empirical study reported in this dissertation rests upon the assumption of centrality-peripherality as outlined above. Because the empirical study is descriptive in nature, the idea of centrality may be taken as a simple one. Are the conceptual structures and functions of the psyche of the educational administrator governed primarily by the personal, experiential structures, or is the converse true? If the conceptual functions are more central, then preparation programs should emphasize these on the assumption that students' experiential capacities and hence their total administrative skill thus would be enhanced most efficiently. The converse would follow if experiential functions were found more central.

It is useful to know how professors and practitioners perceive the relations between these dimensions regardless of the correctness of their perceptions. It is also necessary, however, to attempt to determine the true and correct relations between the dimensions so that the results

of the survey may be evaluated vis-a-vis a criterion. Of course, any criterion drawn is also subject to an analysis of its veracity just as the statements given by respondents, but such a criterion will lend perspective to the survey results and also will have value independently.

Such a conceptual analysis is also needed for another reason. The assumption of centrality-peripherality regarding the personal and conceptual dimensions is deceptively simple. In psychology, the implications of the relations between experience and conception may be considered narrowly or broadly depending on the context of inquiry. In education, however, the implications of which dimension is the more central are very broad and very profound. The issue does not relate only to administrator preparation. The very definitions of education and of administration are called into question. If the personal, experiential structures and functions are found to have greater organizing power over the conceptual functions, then a thorough re-examination of the scientific approach to administration is required. This approach has assumed the centrality of the conceptual function. Following from this assumption, a very powerful image in educational administration and administration generally has devolved, namely that it is the function of administration to analyze, plan, structure, direct, and control behavior in educational organizations. Consistent with this image of administration has come the predominant image of the teaching function--that the teacher analyzes, plans, structures, directs, and controls the behavior of students. If it should become clear that

these images are antithetical to human nature with respect to its developmental possibilities, then not only teachers of administrators but education in general would have come upon a new developmental challenge. Because the administrative function is pivotal in the educational process, it is worthwhile to consider the broader question of the relations between the dimensions with administration as a focal point.

The critical analysis of "scientific administration" in education presented in this chapter and the constructive analysis which follows finds the experiential dimension to be the more central. In the following chapter, it is recognized that the centrality issue is one of both-and rather than either-or, but the relation is a complex one which cannot be discussed here. Even granting an organizing power to conception, however, the customary scientific approach to administration remains inappropriate. As was stated above, it is not to be argued here that science and administration per se are antithetical; they are so only in that we have defined them narrowly and mechanistically. In this chapter and the next, an evolved role for the function of disciplined analysis will be described vis-a-vis an altered conception of the administrative process. This redefinition of scientific administration will then be cast within the framework of an analysis of human information processing. This altered conception of educational administration will be shown to be consistent with the process of education itself--with the way human knowing evolves, becomes organized, and transformed into socially synergic behavior.

In summary, the attempt will be to define a single set of concepts with which to understand (a) the nature of social and administrative science, (b) the administrative process, (c) the educational process, (d) the process of human psychic development, and (e) the process of social evolution within the school. All of these processes will be seen as mutually integrated variations of the same underlying dynamics--dynamics which not only extend the range of evolutionary possibilities for human beings, but which inherently lead in the process to ethical conduct among men.

This analysis cannot accomplish all that has been promised; it is an outline, a bare beginning. It is a conceptual framework which attempts to structure the interrelations among a complex set of assumptions and processes. Its primary value to the reader is considered to derive from (a) raising questions about a variety of assumptions which often are taken for granted and the implications of the assumptions, (b) enlarging the scope of those psychic and social processes usually considered relevant in education, (c) extending the range of what is generally considered possible for schools to accomplish, and (d) delineating a limited set of concepts which comprehend diverse phenomena across levels of analysis and across academic disciplines.

While no such effort is likely to be as neat and clean as would be hoped, it is believed that such attempts are needed and may prove useful in education today.

With respect particularly to Chapter III, some further comments

to the reader are in order. The reader may expect to expend considerable effort in comprehending the ideas presented in Chapter III. Such effort is required for several reasons. Some ideas are inherently difficult to understand. For these, no amount of elucidation or clarification will make them easy. Second, some of the ideas brought forth may be unfamiliar. Third, and possibly the most vexing, is that most of Chapter III is descriptive of experiential modes of information processing which are by definition pre-verbal and post-verbal. To grasp the referents of these discussions, the reader must be prepared to go beyond the words themselves, and to recognize in his experience that which has been pointed to or evoked, often in the form of an image, a memory, or a personal example. Consider the following poem.

BEAUTY

The usually hateful crow:
 he, too--this morning,
 on the snow!¹

This poem conveys a very complex truth about living and knowing, but it is not a verbal or rational truth. The truth can be apprehended only as an image, because only in an image or symbol can facts which are

¹ By Matsuo Basho in Harold G. Henderson, An Introduction to Haiku (Garden City, New York: Doubleday Anchor Books, 1958), p. 46.

logically contradictory be resolved together without compromise in a sensible way which permits an appropriate response. The black of the crow and the white of the snow are opposites, yet in the image, they are not only contradictory, not only complementary, but also perfectly apposite in the situation--opposite yet of one and the same stuff. Likewise, the raucous, trouble-making nature of the crow is of one and the same quality as the silent purity of the snow on that morning even though the two remain as polar opposites. Likewise, the heat of the crow's emotion and the cold of the snow. Such an analysis only begins to hint at the meaning of the poem. By what stretch of the intellect could the poem be said to represent beauty? Yet obviously, it does. It would seem that the more one adds to the poem, the more he detracts from its meaning.

One could no doubt recall several experiences of his own wherein a hateful person has appeared in another light, realizing still that the person remains hateful all the while, but in that moment also he was not. When one appreciates such a many-sided, anomolous situation experientially, he can make an apposite response--often a gesture, a smile, a quip, a look of understanding, a tangentially related but appropriate comment--and thereby keep action developing forward. If one attempts to analyze, he becomes lost.

Chapter III is not an argument for the role of poetry in educational administration. Rather it is an effort to outline as explicitly as possible the operations performed by the mind in comprehending events and situations

which contain much meaning and many complex relations but which simply cannot be expressed with justice via discussive language. It will be suggested that the daily life of administrator, teacher, and student are constantly immersed in such complex situations and similar challenges to their experiential information processing faculties and that it is the acuity and the "fabric" and the evolutionary potential of those processes which play a key role in the development of skilled and even analytically sophisticated performances, be they scientific, administrative, or pedagogic. Hence, many of the ideas conveyed will take the form of examples, images, and "mental" experiments whereby the reader can grasp and test the veracity of the idea via his own direct observation rather than through the operations of his rational faculties. Science is based in part upon consensual verification of relations grasped through observation. In the present case, the events being observed in seeking consensus are inner rather than outer events.

The remainder of this chapter takes the following plan: First, the experiential-conceptual dualism is discussed to indicate the extent to which man has been concerned with it in the past philosophically and across cultures. Today this dualism is of intense concern in psychology, particularly in view of the fact that a neurophysiological basis apparently has been found for it. This section is explicitly concerned with the dualism

in terms of modes of human information processing.

The second section below defines the locus of personal responsibility of the educational administrator. As stated above, if the personal, experiential dimension is found to be more central, then the nature of the administrator's responsibilities for intervening in and bringing direction to the organization must be construed in a different way.

The third section below considers the question: What do educational organizations produce? Do they produce structured behavioral patterns in students which conform with a conceptual structure imposed upon the organization by administration or agreed upon via some consensual means, or do they produce persons as processes? That is, do schools produce fixed patterns of behavior or evolving indeterminant processes? A definition of educational administration must be cast in the same mold with the type of product and production processes which characterize education.

The fourth section considers the relationship between the modes of information processing and scientific procedure. Has the conceptual mode really been the more central in scientific endeavor at its best? It will be shown that the assumption of the centrality of conception in science has led to what Whitehead has called "The Fallacy of Misplaced Concreteness."¹ It will be shown that modern thinking in the physical sciences

¹ Alfred North Whitehead, Science and the Modern World (New York: New American Library, 1925), p. 52.

is no longer constrained by this fallacy, but that to a greater degree, social science has remained its victim.

The fifth section takes the Fallacy of Misplaced Concreteness as a framework and traces the historical development of scientific theory in administration. In this concept, it will be shown that the aim of science as discovery is fundamentally incompatible with the administrative aim of controlling organizational behavior, and that this incompatibility has become increasingly difficult to ignore.

In the conclusion of this chapter, the educational administrative function will be redefined such that it is consistent with a view of social science which recognizes the indeterminant nature of man.

Experiential and Conceptual Knowing

For the past 2,500 years or so, perhaps no other philosophical problem has bothered civilized man more than the relation between the experiential and the conceptual dimensions of existence.¹ One might go almost so far as to suggest that this has been the prime philosophical problem of civilized man to the present. It remains unresolved to the satisfaction of most of those who have concerned themselves with it and will probably continue as such for some time to come. Nevertheless, it seems doubtful that man can make great leaps forward in his evolution until he is able to move beyond this problem. Because education generically,

¹See the quotation from Walter Kaufman presented in the text in the following paragraph.

as it is regarded in this dissertation, is a major enterprise through which man collectively seeks to extend his evolution to higher forms of living, it seems incumbent upon educators to grapple with this problem.

As a case in point, one may consider the current issue of educational objectives. When virtually any educational objective is pressed beyond its strictly instrumental implications, it leads directly and inevitably to the ancient questions of what is real? How do we know? How is it possible to live? What is worth doing? and so on. All of these questions are aspects of the experiential-conceptual problem. If man hopes ever to be able to answer these questions in other than arbitrary ways, he must be able to move beyond the problem at hand. In this vein, Walter Kaufman states:

The existentialists have tried to bring philosophy down to earth again like Socrates; but the existentialists and the analytical philosopher are each only half a Socrates. The existentialist has taken up the passionate concern with questions that arise from life, the moral pathos, and the firm belief that, to be serious, a philosophy has to be lived. The analytical philosophers, on the other hand, insist--as Socrates did, too--that no moral pathos, no tradition, and no views, however elevated, justify unanalyzed ideas, murky arguments, or a touch of confusion. In Nietzsche--and more or less in every great philosopher before him, too--philosophy occurred in the tension between these two timeless tendencies, now inclining one way, now the other. Today this dual heritage has been developed in different camps, and between them they have made us aware of the pitfalls of traditional philosophy no less than of each other's faults. That the existentialists and analysts will get together is not likely. But if the feat of Socrates is really to be repeated and philosophy is to have a future outside the academies, there will have to be philosophers who think in the tension between analysis and existentialism.¹

¹Walter Kaufmann (ed.), Existentialism from Dostoevsky to Sartre (Cleveland, Ohio: The World Publishing Co., 1956), p. 51.

Rather than continuing to argue either the analytical position or the existential position, it is important to educational administration to move between the two positions with the hope eventually of transcending both. Today, such a movement is becoming increasingly apparent on many fronts of the behavioral sciences.¹ Perhaps the magnificent work of Carl Jung has brought us closer to a reconciliation of the problem than that of any man of the modern era. The conceptions expressed in this dissertation owe a heavy debt, not always explicitly expressed, to Jung's formulations.

For now, a partial tabular listing of philosophical and psychological concepts which imply the ground between the experiential and conceptual dimensions may serve as further orientation to the field to be investigated. In considering such a table, greater accuracy may be gained by using the concepts of digital and analogical modes of information processing in place of the conceptual and experiential dimensions. Man is the only creature so far as we know who is possessed of higher order

¹Abraham H. Maslow, The Psychology of Science (New York: Harper and Row, 1966); Michael Polanyi, Personal Knowledge: Towards a Post-Critical Philosophy (New York: Harper Torchbooks, 1958); Eugene T. Gendlin, Experiencing and the Creation of Meaning: A Philosophical and Psychological Approach to the Subjective (New York: The Free Press of Glencoe, 1962); Ernest Becker, The Denial of Death (New York: Free Press, 1973); Jan Ehrenwald, Parapsychiatry (Behavioral Science Tape Library, 1972); Herbert Bonniwell, The Human Equation (Behavioral Science Tape Library, 1972); G. Spencer Brown, Laws of Form (New York: Bantam Books, 1969); Malcolm Westcott, The Psychology of Intuition: A Historical, Theoretical and Empirical Inquiry (New York: Holt, Rinehart and Winston, 1968).

reason--save possibly the dolphin.¹ Reasoning entails making distinctions and making relationships between that which has been distinguished. Furthermore, reasoning entails abstractions; that is, forms dissociated from context.² Reasoning, then, occurs in units of a discontinuous nature, be they words, concepts, mathematical symbols or whatever.³ Each abstraction, by the fact that it is, implies that it is not something else or is not everything else. In the reasoning process, at least two are required for there to be one. Any "thing" requires at least the space in which it is located (physical or psychic space) to give it definition. Reasoning, then, is a digital process.⁴ Digital processes operate according to a yes-no, is-is not, go-no go principle--as with the digital computer.

Man is also characterized by another mode of information processing--the analogic. These processes are of a smooth, continuous

¹ John C. Lilly, The Mind of the Dolphin: A Nonhuman Intelligence (Garden City, New York: Doubleday, 1967).

² Harley C. Shands, "Outline of a General Theory of Human Communications: Implications of Normal and Pathological Schizogenesis," in Communication: Concepts and Perspectives, ed. by Lee Thayer (Washington: Spartan Books, 1967), p. 103.

³ Archetypal symbols in the Jungian sense are exceptions. They are not abstractions in terms of the definition given because they have no definite boundaries. They are at once abstract and concrete, unique and universal.

⁴ Jurgen Ruesch, "Nonverbal Language and Therapy," in Counseling: Readings in Theory and Practice, ed. by John McGowan and Lyle D. Schmidt (New York: Holt, Rinehart and Winston, 1969), pp. 485-494.

nature and operate according to a more or less just-as-it-is principle.

Interpreting the meaning of a smile or a hurried pace involves the analogic process, at least in the initial instance. Whereas the digital is more an analytical process, the analogic is a holistic and synthetic process. In educational administration, Halpin has given particular attention to the analogic in his chapter "Ways of Knowing."¹

Distinguishing between the digital and analogic processes is one way of epitomizing an essential distinction which has been made in many ways and in many cultures. The concepts listed below do not all mean the same but they have in common the distinction between the smooth, holistic, immediate way of knowing and the abstract, discrete, discontinuous, analytical way of knowing. These two cognitive processes and their interrelations are the focal point of the question being studied empirically and conceptually in this dissertation.

TABLE NO. 1. --Analogical and Digital Concepts

<u>Analogical</u>	<u>Digital</u>
<u>wu-wei</u> (The Taoist principle of "not making"--roughly "growing" or "flowering.")	<u>wei</u> "making," "building," or constructing"
<u>Moksha</u> (In Hindu philosophy, that which is without an opposite; that which is not inside or outside any class.)	<u>maya</u> boundary, division, definition, duality

¹ Andrew W. Halpin, Theory and Research in Educational Administration (New York: Macmillan and Co., 1966), pp. 283-300.

TABLE 1. --CONTINUED

<u>Analogical</u>	<u>Digital</u>
<u>prajna</u> (Buddhist term for "intuition")	<u>vijnana</u> (Buddhist term for the intellect or reason which arises from prajna)
tacit knowledge	explicit knowledge
primary process (psychoanalytic terms)	secondary process
classical intuition	reason
preconceptual experience	conceptualization
normal and pathological schizogenesis	
territory (a term of general semantics)	map
doing-undergoing	symbolizing
appositional mind	propositional mind
allocentric perception	autocentric perception
communion	agency

Clearly, one of the central problems of living--whether in the religious sense, the philosophical sense, the psychopathological sense, the scientific sense, the instrumental sense, or the daily life sense--is the mutuality of process or the articulation between the continuous and the discontinuous modes of consciousness. In recent years, the neurophysiological explorations of Roger Sperry have lent a biological perspective to

the analogical-digital duality. Studying patients whose right and left cerebral hemispheres have been separated surgically, Sperry found the predominant functions of the right hemisphere to coincide with the analogical side of the duality and the functions of the left hemisphere to coincide with the digital mode of process. Paul Bakan has presented the following table which summarizes functional differences between the cerebral hemispheres.

TABLE NO. 2. --Functional Differences Between the Cerebral Hemispheres

<u>Left Hemisphere</u>	<u>Right Hemisphere</u>
verbal	pre-verbal
analytic	synthetic
abstract	concrete
rational	emotional
temporal	spatial
digital	analogic
objective	subjective
active	passive
tense	relaxed
euphoric	depressed
sympathetic	parasympathetic
propositional	appositional

NOTE: Another tabular presentation of this duality and a more thorough review of its neurological basis may be found in Joseph E. Bogen, "The Other Side of the Brain: An Appositional Mind," Bulletin of the Los Angeles Neurological Societies, 34, No. 3 (July, 1969, 135-162.

Source: Paul Bakan, "The Eyes Have It," Psychology Today, IV (April, 1971), 66.

Bakan has also reported numerous personality characteristics to correlate with the dominance of one or the other hemisphere in individuals. Furthermore, Bakan states, "It seems very likely that the highest level of mental functioning at both the cognitive and the emotional levels involves hemispheric integration."¹ This neurophysiological hypothesis, then, parallels the focus of the present inquiry.

For the preparation of educational administrators, it seems crucial to develop a conceptual scheme which clears the way for the integration of the experiential and conceptual, or the analogic and digital, modes of consciousness while slighting neither. While it may seem remote at first glance, clearly this digital-analogical duality is a part of the heart of the theory-practice problem in educational administration as well as in education and life in general.

Personal and Collective Aims in Educational Administration

The position argued here is that the educational administrator, if he is seen as charged with responsibility for beneficially influencing what transpires educationally within the school or school system, must be able to conceive of that which is desirable with respect to educational means and ends. This statement may seem obvious, but one wonders, how many administrators actually have in their understanding a coherent

¹Paul Bakan, "The Eyes Have It," Psychology Today, IV (April, 1971), 67.

vision of the final, ultimate aims underlying their daily endeavors? The administrator must be able rationally to justify his conception of the desirable and must understand how this desirable process occurs. Regardless of how sound an administrative theoretical base the administrator employs to guide his actions, unless these actions are taken with clear reference to aims which have been thought through (or lived through) to their ultimate implications, then the administrator is flying by the seat of his pants just as surely as the administrator who follows the most naive, idiosyncratic, and/or unconscious theories. Does the administrator really want and intend to foster the kind of life processes which transpire in the typical school and the kinds of attitudes toward living and growing that most students assimilate in schools? That certain aims for education may be culturally mandated is not enough. The administrator must either personally affirm this mandate, make it his own, be able to justify it rationally, and take responsibility for the consequences of his actions, or he must deny it and affirm and justify and take responsibility for other aims. Because the administrator is an individual actor in the administrative field, and because it is assumed that integrity of action in the external world is contingent upon the integrity of internal processes, it is essential that the administrator be clear about his aims in a holistic sense and that he be personally committed to these aims. This matter of coming to terms with ultimate aims is not something one does in a few hours or a few courses or a few books. As we shall see, as an educator, coming to terms with ultimate educational aims is precisely coextensive

with coming to terms with the meaning of one's own life. For this reason we must be infinitely patient with each other and ourselves--and we must be willing to tolerate the anxiety of continuing to educate even while we do not have final answers. But we must recognize the seriousness of the question and diligently pursue the search.

What do Educational Organizations Produce?

Educational organizations are different than industrial organizations and even service organizations because the product is actually what happens inside the schools, not what leaves them. This distinction is crucial. It may be argued that observable behaviors produced by successfully accomplishing behavioral objectives are the products which the school outputs. But this conception will not hold. Persons may leave schools capable of certain behaviors, but it is the person exhibiting the behaviors or skills or whatever which is the factor, not the behaviors themselves. The person may "have" this behavior so long as he does not forget it, change it, see it in a new perspective, lose interest in it, misuse it, have a disturbing thought about it, etc.

Because human behavior is not entirely determined (it is in part indeterminant)¹, and because that portion of behavior which is determined is usually highly overdetermined (caused by many factors in complex

¹ Bonniwell, "The Human Equation. "

interrelations),¹ it seems doubtful that schools can ever reliably produce enduring observable behaviors without disastrous ancillary consequences. Any production design must be consistent with the nature of the material involved in doing the producing and the material being produced. If only the material of rubber is available with which to construct a facility for the construction of beams for bridges and buildings, and only rubber may be processed by the facility, then it is unlikely that bridges and buildings of strength and enduring structure could be created. Rubber beams built by rubber machines is nonsense. The process, the material, and the product are all inconsistent. By analogy, it is equally absurd to conceive of schools comprised of human beings and processing human beings as producing fixed, enduring behavioral structures. Human beings are the wrong kind of material with which to construct such a process. As Jung has taught us, the fundamental principle of the human psyche (and hence behavior) is the individuation and reconciliation of all with all. This process is always in movement, changing in form as well as content. Stoppages or blockages in this process lead not to higher levels of civilization but to pathology. Whenever one portion of the psyche becomes reified, compensatory processes are set in motion which undermine the stability and functionality of the reified element. Jung called one of these

¹ Perhaps the classic demonstration of the overdetermination of psychogenetic factors is Sigmund Freud's The Interpretation of Dreams in Standard Edition, Vols. IV and V (London: Hogarth Press, 1953).

compensatory processes entropic transfer--the inevitable transfer of energy from the light to the dark, from the conscious to the unconscious, from the ego to the shadow, from the over-differentiated to the under-differentiated, from the superior to the inferior.

Hence, when an individual is developing as human beings do, he may appear less predictable to the observer (in the customary empirical sense) rather than more predictable. If he is forced to be predictable, he may surprise us later with highly irrational behavior at the point where dissociated elements have acquired an overabundance of energy. Is it surprising that highly disciplined and orderly military men are the same men who calculatingly think about dropping hydrogen bombs and destroying millions of persons in a single stroke? Is it surprising that those young persons who go on shooting sprees in New Orleans and Austin and Los Angeles are so frequently described by their teachers as mild-mannered, polite, and obedient--model students? The point of this discussion is that the "product" of the school is not the behaviors in those leaving but rather the total of all that which is taken into account by those participating (including the staff)--with no guarantees that any of this will continue to exist in the same form when the person has left.

An example may bring out this point, even though the example is focused only upon the external half of reality. Consider that a teacher moves from one high school to another. Would this move make an important difference in his or her educating even though the two schools'

curricula were the same? If so, one is led immediately to doubt the whole notion that education can be centrally planned, packaged, and delivered. The teacher would suffer the breaking of close, meaningful ties with others and being uprooted from a community to which he felt a loyal commitment. He would begin taking into account the fascinating intellectual and emotional lives of new people individually and collectively. He would become a part of a new tradition or group history. He would accommodate to the new ecological surroundings of office and campus. He would be next to a different library, think ahead with a different administrator, take an interest in a new community, and so on. What a difference! If such a move would not make much of a difference in a teacher or his teaching, what an astonishing commentary this would be on the vitality of teacher and school. Teachers, administrators, and students are not interchangeable.

The prime concern of the educational administrator, then, entails all that which may be taken into account by participants in the process of their individual and collective becoming. The administrator, like the others, is possessed of personal agency in initiating matters to be taken into account. This idea is of central importance in the present study for the following reason: How administration is carried on results in different ends, not simply more effective or less effective ends as might be the case in another type of organization. Not only are educational aims selected by the administrator, but the process of aiming in the broad

sense is tantamount to education in itself. The administrator, like staff and students, participates in the educational process not so much toward the aim of producing organizational outputs as toward the aim of building or growing a communication process which has legitimacy in its own right.

A grasp of this communication process is facilitated for all concerned by conceptually discovering its structure and communicating its structure in such a way that it can be taken into account and shared by all. The structure of the educational communication process as it is known conceptually is a convenience for participants which facilitates their tendency to behave synergically. If individuals regulate their own thought and action in terms of its relativity to that of others, then it is helpful and convenient to know what others are thinking and doing. Organizational structure, then, together with finding conceptual structure in events (via social science theory, for example) are processes which follow the emergence of concretely real events in the educational organization. Structuring serves the function of taking stock of where we are, where we have been, and where we are heading in our continuing individual and collective emergence. Hence, structuring does not determine emergence of process, in which case the structure is taken as real and the actual process is taken to be in varying degrees of error or randomness. Rather the process determines the conceptual structure in which case the process is taken as real and the structure is taken as problematical.

Organization theory and social science theory should not be used

to determine how people ought to behave and relate in organizations. The purpose of the science of man is not to serve as a tool toward the end of coercing the behavior of man such as to confirm the theory. That would be science backward. Our conceptual facility should help us better take account of what we are "naturally" doing or being inclined to do--thus to do it differently or to do it better if we so choose. As science is based upon the fundamental assumption of order in natural events, so must it assume and have faith in an orderliness in human events.

There is a singular difference between physical processes and human processes, however. Physical processes may be assumed, perhaps erroneously, to have a constant orderliness whereas human processes must be taken to have an emergent orderliness.¹ Because a set of concepts may predict an individual or collective with great accuracy today does not mean that it will have the same accuracy or even utility tomorrow. In the human sciences, theories need to be overhauled periodically and replaced not only because of inadequacies inherent in the theories but also because the human beings explained by the theories are themselves changing as are some of the rules by which they behave. Because man is indeterminant matter, "Matter III" to use Bonniwell's term² and evolving, then the

¹The research of Tsung-Dao Lee and ChenNing Yang dealing with the beta electron of radioactive cobalt led to the overthrow of what is known in physics as the invariant law of parity. Together with Heisenberg's Principle of Indeterminacy, some physicists have been led to hypothesize the uniqueness of every nuclear event. See also Philip Morrison, "The Overthrow of Parity," Scientific American (April, 1957).

²Bonniwell, The Human Equation.

sciences of man can only attempt to encompass man as he now is in their efforts to keep pace with what he is becoming.

Now since education is the generic term which refers to man's conscientious collective or social efforts to know as he becomes, the role of the educational administrator begins to become manifest. In essence, the administrator's first task is, operating at the system boundaries of the organization,¹ to keep pace with emergent reality within himself, the organization, and the organization's environment. This "keeping pace" may be conceived in information processing terms. Second, he converts the processed information into a form which may be meaningfully taken into account by others. The information is processed via all means which comprise us as humans--extrasensorily, intuitively, experientially, kinesthetically, conceptually, and spiritually. The criterion toward which the information is processed is: does this extend the range, depth, and integrity of human experience, knowledge, and action? The progression or retrogression of the process turns on the individual's choice to promote life or to promote death.

The experiential dimension, then, which includes the analogic mode of information processing, the aim of extending the range, depth, and integrity of human experience, and the personally affirmed commitment to this aim, is seen as more central in terms of both time and social and

¹A. K. Rice, The Enterprise and Its Environment (London: Tavistock Publications, 1963).

psychological space than the conceptual dimension, although both dimensions are equally essential in the total process. The personal or experiential dimension is the seat of "qualitativeness" about which Dewey states:

. . . The underlying unity of qualitativeness regulates pertinence or relevancy and force of every distinction and relation; it guides selection and rejection and the manner of utilization of all explicit terms. This quality enables us to keep thinking about one problem without our having constantly to stop to ask ourselves what it is after all that we are thinking about. We are aware of it not by itself but as the background, the thread, and the directive clue in what we do expressly think of. For the latter things are its distinctions and relations.¹

It is this dimension of knowing which Dewey calls qualitativeness and which Michael Polanyi terms "tacit knowledge" and "subsidiary awareness,"² which underlie and organize the administrator's selection of theories and explanatory hypotheses, the selection of organizational events to be attended to and responded to, and indeed the recognition of desired organizational directions.

Now if it is this qualitativeness which regulates the observation, analyses, and behavioral directions taken by scientists, administrators, teachers, and students, then it becomes crucial that those concerned with education be able to grasp its role. Pressing, fundamental questions are raised. Can qualitativeness be validly and reliably observed? Are there different types or orders of qualitativeness? Are some types better than

¹ John Dewey, On Experience, Nature and Freedom (Indianapolis: The Bobbs-Merrill Co., 1960), p. 182. *Emphasis added.*

² Polanyi, Personal Knowledge, p. x.

others? What are the educational consequences stemming from the different types? What would the Board of Education look for when interviewing a prospective superintendent? How would qualitiveness be observable in the classroom? How may one person strengthen the qualitiveness of another? Does the idea of qualitiveness describe processes at the organizational level of analysis?

The following section shows that the frequent misunderstanding (or the simple ignoring) of qualitiveness in social science has led to an image which has the effect of debilitating scientific and administrative acuity and development rather than facilitating it.

Science and the Fallacy of Misplaced Concreteness

Science is a very powerful social force as well as an approach to inquiry. Science is not only a collection of symbolic paradigms through which we construe the world, and not only a set of rules and procedures which we agree are useful and necessary for arriving at certain types of truths; science is also a tradition and a way of life valued in its own right. In this sense, science is an end in itself--a chosen way of disposing ourselves among other ways. Through science, we may participate with others in a joint venture which lends meaning to living.

It is proper then that we should be passionate about science--about being scientific--even as we attempt to make certain that our passion does not cloud our vision but rather energizes it. Our passionate allegiance

to science as a social tradition and as a bulwark of meaning, however, may incline us toward certain errors and fallacies if we are not watchful. We are tempted to confuse the trappings of science and the techniques of science with the actual process of sciencing. In this respect, Thayer has distinguished between science and scientism:

Scientism is pseudoscience, bureaucratized science, parodized science. Scientism deifies the methods and the trappings of science. Its ideologies are its techniques; the primary if not the sole justification for inquiry is the elegance and the current popularity of the techniques employed. . . This desire to appear scientific, to identify oneself and one's intellectual endeavors as scientific, has achieved the proportion of a cultural mania. Its underlying assumptions have become so deeply imbedded that we no longer recognize them as assumptions. As Harley Shands observed recently, ". . . scientific method is itself the kind of one-sided, eccentric application of symbolic method that we would characterize as neurosis were it found in a patient complaining of distress."¹

In considering the role of the scientific approach to understanding, in educational administration, it is important to distinguish between science in its true sense and science in its scientistic sense.

One of the principal values of science is objectivity--the endeavor to grasp nature as it is rather than as we wish it were. Reacting to the mysticism of the medieval period, Francis Bacon, one of the fathers of modern science, remarked:

We have also houses of deceits of the senses, where we represent all manner of feats of juggling, false apparitions, impostures, and illusions, and their fallacies. . . But we do hate

¹Lee Thayer (ed.), Communication: General Semantics Perspectives (New York: Spartan Books, 1970), pp. viii-ix.

all impostures and lies, in as much as we have severely forbidden it to all our fellows, under pain of ignominy and fines, that they do not show any natural work or thing adorned or swelling, but only pure as it is, and without all affectation and strangeness.¹

Both rationalism, in the deductive transcendental sense, and mysticism have been viewed as antithetical to science.² Science seeks to observe the natural order in events. Order is sought by (a) observing events through the senses (directly or through instrumentation), (b) proceeding inductively to form hypotheses of the relations between events, (c) testing hypotheses by the arrangement of antecedent conditions together with consequent conditions while narrowing the sets of conditions under which observations may be observed, (d) inducing generalizations from the observations, and (e) deducing hypotheses from the generalizations. Hans Reichenbach calls this procedure the "hypothetico-deductive method" or "explanatory induction."³ Hence, careful reasoning combined with objective observation in deriving the products of science.

The product of science thus conceived is a symbolic structure which obtains correspondence with event processes, at least insofar as predictive utility is concerned. Because the manifestations of science take symbolic form, not only can the referents for events be manipulated

¹Richie Calder, Man and the Cosmos (New York: New American Library, 1968), p. 29.

²Hans Reichenbach, The Rise of the Scientific Philosophy (Berkeley: University of California Press, 1951), pp. 252-275.

³Ibid., pp. 95-114.

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³Ibid., pp. 95-114.

at a distance from the concrete, but also these symbol systems may be shared among men. Reality may be subjected to consensual verification and thereby made firmer. In this way, science becomes a social enterprise in addition to an individual one. It becomes an enterprise in which the particularity of the individual is in many ways submerged in favor of the universality of conceptual systems.

Science seeks also simplicity and generality. The diversity of individual events is brought within the pale of general laws. The shared symbolic structure containing the general laws becomes a criterion in terms of which individual events may be evaluated. The scientist attempts conceptually and empirically to bring each relevant particular into conformance with the symbolic paradigm. When particulars do not conform, the search is triggered for error. The theory of probability is used to determine the degree of confidence with which the general paradigm may be held really to account for the order in the relations observed in spite of some level of variation in the concrete observations. In social science, the magnitude of the effect is qualified by the variation among particulars to determine the confidence one may have in the causal relations hypothesized according to the symbolic paradigm. The error variation observed is ascribed either to chance, to faulty observation, or to the paradigm itself. Using error as a qualifier, then, the attempt is to confirm that reality does or does not correspond with the symbolic paradigm--with some particular level of confidence; the attempt is not to uncover the

unique properties of each observed event.

For example, nearly identical rats (genetically) under identical conditions of food deprivation may learn the same maze at different rates. Rather than concluding that these rats must think differently or go about managing their lives differently, the conclusion is that the variation observed is due to chance factors. If this variation is not too high, the conclusion is made that food deprivation is causally related to learning, and from this, a hunger drive may be conceptualized and tested further.

This brief overview of scientific method seems clear-cut enough. But in fact it contains many subtle and important issues. Polanyi has discussed these issues more thoroughly than can be done here.¹ First, one cannot assume that true scientists proceed only from observable facts and within known paradigms. That most scientists have proceeded in this way does not indicate that science itself is so constrained. As Kuhn has shown, our conventional image of science is based not upon the ventures of great scientists but upon those of what he termed "normal scientists."² Discovery in science has very frequently involved a form of knowing by the scientist which went beyond reasoning from observable facts and known paradigms--from Copernicus' putting "himself wildly, speculatively into

¹Polanyi, Personal Knowledge, pp. 3-48.

²Thomas Kuhn, The Structure of Scientific Revolutions (Chicago: The University of Chicago Press, 1962).

the sun"¹ to Kepler's fantastic musical analogies.² Kekule first dreamed the benzene ring.³ Einstein intuited relativity at the age of sixteen. These latter ways of knowing will be considered in the following chapter. For now, there are two other "second thoughts" about the image of normal science which would have deep implications for educational administration and require examination. The first involves what Whitehead called "The Fallacy of Misplaced Concreteness,"⁴ The symbolic structure itself erroneously may be taken as the primary and concrete reality rather than the reality to which the structure points and refers. The structure provides a range of explicit implications within itself. But in relation with real events in nature, the structure provokes a range of implications for man which are indeterminate in scope. This relation, which binds the comprehension of man to the true but indeterminate implications of real events through the medium of rational structures is scientific objectivity in the deepest sense.⁵ The knowing and the known are concrete. Abstraction is the medium. If one thinks of administration while reading the following

¹J. Bronowski, Science and Human Values (New York: Harper Torchbooks, 1965), p. 12.

²Polanyi, Personal Knowledge, p. 7.

³Isaac Asimov, Asimov's Guide to Science (New York: Basic Books, 1972), p. 484.

⁴Whitehead, Science and the Modern World, p. 52.

⁵Polanyi, Personal Knowledge, p. 7.

passages from Whitehead, he will grasp the present thesis in a nutshell.

Whitehead states:

There persists . . . the fixed cosmology which presupposes the ultimate fact of an irreducible brute matter, or material, spread throughout space in a flux of configurations. In itself such material is senseless, valueless, purposeless. It just does what it does do, following a fixed routine imposed by external relations which do not spring from the nature of its being. It is this assumption that I call "scientific materialism." Also, it is the assumption which I . . . challenge as being entirely unsuited to the scientific situation at which we have now arrived. It is not wrong if properly construed. If we confine ourselves to certain kinds of facts, abstracted from the complete circumstances in which they occur, the materialistic assumption expresses these facts to perfection. But when we pass beyond the abstraction either by more subtle employment of our senses, or by the request for meanings and for coherence of thoughts, the scheme breaks down at once.¹

He continues:

. . . Thought is abstract; and the intolerant use of abstractions is the major vice of the intellect. This vice is not wholly corrected by the recurrence to concrete experience. For after all, you need only attend to those aspects of your concrete experience which are within some limited scheme. There are two methods for the purification of ideas. One of them is dispassionate observation by means of the bodily senses. But observation is selection. Accordingly, it is difficult to transcend a scheme of abstraction whose success is sufficiently wide. The other means is by comparing the various schemes of abstractions which are well founded in our various types of experience. This comparison . . . [entails] the faith that at the base of things we shall not find mere arbitrary mystery. The faith in the order of nature which has made possible the growth of science is a particular example of a deeper faith. This faith cannot be justified by any inductive generalization. It springs from direct inspection of the nature of things as disclosed in our own immediate present experience. There is no parting from your own shadow. To experience this faith is to know that in being ourselves we are more than outselves: to know that our experience, dim and fragmentary as it is, yet sounds to the utmost depths of reality: to know that detached details merely in

¹ Whitehead, Science and the Modern World, pp. 23-24.

order to be themselves demand that they should find themselves in the system of things: to know that this system includes the harmony of logical rationality, and the harmony of aesthetic achievement: to know that, while the harmony of logic lies upon the universe as an iron necessity, the aesthetic harmony stands before it as a living ideal moulding the general flux in its broken progress towards finer, subtler issues.¹

Insofar as the administrator construes the school materialistically, he loses the ability to take recourse in his experience and to see, beyond his abstractions, those "finer, subtler issues" on which both education and administration turn.

The second caution regarding our conventional image of science is implicit in the fallacy just noted. It is that science, particularly the science of man, can no longer cling to what Whitehead terms the "doctrine of simple location." This doctrine of scientific materialism holds that material is unaffected by space and time except insofar as its relative position is altered. In Whitehead's words:

For, if in the location of a configuration of matter throughout a stretch of time, there is no reference to any other times, past or future, it immediately follows that nature within any period does not refer to nature at any other period. Accordingly, induction is not based on anything which can be observed as inherent in nature.²

The materialistic ideal to which Whitehead takes exception was stated by Laplace in 1820:

An intelligence knowing all the forces acting in nature at a given instant, as well as the momentary position of all things in the universe, would be able to comprehend in one single formula

¹ Ibid., pp. 24-25.

² Ibid., p. 52.

the motions of the largest bodies as well as the lightest atoms in the world provided that its intellect were sufficiently powerful to subject all data to analysis; to it nothing would be uncertain; the future as well as the past would be present to its eyes. The perfection that the human mind has been able to give to astronomy affords a feeble outline of such an intelligence. Discoveries in mechanics and geometry, coupled with those in universal gravitation, have brought the mind within reach of comprehending in the same comprehensive formula the past and future state of the system of the world.¹

With respect to the nature of man, when it is presupposed that such nature may be educed simply by spacializing (objectively structuring) relations which presently obtain, the processual, organic character as well as the indeterminant character of man is abnegated. It is becoming increasingly clear that the future state of man or even of a man can never be predicted on the basis of a formula structuring all the forces acting in a given instant together with the momentary position of all things. Yet much of social science and administrative science seems to continue to seek such a formula which will once and for all indicate what man will become on the basis of a momentary snapshot. In physics, this image was thrown into doubt if not cast out with the advent of Einstein's perspectives of relativity and Heisenberg's Principle of Indeterminacy. Social science, in large part, has continued to grasp for man through the more static, cause-and-effect Newtonian perspectives without attempting to encompass relative change within and between percipient and percipiendum.²

¹Calder, Man and the Cosmos, pp. 36-37.

²Shands, "Outline of a General Theory in Human Communications," 97-134.

While the mechanistic Zeitgeist is changing, there is little doubt that the machine conception of man continues to exert a powerful influence. Von Bertalanffy states:

The evolution of science is not a movement in an intellectual vacuum; rather it is both an expression and a driving force of the historical process. We have seen how the mechanistic view projected [itself] through all fields of cultural activity. Its basic conceptions of strict causality, of the summative and random character of natural events, of the aloofness of the ultimate elements of reality, governed not only physical theory but also the analytic, summative, and machine-theoretical viewpoints of biology, the atomism of classical psychology, and the sociological bellum omnium contra omnes. The acceptance of living beings as machines, the domination of the modern world by technology, and the mechanization of mankind are but the extension and practical application of the mechanistic conception of physics. The recent evolution in science signifies a general change in the intellectual structure which may well be set beside the great revolutions in human thoughts.¹

Shands finds a parallel between the evolution of the human nervous system with the evolution of science. The evolution of the nervous system "takes a kind of dialectical course, with new potentialities emerging repeatedly as improvements in analytical methods set out on the background of an older pattern of integrative process."² A subsequent synthetic step is modulation in which case a choice can be made whether to use the analytical or the integrative approach. Shands states:

Adopting this paradigm as a model, it is then possible to wonder if we do not see something of the same process in historical perspective in relation to cultural process. To the older integrative

¹Ludwig Bertalanffy, Problems of Life (New York: Wiley and Sons, 1952), p. 202.

²Shands, "Outline of a General Theory of Human Communications," 97.

techniques of faith dominant in a religious era, there has occurred as antithesis the analytical method of inquiry in science which has occupied an unchallenged priority in the modern world. The synthetic view which now appears to be emerging in increasingly influential fashion is that both the integrative religious methods which are so important in the formation of a social group, and the analytical scientific methods which allow us to break down observables into manageable portions, can be seen as variants of communicational methods.¹

Shands foresees communication as a massive new "meta-discipline" combining elements of existing approaches throughout the arts and sciences. Defining reality communicationally releases us from the sometimes comforting but ultimately alienating image of mechanism and requires us to take responsibility for the realities we create.

In the epistemological revolution of the twentieth century we have come to understand that what is is what can be communicated in some coded form. What cannot be so managed remains unknown, and as we develop new means of reaching out into a presumably (but never certainly) existent universe, that universe will by token of the new messages achieve novel form, repetitively and perhaps endlessly. The revolutionary idea is most precise in its denial of the individual existence of any thing or object; the mutuality of process between the putative object and the putative subject is the new basis for understanding.²

To sum up what has been said so far, science has produced wondrous and remarkable feats. In its highest sense, science transcends even its own symbolic constructions of reality and allows in man's experience the comprehension of true but indeterminant implications of events. As such, science is a high form of participation in the drama of man's evolution as a life form. But science as a way of life and as a way to life can

¹ Ibid., p. 98.

² Ibid., p. 102.

become perverted when the abstract forms to which it gives birth are mistaken for the concrete reality they purport to represent. Then, as the concept is withdrawn from its true and real context, the scientist too withdraws from passionate participation in the way of science and becomes two-dimensional. No longer the expression of a love of living, science becomes neurotic, obsessional, autistic--alienated from its roots in humanity. As the scientist's doubts are projected onto the universe, the universe becomes lifeless, mechanical, threatening, and perhaps insidiously entropic. The social sciences, faced with a far more problematical segment of reality than the physical sciences, have taken extra pains to play it safe. In general, it would seem that the tenets of objectivity, impersonality, simplicity, and universality have been insisted upon with such single-mindedness that they serve more to defend the scientist against becoming aware of the n-dimensionality of concrete human experience and behavior rather than serving as reasonable, egoistic guides helpful in making knowledge communicable. When thought, discourse, and experience occur only within abstract systems and not from them, then the objective view of man becomes simply untrue. (Maslow has discussed at length the interdependent relations between the nature of the fruits of science and the individual and institutional nature of scientists.¹)

¹ Maslow, Psychology of Science.

Scientific Administration: A Contradiction
in Terms?

The view of man as ultimately knowable in mechanical terms has produced enormous difficulty for the understanding of organizational administration. Just as mechanistic presuppositions led to the classical mechanistic theories in physics, mechanistic presuppositions have led to mechanistic theories of organization--theories which attempt to predict organizations by isolating complexes of forces operating upon abstracted elements during a cross-section of time.

But a further twist is added with the concept of administration. It is presumed with respect to the natural world that nature will continue to nature just as she really does regardless of man's intervention. Man may conquer nature by seeding the clouds or destroy nature by polluting the air, but still the presumption is that nature will continue to do as she naturally does quite without man's continuous tinkering with her. Nature is presumed to be a determined phenomena save in the realm of subatomic physics. Science assumes an orderliness inherent in physical nature waiting to be discovered.

With respect to organizational administration, a kind of schizoid thinking ensues. On the one hand, social scientists, like their physical science counterparts, have generally assumed that organizational behavior is naturally lawful and regularized. They have seen their task to be the discovery of these laws in terms of human motivations, group dynamics, information theory, organization-environment dynamics, intergovernmental

relations, etc. The expectation is that once all the variables and their relations and dynamics are found, the organization will be predictable forever after--that is, we will have the algorithm with which to program the giant organization computer, which if kept supplied with all the relevant and changing data, will make the future certain. We may tinker with social processes as we do with physical processes, but the processes themselves are assumed to be timeless, immutable, entirely enmeshed in a web of causal relations. That matters appear chaotic at times results from our lack of complete knowledge of this web, or simply by chance.

Now contrawise, it appears that the assumption underlying the whole idea of administration as popularly conceived is that organizations naturally entrophy or seek chaos--rather precipitously in fact--and that the fundamental task of administration is to prevent the natural decay of order by imposing a humanly conceived order upon the natural order. The scientist takes the position: This organization is held together by forces we do not yet completely understand. The administrator takes the position: if it were not for us (administrators) this place would be chaos. The true scientist trusts in order (albeit not a static order) even though he often cannot see it. The administrator sees the order even though he does not trust it.

It may be argued that formal organizations are contrived systems of determined forces, but this is a contradiction in terms. Is the fact of hierarchial structure in an organization a contrivance of the management

or the manifestation of human nature organizing itself in a goal seeking manner? If it is conceded that the administrator can decide to alter the structure to a more horizontal one, say, then it is also implicit that a subordinate human being could make a similar unilateral decision of some kind which would abrogate human nature. If the administrator's decision is not a determined phenomenon, neither are the decisions of others in the organization. Organizational coherence then comes to rest directly upon consensual personal agreement--a process which is obviously far from determined. If participants in the organization can choose to dispose themselves one way rather than another--even if their dispositions are subtle variations, even if they choose not to choose or to take responsibility for themselves--then it cannot be said that the mechanistic scientific assumption of determinism is valid. After all, where would the science of chemistry be if chemicals, by their own volition could elect to vary their behavior somewhat from situation to situation? In short, if it is granted that organizations are contrived at all, then it must be granted that they are very contrived by all concerned. To the extent that they appear determined, it may be that one is viewing the many ways of failing to take responsibility for ourselves of which man is capable.

If the contrary position is taken that deterministic forces are so functional that regardless of what the administrator does or the nature of his volition, the organization will continue in its own way--that is to say the administrator makes no difference--then why study administration?

In such a view, administration whether as science or as art or as both is only an illusion. Furthermore, if the administrator makes no difference irrespective of his knowledge, skills, personal qualities, then, of course, no one else does either. Thus, the whole organization--in fact the entire formally organized aspect of society--becomes no more than a mechanism going its own way just as any other natural process quite without regard to anyone. None of us is more than an interchangeable part in a process as impersonal as the seasons.

Hence, when mechanistic scientific assumptions are accepted, the very term scientific administration becomes a logical muddle. If one grants the concept of administration, implying the volitional contrivance and control of organized behavior, he must grant human choice and accept self-responsible consensus and/or mass failure to take responsibility as the ultimate foundation of human conjoint goal-seeking activity. This acceptance runs counter to the deterministic assumptions of science. On the other hand, if one wishes to be scientific and proceed on the assumption that A inevitably causes B given that all the conditions are known, then the idea of administration is completely superfluous because even the administrator's own behavior is caused by the prevailing conditions and he cannot change those conditions unless he willfully chooses to do so which means that those others whose behavior he is planning to cause to be different can also choose to alter the conditions or vary their response and hence the administrator's scientific knowledge of how behavioral outcomes are inevitably determined is put to disarray.

It might be added in this connection that Skinner's behavior modification is not a science of behavior in the broader context but is instead a technique for the exercise of power. The modifier must choose his aims and must choose to exercise the techniques. The one whose behavior is modified must choose to have it modified, be tricked into it, or simply slide into it by virtue of lacking the very qualities of awareness and responsibility for choice which led the modifier to apply the technique in the first place.

The contradictions implied in the idea of scientific management have been a continual problem to those attempting to reconcile theoretically science and administration. A plethora of theoretical half measures and in many cases an aura of intellectual disingenuousness have resulted.

In the early period of the development of administrative theory, matters were more clear-cut. When Frederick Taylor presented his scientific principles for the efficient organization of work tasks, and when Henri Fayol and those formalists who followed delineated administration as planning, organizing, commanding, coordinating, and controlling, it is now clear that they were simply exhorting the manager to be thoughtful, reasonable, astute, and analytical in the wielding of his authority.¹

Mary Parker Follet's contribution, in many ways perhaps the most portentous and enduring of any to date, was also straight-forward but in a different way than the formalists. Her concepts of integrative unity, inter-

¹Luther Gulick and L. Urwick, Papers on the Science of Administration (New York: Institute of Public Administration, Columbia University, 1937).

penetration, and continuous decision were not really "how to do it" prescriptions nor necessarily conceptions of "the way things are"; she was nonempirical in the usual sense. Rather, she called attention to subtle, underlying, organismic processes which may be facilitated toward the end of integrity if adequately appreciated by participants at all levels in the organization.¹ Her guiding assumption seemed to be that human enterprises can grow in integrity and refinement and commitment if participants would adopt an "oozing and flowing" mutually participative perspective. Her vision was that rather than try to actualize through behavior a symbolic conception of how the organization should be, that participants should allow their own individual and conjoint conceptualizing to play upon the complex and many-sided processes as they actually occur in the organization and in this respect her views were consistent with the conceptions being developed in this inquiry.

Follet has been variously classified with both the classical and human relations approaches whereas she might most appositely be placed in a class to herself. Her image of organizational process as "evoking, interacting, integrating, and emerging"² did not fit squarely with any approach prior to that associated with the Tavistock Institute³ to this

¹ Elliot Fox, "Mary Parker Follet: The Enduring Contribution," Public Administration Review (November-December, 1968), 520-529.

² Joseph L. Massie, "Management Theory," in Handbook of Organizations, ed. by James G. March (Chicago: Rand McNally, 1965), p. 395.

³ Rice, The Enterprise and Its Environment; Cyril Sofer, The Organization From Within (London: Tavistock Publications), 1961).

writer's knowledge.

While the traditional or formalist school of administration generally languished during the score of years beginning in 1935,¹ the human relations approach gained ascendancy. Rothlisberger and Dickson conducted the empirical research which perhaps more than any other led the way into the human relations approach.² They set out in a very traditional fashion to discover the effects of illumination upon worker productivity. When they had completed their studies at the Western Electric Company, they had made two very unexpected findings: (a) that any change they introduced in the physical conditions of work, when taken together with their concern shown toward workers when orienting them to the experimental situation, resulted in higher productivity, and (b) that the informal organizational variables entailing social codes, conventions, traditions, interpersonal sentiments, and so forth were more influential in determining collaboration between workers and management, and workers and workers than were formal organizational variables. This line of research was carried further in the work of Zaleznik, Christensen and Rothlisberger.³

Another inquiry frequently considered basic to the human relations

¹ Massie, "Management Theory," 403.

² F. J. Rothlisberger and William J. Dickson, Management and the Worker (Cambridge: Harvard University Press, 1939).

³ A. Zaleznik, C. R. Christenson, and F. J. Rothlisberger, The Motivation, Productivity, and Satisfaction of Workers (Norwood, Mass.: The Plimpton Press, 1958).

approach was conducted by Lewin, Lippitt, and White.¹ In experiments with children, the democratic form of leadership was found more desirable on a number of counts in comparison with either laissez-faire or authoritarian forms of leadership.

The interest generated by researches in the human relations vein presented managers and management scholars with a kind of ambiguity and ambivalence not generally present before. The productivity of the organization continued to be viewed as the responsibility of management. If the organization was not adequately productive--whether participative management was practiced or not--management was held responsible. Clearly, an organization which was not productive could not survive, and the responsibility for this productivity had to be accepted somewhere. So it was considered natural for management ultimately to accept this responsibility on its own shoulders.

On the other hand, the thrust of the human relations thinking and evidence was that many of the more important variables associated with productivity were in some way determined and beyond the control of management. In many ways workers determined their own norms of productivity through a host of informal yet identifiable and understandable processes. Furthermore, productivity and other desired organizational characteristics were found to improve as management divested some of its

¹ Kurt Lewin, Ronald Lippitt, and Robert White, "Patterns of Aggressive Behavior in Experimentally Created 'Social Climates,'" Journal of Social Psychology, X (1939), 271-299.

unilateral prerogatives to workers and lower level managers in favor of a more collegial form of decision-making.

This dilemma represented a taxing challenge to managers. Two options would seem to be present: Either a compromising approach could be adopted whereby management could continue with its traditional responsibilities and prerogatives while in limited ways or in appearance making room for employee participation and informal patterns; or, a transcendent solution could be sought in which cooperation, authority, and responsibility could be reconceived at the foundation in such a way that the organization could both maintain integrity and allow for individual and collective responsibility. It would seem that the former option held sway. To oversimplify, management attempted to be nice, make people happy, and talk over decisions with others, but with the ulterior motive that this strategem should increase productivity and solidify management control. When it was discovered that this tack did not necessarily increase productivity or even employee satisfaction in many instances, the human relations approach began to lose steam.

Management thinkers then turned their hopes to the concept of a science of administration--which focused upon cognitive processes. The higher order of rationality which scientific procedure seemed to offer led management thinkers to hope that the arbitrariness of the traditional approach, and the human factors which had been uncovered could be reconciled and supplemented within a more substantial empirical attack on

organizational process, particularly its cognitive aspects. Perhaps administrators could learn to make decisions on the basis of sound scientific theory, research, and methodology which might ultimately be extended to cover all aspects of organizational behavior.

That the activity of administration contained artistic aspects was not completely denied, but was disregarded for two reasons. First, the administrator's artistic capabilities were seen as not amenable to systematic improvement. He gained such talents genetically and/or through his early experiences and these could not be modified very much through higher education. Second, referring back to Francis Bacon's statement, a manager could claim to be an artist possessed of a higher wisdom he had gained from his constitution or through experience, and thereby excuse himself from the need for sound, careful thinking. In short, the personal aspect of administration seemed not to lead anywhere while providing a convenient rationalization for muddled, capricious thinking; whereas the scientific or conceptual aspect promised an ever increasing level of rationality together with a method and tradition which could be taught. Hence, much enthusiasm was generated for the science of administration between the mid-1950's and the present.

Like earlier approaches, the scientific approach has not proved to be an altogether satisfactory solution in spite of its important contributions and there seems to be a growing pessimism about the ultimate utility of social science theory for the administrator in the field setting.

Part of this disillusionment may be traced to the same fundamental ambiguity which underlay the human relations movement which was outlined above. Formal organizations are seen as deliberately created and designed and operated by human choice and yet they are studied scientifically largely as determined phenomena. The problem may be characterized in this way: The administrator forms an hypothesis using social science theory as a guide to what the consequences would be if he effected a certain maneuver. He carries out his maneuver and measures the consequences. Then he determines that the variation in his observations was sufficiently small that he can be 95 percent sure that what he did caused what he saw. At length, someone asks subordinates about the change and they respond, "Yes, he wanted to give it a try this way for a change so we decided we would go along with him this time."

Another part of the problem is that when the administrator applies ostensibly deterministic knowledge legitimated as being scientific, but this knowledge is employed to actualize value choices, he somehow finds himself in a cunning or otherwise inauthentic position. The locus of responsibility for exactly who wants what and on what basis and the ethics involved in how to go about getting it become seriously blurred.

Chester I. Barnard, perhaps the most auspicious progenitor of scientific administration, avoided such difficulties in his exposition of the functions of the executive.¹ Barnard conceived that organizations

¹ The Functions of the Executive (Cambridge, Mass.: Harvard University Press, 1938).

require cooperative behavior for their maintenance. Individual participants come to the organization with a wide variety of personal goals and dispositions which are not entirely concurrent with the needs of the organization. It is the task of management to elicit contributions from employees sufficient for organizational effectiveness while at the same time arranging for individuals to attain their own satisfaction--which he called efficiency. Individuals contribute a part of their energies and talents to organizational aims while the organization provides satisfactions for part of their needs and desires. Barnard is clearly describing a compromise and is delineating administration as a balancing task, but he is doing so in a straight-forward way which many could accept as utopian enough. Barnard deeply respected both the needs of the organization as a collective and the personal aspirations of individuals and he sought to show how these may be reconciled in an ethical although definitionally imperfect way.

Herbert Simon, another father of the scientific administration movement, was also fairly clear in the scope of what he was advocating. Simon sought to extend the bounded rationality by which management decision is constrained. Perfect rationality he held as an impossible ideal. And he did not downplay man's personal aspect. "A good business novel or business biography," he said, "is not about business. It is about love, hate, pride, craftsmanship, jealousy, comradeship, ambition, pleasure. These have been and will continue to be man's central concerns."¹ He

¹The New Science of Management Decision (New York: Harper and Row, 1960), p. 50.

continues:

The automation and rationalization of decision making will, to be sure, alter the climate of organizations in ways important to these human concerns. I have indicated what some of the changes may be. On balance, they seem to me changes that will make it easier rather than harder for the executive's daily work to be a significant and satisfying part of his life.¹

The techniques to which he refers in this case are operations research, mathematical modeling, programmed decision-making by computer, and the simulation of the heuristic problem-solving processes used by humans. He makes a statement which could well underlie part of the present inquiry though he means it differently:

. . . when we run out of ideas for handling poorly structured problem-solving tasks, it seems plausible to examine more closely, the processes used by humans who have handled such tasks--not always efficiently, to be sure--for several millennia.²

Simon's most unique contribution to the understanding of administration and organizations has been his conceptualizations of the cognitive, problem-solving processes observed to be employed by individuals within organizations.³ He has characterized these contributions as supplementary to the traditional and human relations approaches. Two comments may be made to place Simon's work in perspective with the present analysis. First, he does not recognize or at least does not point out the ethical and conceptual dilemma which exists between the assumption of choice in the concept of

¹Ibid.

²Ibid., p. 22.

³James G. March and Herbert A. Simon, Organizations (New York: John Wiley and Sons, 1958), pp. 136-210.

administration and the assumption of determinism in science. Second, his model of human information processing is mechanistic in the very sense that Laplace meant. He assumes that human thought at any moment is the direct result of the mental set and environmental sets existing in the previous moment. Whether this is true in an absolute sense is not at issue now. The point is that Simon assumes these sets to be so finite as to be amenable to intentional manipulation and constraint within an organizational setting leading to the conclusion that these sets should be the "stuff" which the administrator deals with in making the organization predictable. This assumption is not consistent with the conception of administration being developed here.

The mechanistic view has been brought to a high level of refinement in the theory of Getzels and his various collaborators.¹ The work of Getzels and his collaborators has several important aspects. They make a compelling argument for the practicality of theory for practitioners. They elaborate their own social process theory of administration. And, they present a cosmology of administration--an image of the organization and what administrators do which itself corresponds with scientific procedure in essential ways--albeit, procedure mechanistically conceived. In their work they draw heavily though not indiscriminately upon Parsons' assumptions

¹J. W. Getzels and E. G. Guba, "Social Behavior and the Administrative Process," School Review, LXV (1957), 423-441; Coladarci and Getzels, The Use of Theory in Educational Administration; Jacob W. Getzels, James M. Lipham, and Roald F. Campbell, Educational Administration as a Social Process: Theory, Research, Practice (New York: Harper and Row, Publishers, 1968).

and concepts.¹

As Barnard did earlier, and as most other students of organization have done since, Getzels has posed as the fundamental problem of administration the mutual accommodation of the nomothetic and the ideographic dimensions. The nomothetic dimension refers to the organization as a rational, spacialized, symbolic structure. In the nomothetic, variety is constrained in terms of structural and functional integration vis-a-vis conceptions of goals. The idiographic dimension refers to the presence of flesh and blood people, with particular reference to the individual level of analysis. Individuals who people organizations represent an enormous source of variety in terms of their desires, needs, and unique ways of thinking, feeling, perceiving, and acting.

If it were not for people, that is if people were automotons who could be programmed to behave in every detail as administration required, then the problem of administration would be greatly simplified and organizations could be created which would serve specific purposes with amazing effectiveness and efficiency. But of course people do exist and their propensities must be accounted for in any theory of administration.

Given this nomothetic-ideographic idea, then, the organization is taken on the one hand as an abstraction, as a kind of instrumental ideal, and on the other hand as a collection of living, breathing individuals, each

¹Getzels, et al., Educational Administration as a Social Process, p. 51.

of whom is fundamentally predisposed to his own idiosyncratic satisfactions and fulfillments which are not naturally coextensive with organizational requisites except by chance, by selection, or by pre- or post-induction socialization. That is, individuals are naturally inclined to go their own way or to actualize their individual selfhood and this inclination runs counter to the collective requirement for concerted action.

For example, a given school requires the role of "teacher" to be occupied by a person. This role entails a set of expected behaviors on the part of the incumbent. If these expected behaviors are enacted perfectly by the incumbent, then the institutional requirement is entirely satisfied. But from the personal standpoint, the most that can be hoped for the incumbent is that he will find that the proper performance of his role also allows for the satisfaction of his personal needs for achievement, dominance, self-esteem, or whatever. As the individual is a means or instrumentality through which the organization achieves its ends, so the organization is an instrumentality through which the individual achieves his ends. It is a kind of impersonal bargain. In direction, the universal is always given primacy over the particular, but hopefully, through sophisticated administration, role strain can be held at a minimum.

Since the organization is fundamentally viewed as an abstraction, an idealized structure to which concrete, flesh and blood reality must be accommodated, there is nothing about the organization for an individual to love, say, in any human way. Likewise, there is nothing about the

organization per se to love the individual. While there may be relations of sentiment among individuals, the relations between individual and the organization is a "functionally specific" one.¹ The individual must be accorded by what he does, not who he is. Why? First, because, in the mechanistic conception, only in this way can the great variety, complexity, and variability which characterizes individuals be rendered down so as to confirm the veracity of the symbolic structure. Second, the variety must be rendered down to proportions which can be accommodated by rational, analytical modes of procedure. The assumption is that that which does not confirm the abstract system and that which is not amenable to rational dissection and manipulation is chaotic--and random with respect to any over-arching goal.

Here, then, is that "fallacy of misplaced concreteness" in administration: "the organization," which is taken as the real and the true is the abstraction of the concrete process--intellectually created by administrators. This symbolic structure is confirmed by manipulating particulars to fit the general structure. The object of the administrator-as-scientist is to hold down the variance so that effects observed are structural with respect to the theory and his own goals. The organization as abstractly fashioned is mistaken as real in place of the concrete collective composed of concrete people acting as real people really do. Again, this is science backwards. True science strives to fit structure to events, not events to structure. Controlling events in science is only a technique to enable seeing and

¹ Ibid., p. 137.

learning. Fitting events to structure is technology which has a different ethic.

Given that this fallacy has so permeated not only our scientific approach to administration but also our common sense understanding of organizational requirements upon the individual, we may wonder if our theories of organization have given us any idea of how real or complete people really do behave in goal-oriented collectives; everyone, not only the managers, is confusing the abstract for the real and trying to act accordingly in spite of themselves. Is it any wonder that people in organizations tend to become either contrary or anesthetically alienated, conformist, and uninspired? In this context, we are not surprised to observe such unfortunate consequences of the bureaucratic form of organization as the displacement of goals described by Merton as "an instrumental value becoming a terminal value."¹ Now, however, we may view these disfunctional consequences not as inevitable human adaptations to the requirements of organization--not as an organizational given in need of compensation, or a pessimistic fact of human nature--but rather as a pathological adaptation to an untenably defined situation.

Science requires that variety be summarized, simplified, and generalized economically. Science at its best points back with deeper comprehension to the indeterminant range of implications which lie beyond

¹Robert K. Merton, "Bureaucratic Structure and Personality," Social Forces, XVIII (1940), 564.

the pale of its symbolic structures per se. True science restricts or reduces its data only as a tactic in the process of seeking understanding. Science is a process of understanding, seeking ultimately to extend and deepen its reach; it is not a process of limiting in the concrete the reality it purports to discover.

The case with administration as customarily conceived is the obverse. Because organizations are viewed as deliberate creations, they are created to be limited. Rather than fitting the symbolization of the organization to social process as it really occurs, administration does the reverse. Rather than observing social process in an organization over a duration of time, scientifically objectifying it, and feeding this knowledge back into the process to be taken into account in further emergent processes, administration does the reverse. Administration creates, for example, superordinate and subordinate roles, specifies relations between them, defines the desired ends, and sets about ingeniously to program its human materials such that they really do behave as the conceptualization of their behavior specifies--and if they feel some satisfaction in all this, so much the better. The science of man in the hands of administration thusly conceived is reduced to an adjunct--not a genuine quest to know and to come to grips with the human condition--but a mere technology to be used in the creation of schemes which may not have anything to do with the true nature of man which might be discovered were science not perverted in this way.

As one example of the confusion which results from the failure

to make this distinction between the nature of man as it really is (and can be) and the nature of man as it is when constrained by some a priori conceptual structure, the following statement by Etzioni may be considered.

(Statements are numbered for future reference.)

[1] All social units have a structure and control their members, but organizations have a distinct structure, and their problem of control is especially acute. [2] Organizations are social units that serve specific purposes. [3] They are planned, deliberately structured, constantly and self-consciously reviewing their performances, and restructuring themselves accordingly. [4] In this sense, organizations are unlike natural social units, such as the family, ethnic group, or community. [5] The deliberate structure of organizations, their intensive concern with performance as well as their tendency to be considerably larger than natural units, make informal control insufficient and primary identification inadequate. . . [6] Most organizations most of the time cannot rely on most of their participants to carry out their assignments voluntarily, to have internalized their obligations. . . [7] In this sense, the organizational structure is one of control, and the hierarchy of control is the most central element of the organizational structure.¹

Sentence [1] implies that the agency for structure and control in social units lies within the unit as a whole--that is, there is a kind of organismic control within the entire unit analogous to the control inherent in the human body wherein the relations among all aspects are mutually determined transactionally. Sentence [2] states that organizations serve specific purposes. The question is, what purposes? Purpose does not reside in nature but only in man's mind. Does Etzioni mean that these purposes arise out of social processes within the organization? Or are they the purposes of the board of directors? Or the administrators? Or a

¹ Amitai Etzioni, "Organizational Control Structure," in Handbook of Organizations, ed. by James G. March (Chicago: Rand McNally, 1965), p. 650.

taxpayers' lobby? Or who? This question cannot be dodged with such statements as: Schools are mandated by society for the moral and technical socialization of the young. This statement is an inference and some person or persons must take responsibility for the inferring and for the deliberate structuring which follows. To say that societies socialize their young via the creation of institutions is very different than to say that a specific purpose and a deliberate structure has been mandated. Sentence [3] begins in the passive mood and ends in the active mood. That "they are planned and deliberately structured . . ." implies that organizations are the passive recipients and respondents to human control from an external perspective. But "constantly and self-consciously reviewing their performances, and restructuring themselves accordingly" implies that the agency of control resides within the organism as a whole, not with the planners and structurers. Do those who deliberately plan and control also do the reviewing and restructuring according to their own criteria of how the organization should be, or does this reviewing and restructuring devolve from the way organizations are as empirically observed? In sentences [5] and [6] Etzioni implies that organizations are phenomena so far removed from man's natural predispositions and ways of behaving that they could not exist under their own aegis and require some supernumerary agency to insure integrity. Of sentence [7] it must again be asked, is this a function of the way organizations necessarily are as an empirical phenomena, or is it a function of a perhaps arbitrary conceptual constraint put to organizations by those who are aware of no other way to live?

Synopsis

A revolution in science is underway. The mechanistic view of the universe was overthrown in the physical sciences in the early part of this century and now is finding increasing disfavor in the sciences of man. The indeterminacy of man transcends the indeterminacy of physical nature by perhaps several levels of magnitude. Hence, mechanistic conceptions of man are likely to correspond with reality even less than such conceptions of physical reality. Furthermore, the consequences of viewing himself mechanistically are even more fateful for man than viewing the physical universe mechanistically with respect to his evolution to higher levels of experiencing, knowing, and doing. If man is in fact organismically integrated, or integrated on the basis of an even higher order process, but views himself mechanistically, then he becomes a self-frustrating system which is definitionally antieducational. The function of his intellectual processes is at cross-purpose to the principles which constrain him as a complete process.

In the emergent view of social science, we seek a way toward comprehending man objectively, rationally, and consensually. But now we are cut loose from the archimedean point of reference of arbitrarily defined but consensually legitimated social values. The fruits of the new science must not be conceived as instrumentalities to be put in the service of consensual values. We cannot locate our human position with respect to an arbitrary point of value. Now we must see value and process as

relativistically determined with respect to one another. Value does not determine process nor process value. Rather, both are codetermined aspects of the emergence of awareness in man. As we accept the irreversability in time of all natural processes, we find that scientific or objective awareness is also relative to time. Our science of man must serve us as a servo-mechanism helping us keep our bearings on a trip we know not to where. We cease going round in circles in an endless and fruitless repetition compulsion in defiance of the historical process and move toward life with ever more centered vigor. Our conceptual creations are ever changing; even so, they direct our comprehension beyond themselves to the range of indeterminant events we can grasp only as potentia. As electromagnetic events are preceded in space and time by anticipatory changes ("advance potential"), so our scientific movement creates within us yet before us a preparedness for that which is beyond the present fact.

The new relativistic idea of social science may be reconciled much more easily with the task of educational administration than the mechanistic idea may be. The administrator is distinguished from other participants in the organization chiefly by his particular ontological vantage point. His focus of concern is the school or school system. His objective awareness of "the way things are" (moving in time) together with his "pre-rational and post-rational" apprehension of that which is becoming and that which may become, permits him to facilitate via multi-channel communication a collectively shared awareness of the processual fact and portent.

The administrator-as-scientist, then, in the highest sense, is neither the passive executor of consensual values nor does he actively structure the organization according to his own values. Rather, he creates value as he discovers it in his own and the collective emergence, and embodies this value in awareness via life-endorsing communication. The only value allowed to a living organism is the value of living. As cold is simply the absence of heat, entropy in human experience is simply the absence of living. Man's one choice is to live or not to live. Choosing to live, the life value unfolds, differentiates, and embraces and nourishes other life. Choosing to live, other choices make themselves--including the choice to know (to science in the true sense), to experience, and to commit oneself in action to the living of oneself and others. Education becomes the conscious and conscientious embodiment of the life value which transcends the singular lifetime and the singular life bringing continuity to an adventure of grand and long-standing proportions.

CHAPTER III

EDUCATIONAL ADMINISTRATION: A CONSTRUCTIVE ANALYSIS

Education as Awakening

The previous chapter indicated several criteria which this critical and constructive analysis attempts to meet. These criteria were: (a) The aims and methods of science can be seen as consistent with the aims and methods of educational administration. (b) The aims and methods of administration can be seen as consistent with those of education. (c) The aims and methods of education can be seen as consistent with the nature of man. (d) The problem of education may be seen as tantamount to the problem of the human predicament. Some of the difficulties in meeting those criteria posed in current conceptions of what social science is and does and what administration is and does have been elaborated. These conceptions tempt us to mistake abstract symbolic structures for concrete reality and hence lead us to become self-frustrating systems. At a personal level, whether one takes his cues from the phenomenological theory of personality or the Freudian or Jungian theories, life is seen as a continuous struggle veridically to embody in perception and conception the reality flowing be-

neath, above, and around, thus permitting life to take on a more flowing and less constricted character. It is when perception and conception primarily determine rather than represent reality that neurosis is born.

Scientists and administrators no less than the man on the street can become neurotic in this way, and neurotic inquiry inveighs against all four of the aims set out above.

In terms of the present discussion, the fundamental aim of education is to evoke in consciousness a truthful reciprocal of internal and external reality. In this sense, we define living as the universe awakening. Awakening is expanding the range, differentiation, and integrity of experiencing, knowing, and doing. Education is the conscientious facilitation of this awakening. Educational administration is the facilitation of the facilitation of the awakening. Science is one mode of expressing awakening; art is another; philosophy is a third; there are many others we are less wont to recognize. We can consider none of these aspects or modes of awakening without simultaneously bearing in mind their interdependence--not as interdependent academic disciplines but as interdependent qualities of awareness.

We wish to view this interdependence from the perspective of the educational administrator--from the point of view of facilitating the facilitating of awakening. What is required of the administrator to enable him to facilitate the facilitation of awakening? The administrator must be awake and awakening himself. He must be so awake that he can be aware of the awakening of others, of the many ways to awakening which may be taken,

and of the ways of nourishing and healing required by others such that they may awaken. To be so awake, he must be aware of (a) the dimensions in which living occurs, (b) the dynamic organizing metraprinciples which govern the directions taken in living, (c) the possibilities of encounter, and (d) the possibilities of participation. These aspects of awareness will be explored in this chapter.

Let man be taken as equivalent to living; man is a verb. Let living be taken as equivalent to awakening and awakening as equivalent to education, excepting that education is conscientious and reflexive awakening. Education is a special case of awakening. All that transpires in the school is not education or reflexive awakening. Living in the general case also does occur and should occur in schools but this is not the business of the administrator as an administrator or an educator though he may participate in this living in the general sense as a human being. The differences here between administrator as educator and as human being in general is not one of role but of ego state or being. In the former case, he is attempting to understand and facilitate the understanding of living; in the latter case, he is simply living as he does. It follows that education also transpires away from the school in units of time from the instantaneous to the protracted, and that this education remains the business of the educator.

Levels of Process in Awakening

Our task is to understand the question of human experiencing, knowing, and doing constructively. The product of the present inquiry into the question will not be definitive but will attempt to show the relations between the dimensions, directions, and processual functions involved. Understanding these relations will allow presently existing theories of human behavior to take on new perspective and meaning.

The first challenge is to grasp the processual relation between conception and experience--the digital and the analogic. The historical magnitude of this question and the travail it has brought educational administration and education in general were reviewed in the preceding chapters. Now we must move between the two with the hope of discovering a conception which reveals dimension and direction in human living but which at the same time allows for the fundamental indeterminacy of man. To arrive at such a concept, we will move to a vantage point two levels beyond the one from which we customarily seek to understand ourselves.

Customarily we have sought general laws which will explain how any man or all men will respond under particular conditions of internal and external stimulation--the assumption being that if all internal and external conditions together with their functional relations can be determined, we will then understand human living. We will have a theory which all men now and forever after will confirm by their experience and behavior. We will have in effect a permanent wiring diagram of man. We will have the master program which is man and this program will provide massive power

for good or for ill to those into whose hands it falls. Politicians can control the electorate, social reformers can do good, the mentally ill can be rectified, children can be smartened, and administrators can design marvelously efficient organizations. In this conception, value is not a property of the program; that is, value is not innate in human nature taken as a whole. Value, rather, is a property of arbitrary human cogitation and consensus. The Good is what one says is good; the Good is not inherent in the process of living itself. (In the conception below, the relation between value and human nature will be reversed. Value in human nature is the one question of which we can be absolutely certain whereas the manifestations of value in experience and action are fundamentally indeterminant. That is, we may know this value for sure and yet it is no thing in particular.)

The first level beyond the customary to which we will move is to view man relativistically. The relativistic perspective on man is certainly not new, particularly at the cultural level. However, one may wonder if the full implications of this perspective are always appreciated. Relativistically, the focus shifts from things in relation to relational forms of movement in which no things and no fixed points may be located. That is, not only must the diverse patterns of different cultures be understood as relative to guiding cultural myths, but these myths themselves must be understood as relative to the activities of the cultures actualizing the myths. The reality of Western man may be understood as relative to the myths of rationalism, individualism, and materialism. Also the existence of these myths must be understood as relative to the facts of life for Western man.

Relativistically, each particular manifestation is a function of the processual whole in which the dynamics are stable only with respect to relative emergent movement. The whole is under control but not with respect to any particular criterion. Social process is governed by prevailing myths but at the same time prevailing myths are being governed by social process. Reality is defined by the relation between phenomena and not by the phenomena themselves. Reality cannot be defined as correct from one vantage point and incorrect from another. Reality itself is different when taken within different relations. For example, one cannot be absolutely happy or absolutely sad; one can only be happy with respect to sad. One may be equally sad even though he is much happier because that which is happy is not a fixed point but is in motion. Sadness is only its relation to happiness. Geoffrey Vickers has presented an excellent perspective on relativity in on-purpose organizations.¹ He points to the inevitable presence of multiple, indeterminant, and often contradictory "is-ought to be" dimensions in terms of which organizational reality is attempted to be defined.

. . . Like the fog-bound navigator we may know where we ought to be but have no means of knowing where we are. Or like the climber following an unfamiliar route, we may see where we are but have no assurance that it is where we ought to be. Nor can experience be guaranteed to remedy either case, because the results of our action may return for judgment so long after the event and mixed with so many other variables that they may supply neither validation of the past nor guidance for the future.²

¹Geoffrey Vickers, "The Concept of Stress in Relation to the Dis-Organization of Human Behavior," in Modern Systems Research for the Behavioral Scientist, ed. by Walter Buckley (Chicago: Aldine Publishing Co., 1968), pp. 354-358.

²Ibid., p. 357.

To conceive of the next level yet beyond the customary to which we must move to comprehend our experience, one may first call to mind a conception of the relativistic universe. Now one superimposes upon this universe n additional universes, each of which has an integrity and a "life cycle" of its own and yet each of which is implicated in every event in every other universe. Now we think of sadness as n discrete states or universes of sadness, each coming into being and entropic in its own time frame, each having existence in reality on its own terms, and yet each springing from a common domain of possibility together with all other states. Such is the ground from which we are separated at birth, into which we must sink our psychic roots while living, and into which we re-enter in dying. Such is the ground from which the universe flowers through us and other life forms. We, however, have the power of reflexion which frees us from the binds of time and space and permits completion of the process of awakening during our individual existence. In us, the universe raises the potential of getting itself together. Most of the remainder of this chapter will be devoted to explicating the ideas introduced in this paragraph.

Let us now be reflexive and attempt to conceptualize living in a way which does not artificially limit but which guides; that is, to ask not the "what" of living but the "where" and "how" of living. These are not concepts about concepts but rather concepts about conceptualizing in terms of which any concept, however abstract or subsuming, may be viewed in perspective.

Dimensions of Living

Before examining organizing metaprinciples which govern directions taken in living, some of the dimensions in which living occurs will first be enumerated. We ask where--in what kinds of universes or realms--does our awareness travel in the occurrence of living? These realms are actually beyond definition because they have no definite boundaries. Yet they are perhaps easily recognized which is all that is important for the present discussion. Before attempting to classify these realms, one might call to mind some specific examples. The reader is invited to spend some time with each of the examples listed below before going on to the next. The object is to become aware of one's total state of mind as evoked by each example. What is the complete, exact quality of all that is within awareness in each case? It is expected that one will discover that each example evokes a whole realm of awareness which is quite distinct from realms evoked by the other examples. It is almost as though one becomes a different person in each "state of mind" although of course there is an equally strong sense of continuity.

- (1) The harried pace at 10:00 a.m., Monday morning;
- (2) Acute awareness of that same problem cropping up again which has been with one all one's life and keeps one in a stew;
- (3) The occurrence of one of those relatively rare moments when between oneself and another there seems a deep and unspeakable mutual understanding;
- (4) One sees in the interchange between particular student and particular teacher the re-enactment

of an age-old ritual of initiation, renewal, continuity, and perhaps evolution;

- (5) Trying to figure out how something is put together and how it works;
- (6) Sitting quietly doing nothing.

In experimenting with these examples, one is struck by the immense contrast between what is occurring objectively and what is occurring subjectively. Viewed as objective behavior, these examples would seem altogether unremarkable, yet on the other hand, they may be understood as transient foci of a vast inner landscape as fertile or more fertile than the physical and biological universe. In our awareness, we may travel to distant places on earth and in the universe. We may travel backward and forward in time. We may expand the present such that five minutes seems like an hour. We may approach an object or a question or a purpose from many angles and within many perspectives. We may observe vast implications in minor events. We may be aware of chaos amidst apparent order or order amidst apparent chaos. In awareness, we may know much of what it is like to be in the world as someone else. We may discover over and over again what it is like to be ourselves, each time with surprise. In dreams, our awareness is frequently filled with strange but prescient happenings.

All of this is perfectly obvious. Almost everyone's awareness is mobile, able to expand beyond the room in which he may be sitting or to contract so as to exclude much of the present setting, or to enter into or withdraw from the object of his attention and so on. Still we are often

inclined to discount such operations of awareness as idle fantasy or imagination divorced from any useful or meaningful ends, or as somehow inherently unreliable, inappropriate, incorrect, or undesirable. But if we do not cavalierly discount the significance in living of inner happenings--if we consider subjectivity not as a nuisance or a burden but as the locus in which ultimately we understand even "objective" outer reality--then it behooves us to learn to know inner reality clearly such that in fact we do not lose ourselves and our world in it but rather find them in ways which can be shared and communicated.

The singular difference between the outer and inner universes is that the outer universe may be presumed to be organized in a particular way for a long period of human time; the question is how is it organized? The inner universe must be taken as organizing. In part, the inner is organizing by seeking correspondence with the outer; for the other part, the inner is seeking correspondence with the inner. To grasp particularly the organizing of inner with inner, it is crucial that we learn to be objective about subjective phenomena.¹ We must learn actually to see what is before our "inner eye."

Two people, for example, look at a painting. One of them is an artist and the other is a man-on-the-street. The artist has a deep, moving, compelling, differentiated, and integrated experience of himself-painting. The man-on-the-street experiences relatively little. The gap between the

¹ Cf. Gendlin, Experiencing and the Creation of Man.

two may not be marked up to "individual differences" or resolved by calling in a large sample of men-on-the-street to gain consensual verification of what is "really" present in the painting. It is reasonable to consider that the artist is experiencing more objectively or more "truly" than the man on the street. It is conceivable that fifty naive observers could all see the painting the same and still be relatively "wrong" whereas two artists could see the painting differently from each other and yet both be relatively "right." The quality of the artists' experience may both be veracious on common, verifiable grounds even though the content or particular organization of their experience may be different.¹

With respect to education, is it conceivable that a mode of administration and organizational process could be developed in which the quality of inner processes would be the keystone rather than the content of these processes? Could administrators and teachers and students begin listening to and responding differentially to the qualities reverberating in the experience of others and in turn in themselves, or in addition to the content of expressions? Many issues in living require us to define truth on the basis of the quality of inner operations apart from specific content. Arthur Combs once remarked that all he had learned from his teacher Carl Rogers could be stated in a few sentences, but each year for twenty years

¹Rollo May discusses this point with respect to Soren Kierkegaard in his book, co-edited with Ernest Angel and Henri F. Ellenberger, Existence: A New Dimension in Psychology and Psychiatry (New York: Basic Books, 1958), Chapter I.

these sentences had taken on deeper, more complex, more comprehensive meaning in his experience. It may be accepted that Combs knows reality more and better now than twenty years previously, yet he would use the same statements now as before to communicate this knowledge. It may even be that his observable, measurable behaviors have changed very little, yet those who are able to know as he knows know that he is now very different. Gendlin observes this same process of gradually embodying concepts with more and better or truer experience in his patients in psychotherapy.¹ In the same vein, Zucker states:

Systematization of observation and thought has not been fruitful [in psychology] because the rules of organization have not been adequately related to the nature of the subject matter. This is not to minimize the value of the higher thought processes; obviously they are indispensable to the development of concepts and theories in psychology. Rather, the problem is to determine how they can best be used in the course of psychological study. Analysis, inference, and induction cannot precede adequate contact with the basic data, and such contact is perhaps the most difficult part of the process. Varying degrees of contact make for very different descriptions of "reality," so that what is deeply moving to one psychologist may be only sentimentality to another. Improving the observer's² attunement may help reduce the unreliability of observation.

He continues:

Another relevant methodological aim for psychology would be to find means to know in depth what there is to be known. Indeed it would be a methodological advance even to define the meaning of psychological knowledge held in depth. This is a crucial problem

¹Gendlin, Experiencing and the Creation of Meaning.

²Herbert Zucker, Problems of Psychotherapy (New York: The Free Press, 1967), pp. 19-20.

for psychology, because the utility of knowledge in relation to people and living seems peculiarly dependent on the level at which it is held. . . Ideas . . . may fall away not because of inherent deficiencies but because, unplumbed, the ideas do not manifest their true impact and value. . . The forward movement, then, of a concept in this field may in part be defined in terms of depth of affirmation or in terms of extension of depth or breadth, rather than mainly in terms of newness.¹

Let us now return to the attempt to enumerate some of the realms of awareness in terms of which depth, breadth, and quality of process are problematical. Then we will be able to look more specifically at the directions and operations through which this movement occurs. In enumerating these realms of awareness, the attempt is not to be definitive or even inclusive. Rather, it is to allow an appreciation of the n-dimensional scope in which living occurs. These dimensions interpenetrate and mutually determine one another, but they may be conceived and virtually perceived and experienced as separate realms of awareness.

Daily Life and Work

Most people most of the time probably dwell in the dimension of daily life and work. Transactional analysts would find this dimension comprised of what they call "banal scripts." This dimension is not highly energized libidinally, aggressively, or spiritually. It is the mind of getting by, getting along, working things out, solving the mechanical problems which arise in the course of the day, making instrumental decisions, structuring time, moving around, taking care of bodily needs, and so on.

¹ Ibid., pp. 21-22.

Taken apart from other dimensions, this dimension is flat and "two-dimensional." Thayer discusses the implications for communicational effectiveness in organizations of messages which originate from the role of the person, as it were, rather than from the person himself. There is a near zero positive or negative payoff to the person from such communicational encounters.¹ Otto Rank would apply his concept of the "average man" to one whose awareness dwelled mainly in this dimension.

The Personal Unconscious

Using Jungian terminology, the "personal unconscious" may be taken as a dimension of living, or, as a particular set of dimensions. The contents of the personal unconscious include traces of subliminal, forgotten, and repressed events which have occurred during an individual's own life. For Jung, these contents are organized in "complexes" or constellations of psychic events centered around and attracted by a nucleus in the form of a significant idea or psychogenetic pattern of events.² The complex is a largely autonomous system indicating by its presence the impossibility of its assimilation into the conscious system. It represents "unfinished business" and makes recurrent demands upon consciousness for resolution. At times, awareness may be heavily directed by the contents of the personal

¹ Lee Thayer, Communication and Communication Systems (Homewood, Illinois: Richard D. Irwin, 1968), p. 149.

² Jolande Jacobi, The Psychology of C. G. Jung (New Haven, Connecticut: Yale University Press, 1973), pp. 26-38.

unconscious. Freud's "repetition compulsion" may be interpreted as one manifestation of the presence of the personal unconscious in awareness. One experiences and maneuvers in present reality according to a paradigm created in and appropriate to the past.

Sociality

Sometimes awareness is filled with contents concerning one's relations with others. This dimension includes the normative aspects of social living implicit in awareness as studied by sociologists and social psychologists (awareness of social class, race, position in the group, etc.), that which is referred to as "genital personality functioning" in psychoanalysis (the capacity for genuine and altruistic libidinal investment in another person), and existential interpersonal encounter (the experience of I-Thou). These aspects of sociality may seem so inclusive as to be meaningless. However, the point for the present is that one's moment-to-moment being in time--one's frame of awareness--may be filled with thoughts, feelings, sensations, and intuitions pertaining to oneself vis-a-vis another or others. Nevertheless, this domain or dimension of awareness is but one among many. Albert Einstein, for example, wrote his autobiography with hardly a mention of his personal or social life indicating quite a difference, perhaps, between the dimension of sociality in his living and this dimension in the living of, say, one's favorite soap opera character.

The Collective Unconscious and the Hetero- psychic Realm

Jung applied the term "collective unconscious" to the dimension of experience through which each individual shares with mankind in general a readiness to perceive and respond in characteristic ways in prototypical situations which men have encountered throughout the history of the race and even before. Jung conceived that certain patterns in living have been shared so widely and regularly by men throughout the centuries that these experiences have left permanent deposits in the psychic constitution of man. No personal learning is required, for example, to grasp very poignantly the meaning of a nursing infant, a wise old man, a hero, or a hurricane. These experiences resound very deeply in all men. We recognize immediately the presence of a dark, animal side in human beings. We are ready to perceive and to adopt social "masks" appropriate to the situation. When the integration of the many polarities in one's own or another's personality is occurring, we recognize and respond to it. These are what Jung called "archetypal" understandings. This dimension of living provides resonance, poignancy, depth, and familiarity to living. Because it is diffuse and operates mainly in the background rather than in the foreground of awareness, we are seldom focally aware of its presence. Yet this dimension may upon occasion dominate awareness in artistic regression, scientific insight, psychedelic trips, peak experiences, meditation, and psychosis as well as under mundane conditions. For example, in living with one's spouse, one may perceive the experience as unique on the one hand, but on the other hand, he

may perceive in daily events and exchanges the re-enactment of age-old patterns of experience of which he and his spouse are but one particular variation.

The idea that the awareness of all men is joined or shared at a level beyond that of their individual existence has led Jung and many others to even more surprising hypotheses which have now received wide empirical support in the areas of parapsychology and parapsychiatry. Ehrenwald has reviewed empirical and theoretical work in these areas together with his own psychiatric experiences and has presented the following hypotheses paraphrased here by way of summarizing current thinking concerning Psi-phenomena:

- a. The extension hypothesis: In the process of conversion hysteria, the ego relegates to the realm of non-ego certain incompatible elements which thus become lost to awareness and volitional control. These split-off contents, however, do not cease to exist. Under proper conditions, they may be reintegrated into awareness and subjected to volitional control. By extension, the ego may also shut out incompatible elements originating in the consciousness of other persons and in other times which are nevertheless fundamentally available to it. In dreams, meditation, moments of reverie, or other states of mind characterized by high alpha wave production, or in moments of high emotion, the ego relaxes and permits telepathic messages to be received and transmitted and other Psi-phenomena to occur.
- b. The genetic hypothesis: Telepathy is the primary form of communication between infant and mother and has survival value during the symbiotic stage of development. It is gradually abandoned during the course of development as redundant.

- c. The fact of Psi-phenomena requires an open, non-euclidean, post-Freudian conception of personality structure: A gap continues to exist between explanations of neural events and complex awareness. This is called the autopsychic gap. The same order of a gap exists between the autopsychic experience and hereropsychic experience. It appears that the personality is open to an infinite range of heteropsychic stimuli to which the ego constructs screening defenses similar to its defenses toward autopsychic stimuli.
- d. Psi-phenomena (telepathy, pre-cognition, clairvoyance, and psychokinesis) comprise a syndrome and must be considered together as a package: Psi-phenomena undermine the basis for psychalistic interpretations of psychic phenomena. Psi-phenomena follow currently known psychodynamic patterns. Psi-phenomena are incompatible with time and space values.
- e. Psi-phenomena require for their integration in the personality, and conversely, permit, "existential shifts" to occur. The entire psychic set and volitional posture becomes radically re-organized toward a non-euclidean orientation. Such shifts entail an abrupt reshuffling of a person's biological, cognitive, and behavioral responses.¹

In the light of modern evidence, it appears not in the least far-fetched that the educational administrator may develop and put to educational ends levels of awareness beyond what we now consider as normal. We need not speculate on how such levels are or may be present, but in the context of facilitating awakening to the reality of the internal and ex-

¹ Ehrenwald, Parapsychiatry.

ternal universe, it is important to grasp the role of this dimension of living.

Cogitation

By cogitation here is meant philosophizing, theorizing, and analyzing in both the formal context and the mundane context. To analyze the workings of a particular set of phenomena is to participate in a certain realm of awareness. One forms abstractions of reality and manipulates these abstractions propositionally. If one focuses upon the contents regnant in his awareness while struggling with a difficult scientific problem (or while trying to put the lawn mower back together), he may find himself involved in a very large range of associations, thought images, emotions, and intuitions of quite a different character than those of other realms identified here. For example, if one imagines shifting abruptly from full, concentrated participation in an intellectual problem to full care-free participation in social or sexual behavior, he will comprehend the individuality of these two realms. The point is that at one moment, virtually the entire awareness is organized and functioning in one way while at the next moment the entire awareness is organized and functioning in another way as though these were different inner universes (albeit consistent ones), each with its own rules and processes and contents. Perhaps we are accustomed to the idea that the substrata or underlying potential for thought and emotion and behavior remains relatively constant while only the temporal focus changes in response to internal and external stimuli. It is suggested here

that a shift from one realm of awareness to another is a far more drastic, inclusive, and higher order change than a mere shift of what is uppermost in the mind or obviously present in behavior. Not only does the phenomenological figure change but the phenomenological ground changes as well.

Other Dimensions

Recent Western experience with characteristic Eastern modes of experience has led to increasing familiarity on the part of many with a large set of realms of awareness which might be characterized as "views from the other side." It is our Western habit nowadays to experience ourselves as alienated from life--locked in our intellects, locked in our routines and frantic pursuits of trivial aims. We long to descend from these acrid, stale and barren heights into the warm-blooded, visceral naturalness and contentment which human living seems to offer at its base. From this perspective, we have the sensation of sinking into life. From the other perspective, the "view from the other side," we have the sensation of rising to the surface of life as a diver in the sea. As in dreams, we are touched and supported at every point by the external fluids. Up and down, east and west lose their meaning as we commune with strange and immediate forms. From this timeless abyss where all is connected with all in graceful but ephemeral harmony, we emerge into our individual selves and lives to take the measure of space and time and to propagate the race.¹

¹John C. Lilly, The Center of the Cyclone: An Autobiography of Inner Space (New York: The Junian Press, 1974); R. E. L. Masters and

Awareness, then, moves in dimensions. These dimensions are separate though interpenetrating realms of possibility in each of which n possible discrete states may instate themselves in awareness. The underlying idea here is that consciousness is comprised of the transaction between the complete discrete state of awareness at a given time with the possibilities or potentialities inherent in the realms of awareness of which the state of awareness is an instance, and secondarily with other realms.

For example, a superintendent's awareness is traveling in the realm of sociality. At a given moment, his discrete awareness is filled with thoughts, feelings, sensations, and intuitions concerning a certain organizational member for whom he feels affection and respect. We may imagine (whether it is true or not in fact) that all of the superintendent's brain cells are functionally occupied in this awareness of his colleague. There is a certain patterned form in this activity. Now the change in this pattern from form A to form B results from the transactions between the original pattern and the potentialities inherent in his realm of sociality. The discrete state of awareness is relatively determinant. The realm of awareness is relatively indeterminant. The hypothetical superintendent whose awareness is filled with his colleague suddenly becomes infused

Jean Houston, The Varieties of Psychedelic Experience (New York: Dell Publishing Co., 1966); Alan Watts, The Joyous Cosmology (New York: Vintage Books, 1962); R. D. Laing, The Politics of Experience (New York: Pantheon Books, 1967); Andrew Weil, The Natural Mind: A New Way of Looking at Drugs and the Higher Consciousness (Boston: Houghton Mifflin, 1972); Carlos Castaneda, Journey to Ixtlan (New York: Simon and Schuster, 1972).

with and apprehends new potential with respect to his previous state--the state of himself-colleague-organization-past-future-education-youth . . . The same elements now appear in a new light. His awareness is now discretely different. He is now reprogrammed. Many times his state of awareness will not become infused with potential and hence no further awakening will occur. In any event, changes in awareness which do involve awakening are contingent upon the quality of potential and the quantity of potential in the realm of awareness, the quality of the discrete state of awareness, and the nature of the dynamic operations relating the two. Consciousness in its higher modes of functioning involves a succession of increasingly comprehensive and differentiated programs, each of which during its existence implicates the entire awareness. The human being is not fundamentally a neuromuscular machine analogous to an electronic computer with a fixed program capacity, prepared to emit particular outputs in response to particular inputs. While this "on-line" kind of activity does occur, much of the time and also simultaneously, we are engaged in "off-line" activities--not only constantly reprogramming but also reprogramming the way in which we reprogram.

It is this idea which might be called "successive process" which we will now seek to understand. This idea may be approached by way of example. Consider that a man has a particular way of walking. Here there is both movement and continuity of form. Now suppose that this person in his long journey comes upon some rocky, hilly ground. Now his way of

walking becomes clearly relative to the ground under foot. It is clear that his way of walking cannot have meaning without simultaneously taking into account its relation to the changing ground. Still, there is an order of continuity in his walking--a form which persists through even this higher order of patterned movement. After a while, he becomes tired and still later he gains his second wind. These internal changes are reflected in his way of walking. All the while his walking-ground is changing, yet there is continuity. The clumsy man would show us many dimensions of his clumsy movement but all would still be him and no one else. The lithe athlete would show us many dimensions of his lithe movement but would still be himself. Both the clumsy man and the athlete would be clumsy at times but differently clumsy--not simply more or less clumsy but differently clumsy. Both might be alternately clumsy and graceful but differently so. We see a continuity of walking in the midst of great variety and change.

Now suppose the person's walking which we are studying begins undergoing another order of changing--not in response to the ground, not in response to repeatable internal conditions such as fatigue, but in response to some other change of an evolutionary, irreverable sort. Say the clumsy man has been gaining confidence in himself and experiences an archetypal perception of himself as being with Genghis Khan invading China. Gradually, his step, regardless of the ground or his state of fatigue begins to reflect this different character. Still there is continuity. Even though the ground is changing; he is becoming fatigued; he is getting his second wind; he is

orienting himself differently toward his route, and so on, his walk is still changing character in a way which has nothing to do with any of these. Yet, if we are astute, we can perceive this changing character of his movement with outstanding clarity.

Now let us say that through all this, as his walk is taking on its heroic character, his awareness becomes filled with the sensations of the nomad wanderer. Now his walk, which continues to become more heroic and no less so, also begins taking on a more expansive, less driven but no less purposeful character. Still there is continuity in all this change which we can recognize in a glance.

At last comes the end of the day and the clumsy man sits down to talk. Now we notice that his way of talking is different--more confident, determined, expansive. The content of his talk is different too but is still characteristic of him. But as he talks, he becomes aware that, having been a wandering hero for a day, he no longer needs to be one and his awareness turns to unfinished business of another sort which he anticipates now with new vigor and enthusiasm. In the morning, he sets off again with yet a new quality in his walk, but still he is equally familiar to us--perhaps more so.

Our traveler's awareness has taken on many discrete states. Each successive state has not negated nor even necessarily altered the preceding state which continues in motion. Each successive state lends an additional perspective or frame of motion giving new definition to the preceding fact.

The preceding processual element continues to operate but differently now due to its newly evolved context. Continuity is maintained because moving from state A to state B does not require the destruction or replacement of state A. But state A is now differently manifested within the whole.

Through this idea of "successive process" we may approach administrative behavior. Consider three administrators. The first administrator's awareness is relatively static. He acts like a computer which is always on-line with the same programs. Regardless of the qualities of the particular organization or the fact that he personally is getting older or whatever, he goes about administering in the same way. The program will accommodate only a particular set of data, and processes these data unvaryingly--according to "principles of administration" or according to John Doe's theory of administration, according to that which is scientific, that which is culturally mandated, and so on.

The second administrator takes into account the nature, character, or quality of this particular organization, its individual members, and its environment. He steps off-line and reprograms himself such that his behavior and awareness are veridical with himself as a person and with the organization as it is. His theory of administration is now a relativistic one. That which is right or true can be defined only in terms of the relation between himself as a process and this particular organization as a process. He would administer a different organization differently and correctly so. If he were a different person, he would administer the

same organization differently and correctly so, because reality can be defined only in the relation between phenomena in motion; it cannot be defined with respect to some absolute fixed point because none exists in nature. Organization and administrator must be thought of as "causing" one another to be as they are simultaneously, which is, of course, not causation at all.

The third administrator is successively aware of himself differently. He is different today than yesterday although today has not negated or replaced yesterday. He is the same old Joe but now more confidently old Joe which is altogether different. He is the same confident old Joe but now expansively confident old Joe which is quite different. He is the same expansively confident old Joe but now prudently expansive confident old Joe which is very different. He is the same prudently expansive confident old Joe but now compassionately prudent expansive confident old Joe which is altogether different. Likewise, the organization's members as individuals may be successively evolving. Likewise, the reality of the organization may be different day by day although maintaining its underlying unique character or continuity. Likewise, the organization's environment may be successively evolving.

Our foothold in reality now is not in the relation between administrator and organization but rather is in the way in which successive realities are evolving in awareness.

It is conceivable that the three hypothetical administrators could be equal in I.Q., could be equally skilled in the application of analytical

technique, could be equally well-informed technically, theoretically, and empirically, could be equal in the number of years of experience on the job, could be equal in verbal fluency, stamina, and commitment to task, and could be disposed to the same general approach to administration (such as authoritarian or democratic). But with all of these identities, the differences in the experience, knowledge and action of the three would be drastic. The first administrator would be somnambulant while mired in insoluble complexity and opposition. The third administrator would be awakening to the melodies of living.

The order of change inherent in the third administrator and his organization may seem hopelessly complex, frightening, and unstable. How can one get a handle on such a process? It is suggested here that such change is anything but hopeless. Rather than being beyond the capacity of our nervous system to grasp, such change is ideally consonant with the potentialities of our information processing organs. While the digital computer may far outshine man in performing certain types of operations, man's brain is ideally suited for comprehending multidimensional, successive processual change. Imagine if one tried to translate a symphony precisely into words. The french horns move two notes lower and begin holding for a long count. Meanwhile, the violins move quickly three notes higher then two notes lower then one note higher. Meanwhile the oboes have moved one note lower and become slightly softer. The kettle drums have emitted four rapid beats. Moving to another level of analysis, the violins seem to be losing ascendancy to the brass. Will they be able to

mount a comeback? Does this spell doom for the orchestra? No, the woodwinds are moving to the support of the strings. Suddenly, a single trumpet emerges from the fray with a clarion call which disrupts the entire mood. What will happen next? Obviously, listening to music (or monitoring an organization) in this way would shortly drive one insane. In this vein it would seem impossible ever to comprehend even the simplest music. Yet we know it is not impossible. We can listen to a complex symphony for the first time, one which would require thousands pages of analysis, and yet we can comprehend its meaning and sensibility immediately and we may even comprehend it successively as we listen over and over. We may even understand its meaning with respect to our relations with our friends, our position in history, and so on. This is all a common, everyday, mundane experience. There is nothing superhuman or bizarre about our ability to keep our bearings amidst incredible complexity and change. Apparently our brains were designed with that very prospect in mind. Our brains are much busier than we given them credit for being.

As the educational administrator tunes in on the evolving changing process which is himself-organization-environment successively, he is enabled simply to go with what is, discovering in his own awareness and potentiating the discovery in others of higher and deeper orders of symphony in experiencing, knowing, and doing.

The three administrators in the example differ in their approach to the questions: What is real? What is true? What is good? The alter-

nate approaches to these questions are of preeminent importance to the quality of education in its every aspect and implication. Preparation programs for administrators may sometimes concern themselves with what the answers to these questions may be. But what the answers to these questions may be is irrelevant and entirely beside the point. For human beings to search for "what" answers to ultimate questions is utterly futile. The only meaningful questions are where may the answers be sought and how may we go about seeking them? If we know where in our awareness to look, and if we know how to experience that which is occurring where we are looking, then this movement will bring us as close to the real, the true and the good as we are destined to arrive.

Human reality for the individual has the character of a growing, irreversable, non-repeatable symphony. In the beginning, we find a few instruments entuning cacophonously. In time, more instruments enter the scene and begin playing their own melodies--some sad, some happy, some robust, some tender, some triumphant, some quiet. Later the strings begin playing together, and the brass and the percussion, but with little regard for one another. When all of the instruments which potential allows have entered in and become accomplished, each playing its own changing but characteristic melody in complement with all others creating a continuously evolving and unique work of art, then we need but continue our participation to be in touch with that which is and that which was intended.

For a potentially awakening experience, one might try the following experiment. Select some relatively simple music played by a quartet or a small combo and listen to the "personality" expressed by each instrument. Then identify each instrument with a person one knows daily at work. One may give himself a part. Finally, imagine these now personified instruments having a conversation about some common problem--each taking his own point of view, making his own contribution in his own style, being completely independent yet completely harmonious at the same time--a cooperation without compromise. The completeness and wholeness and unity of the enterprise devolves from the uniqueness and expressive independence of the participants. Independence does not mean acting without concern for one's position in the aggregate. To the contrary! Independence means that the underlying bond of common concern is so strong that only by each part being passionately itself can the depth and fullness and completeness and indeed veracity of the totality come into being. The "trumpet" may play the lead, but the organization would not be the same were it not for the laconic bass with his way of sitting off to the side chiming in with comments of depth and perspective and punctuation.

Now for a somewhat more difficult twist of the experiment, one may identify each instrument as part of himself--each instrument with a trait or characteristic or mood or "side" of one's personality. One can see that without the presence and honest, independent participation of each instrument, one could not be the symphony he is. Each of our "sides" or

facets makes for a complement and an "objective commentary" on the others. How utterly barren an orchestra would be if every instrument played exactly the same notes in unison! Our personalities at their best are composed of an untold number of unique, independent "demons" each doing its passionate best in the name of our overall welfare and evolution. Our will or ego is merely the conductor. Each instrument composes its own part spontaneously--arising from its innate nature on the one hand, and with a watchful, interested eye on its fellows on the other hand.

Directions in Living

Human living occurs in an indeterminant number of dimensions. Yet living usually seems characterized by a kind of directionful equilibrium. Living has dimension and direction. It is toward the comprehension of this equilibrium that most scientific efforts to understand living have been aimed and this inquiry will be no exception. One needs something upon which to hang his hat even if that something turns out to be everything taken together taken in motion (or as motion) rather than something in particular. As living systems, we are "under control" in that all is relatively coordinated with all, but such control does not in most cases imply a controller, a controlled, and a particular criterion toward which control is exerted. But if there is no controller and no particular criteria toward which control is exerted, how can we speak of direction? The direction we speak of is actually a kind or an order of process. Through the many kinds of processes possible in and involved in living, we are directed toward one kind

of process which is terminal. The end toward which living is moving is not a state or a condition or a pattern; rather it is a way. We move from one way of going on to another way of going on until we reach the way of going on beyond which there is no other way but only going on. In this section, we will attempt to become as explicit as possible about this terminal way.

The mechanistic conception has been found inadequate for encompassing living. If physics takes its data relativistically, then at a minimum social science should begin with relativity and seek to move beyond it in seeking to understand man who is probably a higher order of process than physical process. But one difficulty is immediately apparent: The reality of man entails both man as the known object and man as the knower of that object. For many purposes it can reasonably be assumed that the physical universe will continue to do as it does regardless of whether or how we know it. (This statement may very well be untrue but for present purposes we may consider it as true.) But the same cannot be said of human nature. At the level of human knowing, erroneous conceptions of "human nature" remain true in the sense that they exist and are a part of the experience and behavior of some knower who is manifesting human nature. If we understand atoms incorrectly, we do not expect them to become flustered or anxious or to begin behaving differently. But if we understand ourselves incorrectly, that misunderstanding remains a true and legitimate manifestation of human nature insofar as this mis-

understanding is manifested in natural cognitive processes. Nature is never wrong, and as human beings are manifestations of human nature, they can never be wrong; only more or less together. Hence, if one understands himself mechanistically and behaves partly in that way, he is not wrong because this mechanistic conception is part and parcel of the reality which is him. If person A who is mechanistically organized evokes his conception to understand person B who is not mechanistically organized, then A is being true to human-nature-as-himself and false to human-nature-as-the-other. The science of human nature, then, is beyond the issue of right and wrong, correct and incorrect in any absolute sense because we can never locate in human nature itself any fixed criterion upon which to base evaluations. It makes no sense to ask, is my theory of myself correct or incorrect for now and all times because my theory of myself is part of me and if I change the theory, I have changed the reality to which it pertains. Hence, we can never discover once and for all how human beings operate but only how we operate on our operations. We can discover the qualities of the processes whereby each aspect of living-man-in-motion seeks relation with other aspects. We cannot find out the truth about man because there is no particular truth; we can only discover qualitative differences among forms of forming potential into pattern. We may conceive and discover, however, one quality of forming which subsumes all others.

As a basis for grasping the indeterminant yet orderly motion which is living man, it will be helpful first to recapitulate the mechanistic

view and the relativistic view of man--this time in a more schematized fashion than before. As an aside, it might be added that while it is frightening to give up the notion that somewhere there exist fixed points of reference to be posited or discovered in human nature, and even more frightening to give up relativistic points of reference, ultimately the highest degree of certainty lies in doing just that.

How may the mechanistic conception of man be stated in the simplest terms? Man is seen as an energy system comprised of vectoral forces. The movement or behavior of the total organism is seen as the resultant of the net sum of the vectoral forces at a particular time. These vectors arise in several ways: (a) Biological tensions arise which aim for reduction. The organism's behavior in the environmental contingency set results in primary and secondary reinforcements of tension-reducing behaviors which henceforth tend to be repeated in similar situations.¹ (b) Behaviors may achieve "functional autonomy" from their original physiological bases and provide satisfactions at the ego level of process in connection with other such behaviors.² (c) Behavior may be organized teleologically. That is, when a fictional end state is identified, behavioral vectors are organized so as to actualize the end state.³ In sum, positive

¹J. Dollard and N. E. Miller, Personality and Psychotherapy: An Analysis in Terms of Learning, Thinking and Culture (New York: McGraw, 1950).

²Gordon W. Allport, Personality: A Psychological Interpretation (New York: Holt, 1937).

³Alfred Adler, The Practice and Theory of Individual Psychology (New York: Harcourt, 1927).

vectoral forces are seen to result from libidinal and aggressive strivings, ego strivings, and teleological strivings. Negative vectoral forces arise as anticathexes or ego defenses against instinctual striving, in the demand for cognitive consistency,¹ or for "self-consistency,"² and from moral and/or existential prohibitions. Lewin has used the concept of vectors in his "field theory" of personality.³

In the mechanistic perspective, then, the personality of the individual may be viewed as a composite of elements each characterized by a directional energetic force.

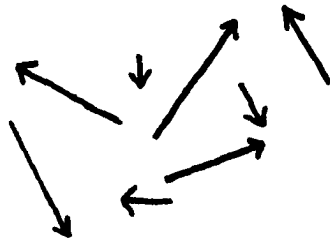


Fig. 1. --Vectoral Forces in the Personality.

For movement to occur along many of these vectors, the entire organism must be involved. It is impossible to eat and have sex and play the piano and sleep at the same time and hence the vectors must be combined in various ways. The simplest way in which the vectors may combine is by summation.

¹ Leon Festinger, A Theory of Cognitive Dissonance (Stanford: Stanford University Press, 1957).

² Prescott Lecky, Self-Consistency: A Theory of Personality (Garden City; New York: Doubleday and Co., 1945).

³ Kurt Lewin, A Dynamic Theory of Personality (New York: McGraw, 1935).

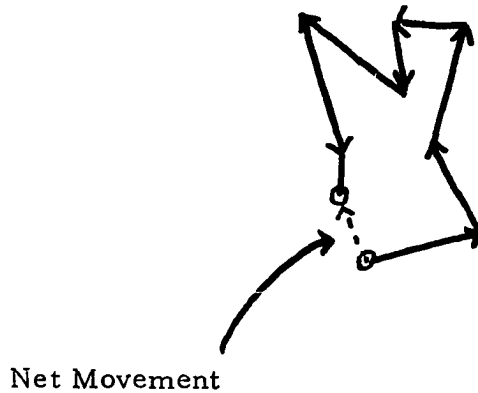


Fig. 2.--Summed Vectoral Forces in the Personality

Summing the vectors, we find a large amount of energy bound up to result in a relatively small amount.

The following are examples of the binding of large amounts of energy which result in relatively small amounts of movement: (a) the obsessive personality who jumps from one doubt, second thought, and re-consideration to another until his action is paralyzed, (b) the neurasthenic personality for whom so much energy is bound in repressive vectors that little is left for progressive movement, (c) the hysterical personality in which vectoral combinations occur in split-off organizations which compete to dominate the whole, and (d) the schizophrenic personality whose vectors remain or become so fragmented that integrity in action is lost. A related example is the psychopathic personality whose vectors are so readily transformed into physical expression that psychological distancing in space and time does not develop and differentiation and integration in the system are sacrificed. Analogs of these examples may be observed at the organizational level of analysis: the obsessive organization whose rulebook is so thick that there are rules both for and against almost anything, the repressive organization which has little apparent conflict but also very little energy to act and so on.

As discussed in the previous chapter, much of social science has been given to identifying what may be interpreted as various types of vectors and the various ways in which they may combine resulting in behavior. It seems clear that many if not most individuals and organizations do appear to behave to a significant degree as the vectoral model suggests. It may be, however, that the vectoral paradigm derives from a constricted form of information processing on the part of the scientist and is similarly descriptive of subjects who are themselves examples of unnecessarily constricted forms of information processing. This possibility leads to two types of observations increasingly being made in contemporary social science. The first is that the "unconstricted" scientist studying constricted human subjects finds the subjects as incomplete examples of human nature; they are seen as pathological or as less than fully actualized. Second, the scientist operating within the limited paradigm finds constricted subjects explicable and unconstricted subjects inexplicable. Hence, the need for a more comprehensive social science corresponds with the opportunity for people to become more unconstricted and comprehensive human beings.

Now, upon what grounds can it be held that the vectoral paradigm is lacking scientifically and that people accurately described by the vectoral paradigm are lacking humanly? First, it may be observed that in the vectoral system, energy is bound within the elements themselves and is distributed between them in a linear fashion. A physical analogy would be the force field created by the poles of two magnets. The energy distri-

bution and dynamics are a function of the parts and their relations rather than a function of the whole. The energy is so distributed because of the "logic" of the parts. This logic is digital rather than analogic. Digital logic, it will be remembered, is of a discontinuous, positive-negative, yes-no, go-no go variety. Hence, the system develops as an interrelated complex of polarities or bipolar dimensions. This polarization has been discussed by George Kelly in his theory of "personal constructs,"¹ Polster and Polster with respect to Gestalt therapy,² Angyal with respect to the obsessive character,³ and by many others.

Consider that a system containing a particular amount of energy is moving in a particular direction. Now as the bipolar dimensions of good-bad is superimposed upon the system, part of the energy becomes organized oppositionally. That which is good must move away from that which is bad; that which is bad must move away from that which is good. Yet, because neither good nor bad can exist without the other because each term logically implies the other, an equal and opposite force must be exerted to bring the two opposites together. New energy added to the system lengthens the distance between the poles but does not disturb the relation.

¹George A. Kelly, A Theory of Personality: The Psychology of Personal Constructs (New York: W. W. Norton, 1963).

²Erving Polster and Miriam Polster, Gestalt Therapy Integrated: Contours of Theory and Practice (New York: Brunner-Mazel, Publishers, 1973).

³Andras Angyal, Neurosis and Treatment: A Holistic Theory (New York: John Wiley and Sons, 1965), pp. 156-189.

In terms of the musical analogy, it is as though the trumpet and the piano in the combo agreed that they were logically opposite so that one of them had to go. Since they are both part of the combo and it cannot make music without both, they move to opposite ends of the room, construct a half-way sound-proof wall between them, and begin to play competing for the allegiance of the other parts. Each is forever anxious about what the other is up to and fearful that the remaining instruments will desert to the other side, thus not only leaving him lost and all alone but also dissolving the combo in the process. Hence, not only is there no fun in playing but the quality of the music can never exceed that of a "juvenile band," a fitting image, perhaps, for the quality of process in many schools.

It would appear that psychological energy is absorbed in the opposition created by digital categorization and is freed with the dissolution of polar opposition which may be accomplished via the continuous (non-discontinuous) analogic mode of information processing. Energy is freed not by the annihilation of the elements organized around the poles but rather by altering the mode of relating which had been extant.

In analogic "logic," one may be both good and bad without negating either and without summing to zero. Good and bad remain as informational coordinates but without oppositional energetic charge; the energy now freed of its oppositional structure leads to the subjective experience of mature love, compassion, appreciation, wisdom, tragedy--experiences which might be characterized as "positive neutrality."

What happens to this energy which is freed from opposition and which results in the experience of positive neutrality? To concretize this question, consider the image of the Buddha. At one and the same time, he appears both masculine and feminine, possessed of a cosmic calm, but emanating vital energy. Consider the teacher or administrator who projects a sense of sage, relaxed, earthy, nonheroic, irrepressible forward motion in the midst of many reasons for despair.

In response to the question of what happens to this energy which is freed of opposition, we would follow Kenneth Burke's suggestion that negation is nowhere to be found at the base of nature save in the cognitive processes of man.¹ While we may conceive of the earth as held in its orbit by opposing centrifugal and centripetal forces, if we look more closely, we see that the earth's movement in orbit is only a positive event. As Burke says, there is no equivalent in nature itself to the statement, "It should not have turned out that way." Should versus should not are simply not properties of nature. Should and should not are exclusively paradigmatic properties implying stasis spacially and temporally in the form of logical and abstract opposition. But stasis is not a property of the universe and is not a property of man. Because there is only movement in nature, there is only movement with respect to other movement. Ideas in themselves may have stasis but as these ideas are held in the awareness of man who is never

¹Kenneth Burke, "Dramatism," Communication: Concepts and Perspectives, ed. by Lee Thayer (Washington: Spartan Books, 1967), pp. 327-360.

in stasis, the ideas cannot be said to have stasis. Therefore, when ideas bind energy in terms of oppositional logic, the system does not become absolutely static but takes on an inferior order or quality of process ill-disposed to expanding the range and depth, and integrity of experiencing, knowing, and doing.

Moving to the higher order of process, concepts become coordinates in a positively moving field; the disposition of energy is a function of the field and not the coordinates. In this field, there are no things but only relations; not relations between things, just relations. The very idea of a concrete thing implies something which is static in space. If its make-up changes in space and if it is not the same at one point in time as another, which is the way all "things" do, then in fact it is not a thing but a process. A process can be identified only as a form in which case that which exists between points is as real as the points because in reality there are no points; nothing ever stops. The relativistic foundation of reality then is formed process.

The relativistic foundation of awareness is a correspondence of the mode of information processing in awareness with the mode in which process occurs in nature. The point is, if nature is a relativistic process, then we must process information about nature relativistically in order to understand it. Thus, in that living is awakening and awakening is the growing of correspondence of inner with outer and inner with inner, then awakening with respect to the outer relation implies a shifting of inner

modes of process toward the modes characteristic of the outer universe. If awareness is to correspond veridically with the outer universe, then not only must the mind or awareness be conceived relativistically but it must operate relativistically. Hence, while the non-relativistic operating mind is a true manifestation of human nature, this mind is less awake than a relativistic mind. With respect to forms as enduring as physical nature, we may often let formulas do the work: $E=mc^2$. But for forms as ephemeral as the human being, we cannot capture our relativity in a formula but instead must allow information processing itself to occur relativistically. Inner reality corresponds with external reality when the patterned forms in awareness correspond with patterned forms externally. As we recognize that there are no fixed points of reference in the external universe and no negation, then awareness takes on a similar nonpolarized, continuous quality--not one which denies enduring relations but one which processes these relations in a continuous (nondiscontinuous) way.

To grasp the relational mode of inner with inner, we now return to the third level of the present discourse earlier discussed with respect to the concept of "successional process." To return to this level now, we may consider the relations whereby we understand interval, ordinal, and discrete data. With interval data, we experience a single, continuous, bipolar dimension--for example, the loudness of music emanating from a stereo. Meaning is assigned to the loudness proportionally. That is, fundamentally we are not concerned with any particular level of loudness

but rather with the proportionality of the loudness. A decibel reading of X has no meaning until it is established that X and/or its correlates is 20 percent greater or whatever than Y. The conclusions and implications drawn are derived from the 20 percent or from the differences in distances along the scale. Again, meaning is assigned not in terms of points on the scale but on the basis of the proportional relation between points on the scale.

With appropriate instruments, loudness can be determined on an interval scale. It can be determined that level A is precisely twenty units louder than level B and exactly ten units less loud than level C. But let us assume that no such measuring instruments are available or that a knowledge of interval differences would not be useful or appropriate. The differences will be ascertained on the basis of the listener's "objective subjectivity." (Ultimately, all understanding is subjective. As Ragland has stated, "Objectivity is one form which subjectivity may take; there is only subjectivity."¹ Now, even if agreement can be found among listeners that level A is louder than level B and less loud than level C, the proportionality of the relations cannot be determined with precision. So what is new at this ordinal level? Now each point on the ordinal scale has some identity of its own which must be taken into account in assigning meaning. Each point has some discrete existence, but meaning is assigned to each point on the basis of its relation with other points along a common dimension.

¹ Robert Ragland, "Working Assumptions for Helping Persons," Departmental Memorandum, Counseling Center, University of Oklahoma, 1971 (mimeographed).

Ordinal data is usually regarded as "weaker" than interval data, but in experiential terms, we may say that it is more complex. We may say that Jack is a better administrator than Joe in terms of some ordinal scale but now we must take into account some of the individuality of Jack and Joe apart from their relation on the scale when we assign meaning to the ordinal relation. With the stereo example, for instance, although level B is less loud than level A, the trumpets are experienced as relatively more prominent and the bass as less prominent in level B than level A, and hence the relation between level B and level A is more complex than simply a matter of the difference between total decibel levels. We are detecting more differences ordinally than intervally but are evaluating these differences along a common dimension. If we hold that the meaning of the observations lie in the measuring instrument rather than in the measuring person, we conclude that the interval discrimination is more precise than the ordinal. However, if we find the locus of evaluation in the experience of the observer--and assume that the most acute listener conceivable is able to detect true and rather comprehensive differences between the sounds in his own experience with respect to the criterion dimensions--then we conclude that the discriminations spawning the ordinal rankings are more precise or true than those yielded by the interval instruments. Indeed if we hold that Leonard Bernstein's discrimination of pianissimo is less accurate, precise, or true than that of the decibel meter or any combination of sound detecting devices, we are on shaky ground, because, for

Bernstein, pianissimo is more than a matter of noise; it is a matter of the total quality of the sound. Of course the type of discrimination to be employed depends upon the uses to which the data will be put. Nevertheless, in discriminating complex, moving patterns of events, it may be held that the veridical correspondence of awareness with events is more a function of the qualities of information processing in the observer than the precision of instrumentation because it is within the observer that the Gestalts are formed which give rise to meaning and action. Our seeking to know the truth cannot be separated from the implications of the truth for our experience and action. Hence, a "subjective" truth which permits keen experience and action is better than an "objective" truth which does not. We cannot consider precision as independent of meaning and context.

Now how about nominal or discrete data? Let us continue with the musical example. Assume case A wherein the stereo is playing very softly as one attends alertly. What is the nature of one's experience? Is the difference between case A and case B simply a matter of loudness and the qualitative differences in sound which vary with loudness? No. The differential experiential differences, the meanings, the implications, the characters of the two cases are vastly different. Case A comes together with one set of thought patterns, recognitions, emotions, moods, impulses, bodily dispositions, memories, etc., and case B comes together with other sets. The patterns in and of awareness--indeed the very realities of the two cases--are very different. This difference is of an entirely different order than the difference between levels of noise or the differences in sound

quality at different volume settings. Instead, the realms of awareness in case A and case B are virtually discrete.

One might think of viewing a kaleidoscope wherein a slight twist on either the "receiving" end or the "objective" end produces a complete reorganization of the pattern. Precisely the same pattern is likely never to reoccur, yet each pattern is orderly and the total of the elements present in the gadget remains constant. We can measure the amount the device is turned but this tells us relatively little about the change in reality with which the turn corresponds.

The analogy with the kaleidoscope cannot be pressed very far, but we may begin to conceive of the reality of living in a roughly similar way. Indeed we can and do process data intervally and ordinally and these operations are extremely useful in becoming oriented toward the "facts of the world" particularly with respect to physical phenomena which operate in less a kaleidoscopic fashion in that exact states may be more nearly reproduced and predicted and precisely calibrated with levels of the variables involved. If one is to build a cracking tower in a petroleum refinery, then one can and must know precisely the height in the tower (together with other variables) at which various petroleum products will separate themselves from the others. But in the realms of inner human and interhuman reality where our concern is not with the reciprocity of the inner world with the physical world but is rather with the reciprocity of intrahuman forms with other intrahuman forms within the same person

and with the reciprocity of inner forms between persons, then the discrete perspective in knowing comes to the fore.

There are some important ironies to be observed at this point. We have been speaking of digital and analogic modes of information processing. The digital mode is of a discontinuous nature. The switch in the computer is either on or it is off; there is no in between and no other possibility. An event either is or it is not. In this sense, events are represented discretely. The analogic mode is of a continuous, more-or-less, just-as-it-is character. One's household furnace, for example, is either on or off digitally, but the tensile metal strip in one's thermostat is bending continuously in accordance with the temperature in the room. It is only more or less at some particular point but it is just as it is and is moving. So the digital is discontinuous and the analogic is continuous. But we have also been speaking of interval, ordinal, and discrete data and the ways in which such data are represented in awareness. Interval data was discussed as arrayed along a continuous dimension wherein any point derives its meaning from its precise relation with other points along the same dimension. Discrete or nominal data was discussed as being of a discontinuous sort. An item is what it is qualitatively; we are not concerned with or cannot say whether it is more than or less than something else. We cannot say that blue is more than red. We can say that setting A on the stereo dial is louder than setting B but we cannot say that the experience occurring within us at one setting is more or less than the experience at another setting; they

are qualitatively different in ways which may have no logical or empirical relation with the loudness itself. When the music is loud, our experience may well be bland and low-key. When we turn the volume down, our experience may intensify. The next time the volume is altered, the reverse may occur in our experience. In each case, the change in volume is implicated in the change in experience but we can only speak of qualitative changes.

Here, then, is the irony: our discontinuous mode of information processing (digital) is the one through which we primarily handle continuous or interval data. Our continuous mode of information processing (analogic) is the one through which we are primarily aware of nominal, discrete, discontinuous data. We apprehend separate qualities or qualitatively different states of awareness analogically or continuously. We apprehend continuous differences along a dimension quantitatively or discontinuously. Interestingly, the most complex states of awareness are apprehended through ostensibly the simplest and/or the most immediate mode of information processing. The simplest states of awareness, those involving more than and less than distinctions and relations along a limited number of bipolar dimensions, are apprehended through what seems to be the more complex mode of information processing. It is part of our everyday experience yet is no less shocking that we can immediately grasp the meaning of a complex interpersonal experience which later requires hours of arduous digital analysis to transform the comprehension into a form which may be communicated rationally through language. Bruno Bettelheim

is said once to have spent four hours describing to a group of students what he observed in five minutes of interaction between a child and his parents.

This irony leads us to question the meaning of the term "higher mental processes." It would appear that the continuous mode of information processing is actually of a much higher order than the rational or discontinuous mode. Yet it is clear that man who is distinguished from the "lower" animals by his powers of rational thought is indeed a higher order process than the others. This fact leads us to conclude that the digital mode of information processing is an intermediate level of process. The total psyche of man gains its preeminence not by the power of rationality alone but rather through the emergent, ascendant transaction between the discontinuous and continuous processes. On the one hand, rationality allows us to transcend the confines of immediate experience; but then experience allows us to transcend rationality. The implication of this is that rationality does not allow us to be removed from the lower animals by merely one order of magnitude but rather by an infinite succession of orders of magnitude. By the same token, we cannot say that one man represents a higher order process than another man simply on the basis that former is more rational; instead we must always encompass in our evaluation the quality of the experience of which the rationality is an expression.

The discrete states which comprise our awareness from moment to moment, then, include pre-rational, rational, and "post-rational" processes. The post-rational processes are identical with the pre-rational processes in their essential nature but differ in their depth, comprehensive-

ness, and specific form. The post-rational at one time, together with its interactions with the potential of the realm from which it arose, may constitute the pre-rational another cycle at some other time. (The meaning of the "potential" of the realm of awareness will be defined below.)

The fluidity of the emergent oscillations between the continuous and discontinuous modes of information processing is especially significant with respect to interpersonal and intrapersonal communication and experience. If the reality of person A, which is one realm of awareness and one state or forming form within that realm undergoes a change to another realm and form, and if person B wishes to understand the realm and form of person A just as it is, then B must be concerned also to move from one processual discrete state to another which is reciprocal to A's state. Here we are concerned with the correspondence of intra with inter. Here, the interval and ordinal ways are of less use than they are in comprehending physical phenomena because A has not simply become more so or less so along some dimension or set of dimensions or within some pattern (though this also may have occurred); mainly he has become different in a discrete way. Not only is he becoming different as the physical universe does; now he is becoming differently. He is becoming different differently through time. The superintendent we knew last year has not only become less authoritarian, he has become discretely reorganized. The implications which flow from this new reality are of an entirely different order from the implications which would flow from the same reality altered only in being less authoritarian. He is now virtually a new person although we may intuit continuities

with the old person.

Similarly, the correspondence: intra with intra also implies changes of a discrete order of complexity. Whereas the superintendent is now a "different person," that is, he is aware of different patterns; he is aware of them differently (relativistically); and he is awaring differently of them, still, he is no stranger to himself. The problem is, how can one move from one discrete state to another discrete state in moving toward correspondence in awareness with that which is potential to awareness without becoming disconnected? For the form of the answer, we may turn appositionally to some good speculation in cosmology and couple this thought with some musings suggested by the fact of Psi-phenomena.

Isaac Asimov has written what he terms an "imaginative essay" concerning the beginnings and ends of the universe.¹ He brings together recent findings from the science of cosmology (which has been virtually exploding with new insights in the past decade or so) and then reasons from these findings to possible conceptions of beginnings and ends. Because, in the perspective being developed in this inquiry, each person is viewed as a universe unto himself seeking correspondence with the external universe, other human universes, and with the realms or universes within his own universe, it is appropriate to look for clues into our own nature (which, at least at one level, has a beginning and an end) in what we observe of the

¹ Isaac Asimov, "The Beginning and the End: An Imaginative Essay," in Concepts in Physics, ed. by Isaac Asimov, et al (Del Mar, California: CRM Books, 1973), pp. 360-368.

cosmos at large. After all, the atoms which comprise our brains and the rest of us are the same atoms which comprise other living, non-living, and extraterrestrial matter and energy. The very matter and energy which comprise each of us at this moment is destined ultimately to burn up with the rest of the earth and perhaps eventually to disappear down a "black hole" in space. We are a flickering form in which the universe is manifesting itself. So it is not unreasonable to suppose that what is at the base of the physical universe is also at the base of us in some way.

Asimov's conclusions can only be summarized in the present context. Every particle has its anti-particle which is identical in every respect except for electric charge and the relative directions of spin and magnetic field. Ordinary particles combine to form ordinary matter and anti-particles combine to form anti-matter. Our entire universe is apparently matter which gives rise to the possibility if not the likelihood that an antiuniverse exists similar to or identical to our own but separated by great distances along some dimension. If particles and anti-particles of matter were proximate, they would combine annihilating each other as matter; they would be converted into energy in the form of photons which are equally at home in both the universe and the anti-universe. If matter has not existed externally in the universe but was in fact created from energy, then we may be reasonably sure that an equivalent amount of anti-matter now exists somewhere beyond our detection.

It appears now that the universe is expanding and that at some future time it may begin contracting. During the expansionary phase,

time appears to run forward; during the contracting phase, time runs backward. As the universe and the anti-universe contract, they move closer to one another in space. As proximity increases, mutual annihilations of matter and anti-matter increase producing eventually a "cosmic egg" of pure energy.

Now where did this energy come from in the first place? When a gun is fired, equal amounts of positive and negative momentum are created-- positive in the momentum of the bullet, negative in the recoil of the gun-- which sum to zero. Likewise, there is the law of conservation of electric charge. A proton with a positive charge cannot be created out of energy unless an anti-proton with a negative electric charge is also created. The two charges sum to zero so that no net electric charge has been created.

Asimov wonders if this principle also applies to energy. Can there be positive energy and negative energy which sum to zero? If so, positive energy and negative energy would interact to produce nothing. But if that is so, the reverse ought also to be true. A quantity of nothing might suddenly become equal quantities of positive and negative energy.

The picture now produced is of a quadruple universe or a set of quadruple universes arising out of nothingness to become positive and negative energy which in turn becomes positive and negative matter and anti-matter. The positive universe and anti-universe are separated in space, whereas the negative universe and the negative anti-universe are separated from their positive reciprocals in time. Figure 3 depicts the relation.

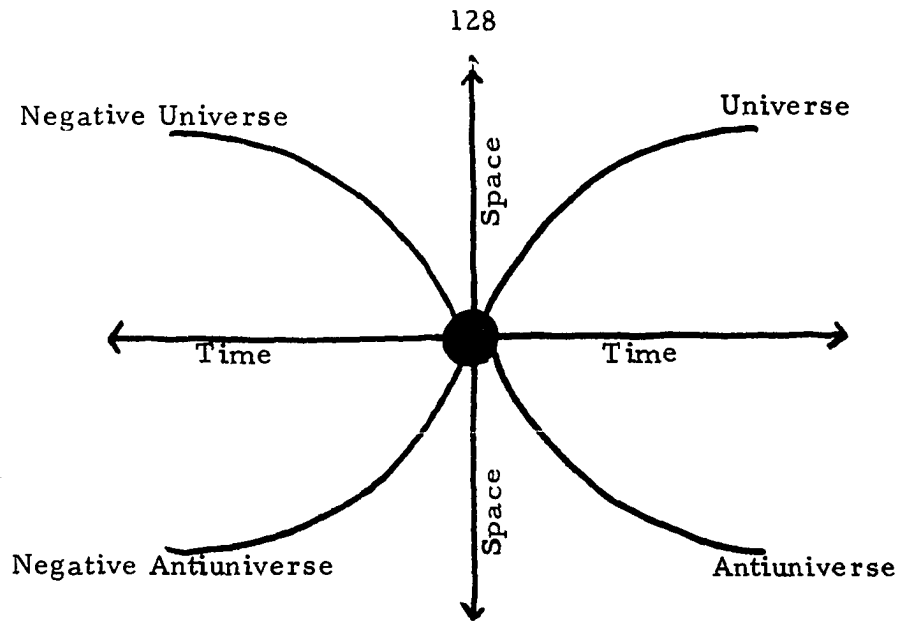


Fig. 3. --Asimov's Quadruple Universe.

But now Asimov asks still another question: What is this nothingness out of which all the quadruple universes arise and into which all sink? Is it really nothing or is it something other than nothing which we simply cannot discriminate from true nothingness? Something more subtle than energy but just as real?

Before proceeding, it is intriguing to recall Jung's theory of personality in which he views quaternity as the universal symbol of unity. He discovered in the dreams and artistic productions of his patients as well as in artifacts of cultures around the world the four-sided symbol of the mandala. Selfhood represents the harmonic unification of differentiated opposites-- those of the four psychological functions (thinking with feeling, sensation with intuition), the attitudes of extraversion and introversion (a positive investment in the external world and negative investment in the internal world, and visa versa) and the ego with the shadow.

But Jung's insights into the connectedness of physical and psychical or external and internal events go much deeper. In his "synchronistic principle" Jung describes an acausal but simultaneous relation between events in awareness and events in the physical and heteropsychic world. This synchronicity is a property of the archetypes of the collective unconscious. Jaffe states:

In reality, the archetype must be regarded as the "arranger" of synchronistic phenomena. It is their condition, not their cause. The "unexpected parallelism of psychic and physical events" is a manifestation of the archetype's psychoid (psychophysical) nature: because of its "transgressivity," its psychoid nature is split, and it appears here as a psychic image and there as an external event, occasionally as a physical object. The archetype arranges itself, along with its antinomies, in the facets of the synchronistic phenomena. But this split is never so radical that the experience of their underlying unity is lost; indeed, on that depends the experience of meaning, which is the distinguishing mark of synchronistic events.¹

Jung himself goes so far as to say:

I incline in fact to the view that synchronicity in the narrower sense is only a special instance of general acausal orderedness--that, namely, of the equivalence of psychic and physical processes.²

To seek to grasp the correspondence of the bases of awareness and the bases of the universe is not unique to the present inquiry. Wolfgang Pauli, the nuclear physicist, writes:

¹Aniela Jaffe, From the Life and Work of C. G. Jung (New York: Harper Colophon Books, 1968), p. 37.

²Carl Jung, Synchronicity: An Acausal Connecting Principle (Princeton, New Jersey: Princeton University Press, 1960), p. 100.

Although in physics there is no talk of "self-reproducing archetypes" but of "statistical natural laws with primary probabilities," both formulations meet in the tendency to expand the old, narrower idea of "causality" (determinism) into a more general form of "connections" in nature. The psychophysical problem (i.e., of synchronistic phenomena) also points in this direction. This approach permits me to expect that the concepts of the unconscious will not go on developing within the narrow frame of their therapeutic applications, but that their merging with the general current of science in investigating the phenomena of life is of paramount importance for them.¹

Substance is lent to the expectations of Jung and Pauli and others in this vein of inquiry by the fact that it now appears absolutely indisputable that certain people can move physical objects at will using only the power of "thought." The most well-known of such persons is Nelya Mikhailova, a Russian housewife, who, before competent western scientific observers and on film has been observed to move such objects as a matchbox or a wine glass over the surface of a table with only the power of "thought."² Psychokenetic ability such as the power to influence the fall of a die down an incline has also been confirmed in numerous studies (typically at $p < (.05)$.³ Furthermore, the ability of many people (and probably potentially of all people) specifically to "read" the contents of other persons' minds over large distances; the ability of people to "travel" outside their own bodies and physical settings and to describe in great detail events and

¹ Jaffe, From the Life and Work of C. G. Jung, p. 43.

² Sheila Ostrander and Lynn Schroeder, Psychic Discoveries Behind the Iron Curtain (Englewood Cliffs, New Jersey: Prentice-Hall, 1970), pp. 68-86. See also Ehrenwald, Parapsychiatry.

³ Ehrenwald, Parapsychiatry.

physical settings miles away, which they had never had occasion to view before, at the times when these events are actually occurring (clairvoyance); and the ability of persons to have detailed awareness of future events-- these occurrences are no longer in serious doubt in the scientific community. We know with considerable certainty that they occur; we still do not know how they occur.

We return now to the question, what is this "nothing," which may be other than nothing, out of which energy may arise and hence the quaternary universes of which we are a manifestation? Is it conceivable that this "nothing" is of the same ilk as the "nothing" whereby persons move objects with the power of thought, see into the future, know each others' thoughts, psychically heal wounds, and so forth? Jung held that the acausal principle of synchronicity is the fourth complement to space, time, and causality-- hence unifying the universe of which both we and physical events are manifestations. This nothing may be at the base of our moment-to-moment experience. It may be that 500 billion years ago or so (our time), our universe sprang forth from the same nothing which supports, gives rise to, and potentiates our analogic and digital processes in awareness. As we know that time is relative (time itself may be a form of energy), it is not difficult to conceive of our awareness as organizing and disorganizing within a multiplicity of time frames. Our "stream of consciousness" may in fact be many streams which are organizing and disorganizing in their own times but with respect to one another in the timeless realm of nothing.

Let us bear in mind the idea of "positive neutrality." This nothing we may regard as neutral because it exists prior to positive and negative, existence and anti-existence. We may further observe many referents in human experience to such neutrality such as Zen satori, compassion, and others mentioned above. In both the physical and the experiential there is the sense of neutrality--of that for which there is no opposite. But also there is a sense of the positive in these apprehensions--a sense of movement which is beyond the question, relative to what? When relativity is dissolved, when there is only spacelessness, timelessness, and energylessness, still we have the sense of something even though this something has no opposite or cannot be defined as contra something else.

This something, the positiveness of the neutrality, may be conceived as potentia. The irradicable fact of this nothingness is that something may come of it and we are aware of that. Consider Harlow's idea of the "curiosity drive," White's concept of the "effectance motive," Maslow's concept of "self-actualization," and other ideas in this vein.¹ These ideas are now sensible on other than a priori grounds. The irreducible foundation of reality, whether as physical reality or awareness reality, lies not in reality itself but in the possibility or potential of reality. The possibility

¹ R. A. Butler and H. F. Harlow, "Persistence of Visual Exploration in Monkeys," Journal of Comparative Psychological Psychology, XLVII (1954), 258-263; Robert W. White, "Motivation Reconsidered: The Concept of Competence," Psychological Review, LXVI (1959), 297-333; Abraham H. Maslow, Motivation and Personality (New York: Harper, 1954).

of reality, being beyond being or not being is n-dimensional--infinitely dimensional. That is to say, what is, in potential, may become, together with whatever else is. The result of this n-dimensional being of what is, together, is the sense of a substratum into which all particular things and the concepts of them may be harmoniously dissolved to arise again as other things and patterns of things. We observe the substrata of possibility as everywhere apparent, dwelling in the particulars of existence: the pulsating creation and uncreation of the universe; the rising and falling of civilizations; the construction and decay of buildings; the organizing and disorganizing of our bodies; the structuring and destructuring of ideas; the coming to self and losing of self, and on and on. On a shorter time frame, we experience the transitions among discrete contacts. At one moment we are in contact with ourselves-driving-the-car; at the next moment, with our thoughts about the day ahead; at the next with our feelings toward a friend; at the next a kinship with the changing season.

Whatever is, whether it occurs over a trillion years or over the course of a moment, emerges out of the potentia of nothingness. It is irreversible and discrete. It is coming into being even as it is going out of being. It is, we hypothesize, from this n-dimensional potentia which we may take as real and ever imminent that time and space, matter and energy, thought and experience arise.

The Experiential and the Conceptual: An
Integrative Model

Let us summarize what has been developed thus far and then compose these elements into a model.

Awareness and Dimension

It has been suggested that awareness, together with its antecedents, occurs in dimensions. Six types of dimensions or realms of awareness were identified in a very crude way. These realms were daily life and work, cogitation, the personal unconscious, sociality, the collective unconscious and the heteropsychic realm, and others. This categorization of the realms of awareness, however inadequate it may be, serves the purpose of allowing us to see some order in what is actually an n -dimensional process. Thus, it is true on the one hand, that if awareness per se is n -dimensional, then any subset thereof must also be n -dimensional. On the other hand, states of awareness are discrete, hence differentiable, and thus to recognize one, we must pose it contra others. Hence, for convenience, we establish categories recognizing full well that each category is unlimited with respect to its dimensionality and that dimensions among categories interpenetrate in the composition of any discrete state of awareness.

Now of course it is very difficult to visualize relationships in more than three dimensions. We can easily plot points with references to x , y , and z axes, but when we attempt to add a fourth, as Einstein did in indicating the relativity of time, we must leave our spatialized way of thinking

and shift into a higher gear. We cannot physically represent more than three dimensions but we can comprehend more than three and so that is what we must do.

Here is a simple experiment, one may perform to gain an appreciation of n-dimensionality: Place a lighted cigarette or incense in an ash tray on a desk between oneself and a florescent light with a dark background. Watch the smoke. The smoke leaves the tip of the cigarette in a relatively unified stream. Then it begins to unfold and unfurl into incredibly complex, smoothly evolving, never repeating, yet orderly patterns. These patterns are not the kind which can be "made sense of" because they are absolutely concrete. No abstraction could be taken from the unfurling portion of the smoke stream because it is ever changing, not only in position but in pattern, and never repeating. Yet the patterns are anything but random. At a distance from the tip of the cigarette, say ten feet, the smoke has assumed a state of considerable entropy. In contrast with the intense, organized burning at the tip and the smooth flow of smoke from the tip, at a distance the smoke is rather evenly distributed--not randomly so any more than the patterns nearer the tip--but more complexly so. At a distance, the smoke is entropic in the sense that it is nearly impossible to observe order or form in its distribution; nevertheless, this is not to say it is distributed randomly. In fact, under certain lighting conditions in a smoke-filled room, one can observe very broad gauge, slowly moving

patterns in the smoke.¹

If we define a dimension as any continuity of form from which deviations may be detected, we see in the unfurling of the smoke a very large number of dimensions--perhaps this event is n-dimensional. Even though the event of the smoke is transpiring physically in the four dimensional space-time field, the event taken as an informational order of reality approaches n-dimensionality. That is, if we cast the formed movement of each smoke particle as a dimensional context in which to view the formed movement of every other particle, we find an event of virtually infinite complexity. Yet as one quietly watches the smoke stream slowly unfurling before him, it is quite a comprehensible and ordinary event in no way taxing the capacities of our awareness.

Computers have now been taught visually to identify the shapes of common objects such as "stick chairs." They require, however, at least five minutes of intensive scanning and computational activity even to recognize such a static simple figure as a stick chair. We, on the other hand, can grasp the unfolding of a smoke stream instantaneously. We can even "go with it" as it continuously evolves. We do this with enormous ease and relaxation. While the computer is comparing its observations against the categorical structures of its programs, we were not evaluating the

¹ Michael Polanyi has given an excellent criticism of the role of randomness in scientific inquiry in Personal Knowledge: Towards a Post-Critical Philosophy, pp. 33-48.

smoke against any structured criteria. Nevertheless, while the smoke is not any "thing," it remains orderly. By the same token, if one were to be involved with high awareness in an evolving group process, he may well become privy to its complex orderliness even though this order contains no recognizable (abstractable) structure. Again, we see that a process which contains no enduring recognizable structure is not necessarily an aggregation of random events but in fact may be a higher form of order which we are quite capable of grasping and participating in apart from the exercise of our rational faculties. The inconceivable power of our analogic information processing faculties for apprehending complexity thus becomes clear. It is from out of this analogic ground that our conceptualizing arises and it is back to this ground that we are led from our conceptualizing.

Recall now that we have defined the direction of living as awakening, and awakening as a counter-entropic process--a coming to form in awareness of that in which no form could be observed initially. We take the apparently diffuse events of internal and external reality and find in them complexity simply apprehended and/or expressed.

Let us continue to liken awareness with the smoke stream by analogy. Imagine that the smoke stream is taken on film and then the film is run backward. Now we see infinite complexity (not randomness) being resolved into simplicity. In the first few inches above the tip, we see ostensibly only a few dimensions--a few distinct strands all moving generally in the same vertical downward direction, yet this simplicity of

order is connected continuously with the immense folding complexity of events in the next few feet higher--and this level of complexity is continuously adjoined to the even more complex diffuse distribution of smoke in the room.

At the very tip of the cigarette, we find combustion occurring--another type of process altogether from the moving smoke. If we consider the smoke itself as having a purely informational reality having an existence apart from any visceral or physical reality, we find this information issuing into or issuing forth from (depending on the direction of the film i.e. awareness process at the time) a kind of physical reality process which is informationgenic. The raw material of tobacco is combined with heat and oxygen, and hence, through the chemical reorganization of molecules, smoke is produced. The smoke continues to have a physical reality but its significance now lies in a different frame of reference or order of reality. The order of events which produce the smoke is quite different from the order of events composed of the smoke itself. Following this thinking, imagining the biological basis of our experience as the tip of the cigarette, we see that the physiological combinatorial possibilities of the neurons of the brain and elsewhere occurring together with all of the other physiological processes of the body, also represent a physical order of process which is informatiogenic. This process draws upon and contributes to events at one level of reality, but the combustion process itself is of a different order. This idea may suggest, contrary to the

common assumption, that the dynamics of the analogic processes are further removed or processually more unlike the reality of the viscera than are the processes of rational thought. After all, conversion symptoms and psychosomatic disorders seem much more related to symbolic difficulties (vectoral binds) than they do to analogic malfunction.

Awareness, then, is a matter of resolving n-dimensional complexity of an informational order of reality into integrity (i. e. , simplicity) and moving to and from this order of process into the ratiocinative order of reality. Awareness evolves in this way: If we imagine n-cigarettes each having a characteristic color of smoke (representing realms or states of awareness) burning in a room and we imagine a small sphere encompassing the tip of each cigarette, we can then imagine each sphere expanding in circumference to encompass more and greater of the unfolding complexity of the respective smoke streams until the spheres begin intersecting and the smoke streams begin intermingling. Yet each sphere and each smoke stream keeps its "tag" or color such that in the intermingling, there is not the loss of identity but rather an even higher order of organized complexity rendered simply apprehensible by running the film backward, but now such that the smoke returns to fewer, larger cigarettes, ultimately only to one.

Orders of Change in Movement

Eight orders of change or levels of process in awareness are apparent. These levels progress from the most finite to the infinite.

The first four levels have to do with the rational mode of information processing; the second four levels have to do with the pre- and post-rational mode.

- a. Change of a vectoral sort whereby biological and psychic energy is bound via symbolic organization (with the implied necessity of negation or logical oppositionality) wherein impetuses in various directions are summed to result in the behavior of the organism as a whole.
- b. Motion within a static system, i. e., the earth is perpetually in motion around the sun but invariantly so (for practical purposes). The assembly line worker is in motion but the parameters of his motion are mainly fixed. Circular or habitual patterns of behavior and thought represent this order of motion. Consider, for example, the man walking on flat ground. These motions constitute essentially fixed entities. The dynamics constraining the constituent elements occur within the locus of the processual unit itself, i. e., they are not transactionally determined with elements across the system boundary.
- c. Stable systems transact to form new stable relations. Two chemicals, for example, (characterized by order of motion (b) above) transact to form a third substance different from either chemical itself or any simple combination of the two. The product has its own characteristics and reactivity. Two conceptual elements combine to form a third which is different than or more than the simple summation of the two. For example, "Principal A seems tense and preoccupied these days." This statement has a certain range of implications for a given superintendent. The statement, "Principal A is not performing efficiently in his role" has another range of implications. When these two conceptual elements are combined (together with others), a new conceptual compound is formed which has a range of implications which is different than, more than, and less than the summation of the original elements: Principal A is torn by "role strain."

- d. Relative movement within multiple contexts. The earth's movement with respect to the sun and the solar system is static. But the sun is moving through space with respect to all of the gravitational forces within our galaxy and perhaps with respect to all other galaxies and these with respect to some primeval cosmic event. Here we have many orders of motion taken at once. We have motion relative to other motion but no Archimedean point of reference. As another example, we have Principal A who is torn by role strain. But this role strain has definition within the context of our cultural evolution, manifold and contradictory aims for education, various theories and value judgments concerning the administrative process, the various "life scripts" (Eric Berne) or "guiding fictions" (Alfred Adler) serving to organize the principal's behavior, and so on. Such a complex set of elements in relative motion may be resolved within a conceptual set and through rational process, but it would seem that this rationality must be of an holistic sort rather than an inductive or deductive sort. In evaluating the principal, the superintendent must allow all of the relative elements to come together "all at once" rather than attempting to bind the elements together in a linear way. Because there is no fixed point around which all of the elements may be organized, each element may be defined only with respect to all the other elements, never absolutely. If one is out in space looking down on a jet facing eastward over St. Louis, then is the jet moving over the earth or is the earth moving under the jet? If the school principal's "personality" is impelling him in direction A, and if his school as a social system is moving in direction B, and if the surrounding community is moving in direction C, and if the national culture is moving in direction D, which one is right? Is the principal right and the whole world should change? Is the framework of the national culture right and the reality of the particular school should be changed to conform? Is the local community right and the superordinate culture and local school wrong? Continuing to oversimplify, if one should conclude that Albert Schweitzer was right and the United States of America is wrong, what would be right for him to do as a school principal--as one who cares about the "little" things in the lives of

people who themselves care about the "big" things i.e. material progress and success? How does one devise a rational, ethical criterion by which to formulate school policy? A holistic mode of analysis is required.

- e. Within the arena of human awareness, it has been suggested that the equivalent of multiple universes are extant. Phenomenologically, one shifts from one state of awareness to another, each of which implicates the entirety of awareness in one manner or another. These states arise and decline in different time frames, but may be operating concurrently. Say, for example, that one is working on a particular problem. He works on this problem for ten minutes beginning at five o'clock each day, picking up always about where he left off the previous day. The problem or the idea forms and disintegrates over a year's time. We may observe that this problem has had a continuous existence for one year even though it has been uppermost in attention only intermittently. That is, one integral of awareness has come and gone in a year. Now a single person may have 100, or 1,000 or 10,000 such integrals operating within him at a given time. If we take the Hindus seriously, some of these integrals say may take many lifetimes to work out. Others may occur only singularly and briefly as one apprehends a crow flying across the sky. In short, each person is not a single stream of development but a large collective of streams of varying degrees of comprehensiveness and duration some of which come intermittently to be uppermost in attention, others of which come and go only in the background of awareness (but yet within awareness). When the superintendent and his assistant begin discussing an important problem, then, it is important that each can attend to what he himself is in contact with. Not only might each be looking into the same crystal through different facets thus seeing different refractions of reality, indeed, each may be looking into a different crystal!
- f. States of awareness may be modified successively in a counter-entropic direction. For example, a particular state of awareness--say a particular occupational inclination such as to take a different kind of job--may organize and entropy in time. But to the

extent that "successional process" is occurring, the succeeding occupational inclination within this on-going stream as it forms in awareness is a higher order, more inclusive state than the preceding one. It is qualitatively different, not simply more or less intense or more or less organized.

- g. With respect to a particular individual, states or elements which are accessible to awareness but which have never been in awareness represent a form of process here called "autopsychic potential." Within the individual characterized by the levels of process enumerated thus far, there exists a type of potential which represents a reservoir from which successive, counter-entropic states may arise into awareness either as foreground or background. One may recognize this level of process by calling up from his own life the following kind of example: As one goes through daily life, from time to time one gets the dim feeling that he is on the verge of a change of some sort--a change of attitude about his work, a change in goals or direction, a change in self-concept. One has the feeling that something is on the verge of happening within him but cannot quite put his finger on what it is. The fact of the autopsychic level of process is that something already is happening and already has happened within him and these events now stand ready "in the wings," so to speak, to be transformed into awareness where they can be recognized clearly. Before one is able to be aware of these processes of change, they exist only as potential, but they do exist. The happenings which come upon the stage of our daily inner lives do not just come from out of the blue, they come from that level of process within us which makes them potentially occurable. If one could learn to influence the quality and quantity of this potential within him, the implications for psychic growth, for education, and for administrative skill would be enormous. We may thus come to see ourselves individually and collectively as open-ended phenomena with no finite limits upon development.
- h. A second type of potential resides at the heteropsychic level--the potential which is shared in common by all humans and perhaps all life as well as non-living matter.

- i. The final type of potential is that nothingness, which is other than nothingness, from which all that which exists, both psychic and physical arises. This concept may be metaphysical. On the other hand, it may prove demonstrable via the concept of synchronicity.

On the Purposes of Life and Death

Living takes the direction of progressively embodying in synergic awareness that which is potential to awareness. This potential is a peculiar form of reality. It is neither nothing nor is it something. If it were truly nothing, then nothing could come of it and indeed everything which comes comes of it. The fact that an event can occur which has never occurred before and may never occur again--a particular thought for example, or man himself as a species--inclines one to the view that an "antecedent" order of reality (not always and/or only antecedent in time) permeates extant reality. If there were nothing of something from which that something could arise, then no something could arise. So potential is not nothing. It is not something because something is by definition extant and potential is by definition not yet extant.

Living thus is the process of giving extancy to that which does not exist but which may exist--that which hence exists in the medium of some order insofar as it may come to exist. Living is movement toward that which does not exist (nonbeing) but that which at the same time gives rise to or potentiates that which does exist and may exist. In the process of moving toward that which does not exist, living continuously "arrives" at that which does exist.

In living, we move toward "nothingness" (potential) in two ways:

(a) We move toward biological death which may be conceived as a re-entry into the nothingness or possibility from which we came, and (b) we move toward giving extancy to the nothingness we abut while living. When we are dead, nothing cannot become something via ourselves but our part of nothing may become something via someone else who is extant. Deathness or "nothingness" then, in both the biological and the psychical sense, is a "preparation" for living; living a "preparation" for deathness.

It is interesting to note here a parallel in atomic physics. Time does not exist at the subatomic level and hence, neither does causality. The equations by which physicists explain subatomic events are equally valid and give the same results whether one posits that event A precedes event B or event B precedes event A. The imputation of causality is merely a convenience. So it may be also with our awareness. Past conditions may be no more nor less determinative of present events than are future conditions determinative of present events. That is, potential may be a timeless affair, and as we give extancy to potential, we may be in effect drawn toward the past and pressed out of the future.

Life, then, we may observe is positively neutral; life-death is tragic in that it is inevitably moving in the direction of nonbeing. All that which we know as extant will inevitably cease to be extant. We find with age the growing weight of this recognition and with it a cosmic sadness difficult to bear. Much more tragic yet is that that potential which might

come into being does not inevitably do so. Most frequently perhaps, living hardly gets going at all--undoubtedly a source of much weeping on the part of our forebears and progeny yet to come. But though life is tragic, it is positively so in that potential remains imminent and forever manifesting in the emergent extancies of creation. We may only hope to sublime these extancies and to know them as all of a piece.

A Model of Awareness

Now let us attempt to depict the direction, functions, and levels of process in awareness in a model. Discussion of the model will necessarily be abbreviated in view of limitations of space and present purpose.

The first four levels of process listed above may be considered as secondary levels of process. The secondary level may be indicated with the letter N. N levels of process, whether they be physical or psychological, have definition only with respect to time and space values. In a word, N's may be regarded as that in nature or that in awareness which nouns may suitably represent. We may think of an atom or the atom as nouns even though we know that atoms are constantly in motion or process. We may regard the entire extrapsychic universe as a noun knowing full well that it is a complex process. Still, it either exists or it does not exist. As we are able to be aware of its existence as an "it" which is not some other it and which is not becoming some other it, then it is a noun.

The second four levels of process (primary levels) may be

referred to with the letter V. V implies a kind of is-ness in awareness for which there is no opposition. Both N and V may be operant in awareness at once. For example, one may be contemplating the universe. N-wise, one is aware of the possibility that the universe does not exist in some other time or place. If we may consider any thing to exist, then by a simple operation of the intellect, we may consider the possibility that it does not exist. Being and non-being in the noun sense are two halves of the same identity. Anything which is is perforce not something else. If all men are mortal and Socrates is a man, then Socrates is mortal.

But at the same time that we are aware of the universe N-wise, we may simultaneously be aware of it V-wise--in which case there is no opposition. As one is aware of the universe, then this awareness itself, in the V-sense, is only a positive event. It would be illogical to say that one is not aware of what he is aware of. One's awareness of the universe may not correspond objectively with how the universe "really" is, yet one's awareness is a fact which cannot be denied. Awareness itself can only change; it cannot cease to exist--at least so long as biological life continues. As such, awareness in the V sense precedes awareness in the N sense. Awareness in the V sense precedes issues of is-is not, correct-incorrect, good-bad, positive-negative--it precedes all duality.

Earlier, the idea of successional process was discussed. How may this idea be represented in a model? Recall the example given above of the walking man. Let us assume for now that this man was not thinking

as he walked--that while he was he was active and attentive, no words or inner speech were occurring in his mind. If one pays attention to his own experience, he can easily observe that there are times when no words are crossing his mind although it is sometimes difficult to find such times of longer than a few seconds duration. One can further observe in his own experience that when he stops thinking, he does not stop knowing, and in fact often seems to know more clearly and more accurately and to know in such a way that keen action is possible. Consider the case in which one is steering his car around a curve on the highway. One can be acutely aware of what he is doing without either thinking about it or being automatic or unconscious about it. If one attempts to give himself verbal instructions, especially complex ones, some integrity of action is often lost. Hence, to permit better differentiation between V and N, let it be assumed that no words crossed the hypothetical walking man's mind. As such his entire primary awareness during his initial walking may be indicated as:

V

As he was walking, his awareness became transformed by his heroic archetypal experience symbolized as Genghis Kahn. He need not have thought of Genghis Kahn but only undergone the experience of the archetypal hero. As an aspect of this transformation, he began walking more confidently. The quality of "confidently walking" may be represented as:

A_v, V

Now this "confidently walking" is not simply walking once modified; it is a discretely new experience with its own implications. It is a new whole.

Thus:

$$(A_v, V)$$

Next, the walker began walking more expansively.

$$A_{v_2}(A_v, V)$$

Now let us say that he begins walking more sanguinely.

$$A_{v_3}[A_{v_2}(A_v, V)]$$

At the end of the day, we noted that his talking had also taken on these new qualities.

$$A_{v_3}[A_{v_2}(A_v, V)] V_a$$

It can be seen particularly that these archetypal experiential transformations are extremely pervasive.

At night as the walker dreams and otherwise sorts out and integrates the transformations of the previous day, we find:

$$A_{v_3}[A_{v_2}(A_v, V)] V_a = V'$$

$$V_y \begin{matrix} V_x \\ V' \\ V_2 \end{matrix} V_v \longrightarrow V_p \longrightarrow V''$$

- V_x represents past states of awareness.
 V_y represents other states of awareness from the preceding day.
 V_z represents future states of awareness.
 V_v represents states of awareness originating in the heteropsychic arena.
 V_p represents the altered condition of autopsychic potential.
 V'' represents the state of awareness upon awakening.¹

Now all of these changes may have occurred without the waking man's recognition in the N-sense that he is now different. But let us assume now that such recognitions did occur with each transformation. We now have the following situation:

$$A_{V_3} [A_{V_2} (A_{V_1}, V)] \longleftrightarrow N_1, N_2, N_3$$

With each succeeding N, the man thinks, I was like that; now I am like this. "This" has the same elements of composition as "that" plus some additional elements, but the new "compound" has different properties. The elements are now differently disposed with respect to each other. In essence, each succeeding N represents a different theory of the new V process with which it corresponds.

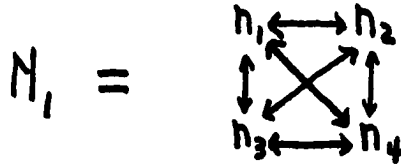
Both V and N are orderly but in different ways. (Furthermore, both V and N may be more orderly or less orderly.) But the orderliness

¹ Clearly this formulation has little explanatory value but is intended simply to depict the interrelations of dynamic structures and functions within the set of V processes.

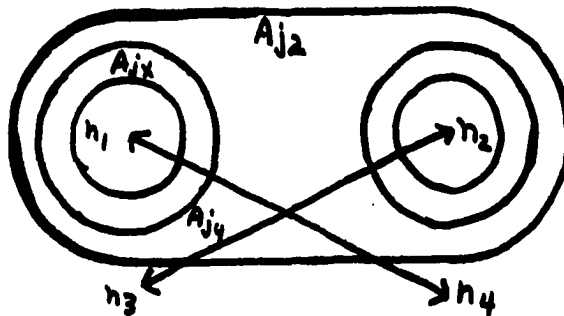
of N is of a rational type. Each succeeding A_v sprang forth from the potential residing in the system. The situation with N is somewhat different. Each N has certain inductive, deductive, and holistic implications. The N or "theory" applies here, in particular ways and under particular conditions, and not there. Therefore, the rational qualifications and implications of each N may be represented as:

$$N_1(\pm A_{j_1}) \longleftrightarrow N_2(\pm A_{j_2}) \longleftrightarrow N_3(\pm A_{j_3})$$

N and A_j may be further examined. N, a noun-like symbolic structure, may be composed of subelements which stand in relation with one another.



The qualifiers, A_j 's, together with the n's, determine the reactive properties of the system. If perceived role strain is high in a long-time employee, this fact may lead into one line of thinking. If it is high in a new employee, another line of thinking may follow suit. Hence, the relation between n and a_j is shown as follows:



The n's may share qualifiers in organizing themselves into complex patterns having varying degrees of stability. Very complex structures having manifold

implications may derive from interactions of a few basic elements.

This brief discussion of N and A_j is an attempt to compose a rough model of rational process as it occurs in the psyche (not necessarily in the brain). The significance of construing rationality in this way is that rationality is now located in the psyche rather than in abstract, logical forms dissociated from the psyche in which they occur. That is, even rational processes vary with the thinker himself. We do not take into our minds a theory or an equation (however accurate it may be) and put it to much use straight away. Rather, the very logical process which the theory represents in itself is contingent upon the combinatorial modes and possibilities of the thinker, namely, the range, numinosity, and integrative qualities of all other relevant N 's in his mind. In other words, rational process at the intrapersonal level (or internally) is more indeterminant than rationality viewed externally.

Nevertheless, theories, interpretive structures, or N 's are static in and of themselves even though they account for process and even though our use of them constitutes a process. Assertions can be made only within a framework. If one could proceed entirely on the basis of rationality, then the movement of thought would be governed entirely by the properties of the framework or the sum of the transacting frameworks within which the thought is moving. Because we clearly often bring to bear many conceptual frameworks as well as sub-frameworks and supra-frameworks, it is useful to have some idea of the "mechanics" which allow one thought to

lead to another, thought systems to hold together and be torn apart, and inferences and conclusions to be drawn. The analogy with chemistry drawn here very crudely may nonetheless be useful. If we think of conceptual structures as similar to chemical substances which will react with certain other substances under certain conditions to yield yet other substances with properties and reactive capabilities of their own--the process being determined by the nature of the structural relations of the elements and the magnitudes of positive and negative electrical charge attending these relations, then we may have a paradigm by which to understand how a virtually unlimited number of transformations of elements may occur, and yet only those which are "in the cards."

Insofar as N alone is involved in awareness, awareness can expand in depth, breadth, and integrative unity only within the limits of the sum of $N(\overset{+}{A}_j)$ and only through the mode of rationality. Fundamental novelty cannot emerge from N but only the novelty inherent in combinations of N. Fundamental novelty, and hence the evolutionary expansion of awareness can devolve initially from V, and proceeding from V, from potential.

Polanyi partially summarizes the position being developed here as follows:

The curious thing is that we have no clear knowledge of what our presuppositions are and when we try to formulate them, they appear quite unconvincing. I have illustrated already in my chapter on probability how ambiguous and question-begging are all statements of the scientific method. I suggest now that the supposed pre-suppositions of science are so futile because the actual foundations of our scientific beliefs cannot be asserted at all. When we accept a certain set of pre-suppositions and use them as our interpretive framework, we may be said to dwell in them as we do our own body. Their uncritical acceptance for the time being

consists in a process of assimilation by which we identify ourselves with them. They are not asserted and cannot be asserted, for assertion can be made only within that with which we have identified ourselves for the time being; as they are themselves our ultimate framework, they are essentially inarticulable.¹

What is the nature of this process whereby we arrive at N as the temporal expression? It is beyond the scope of the present work to attempt a definitive discussion of the modes whereby V is transformed into N. Fortunately, Gendlin has already presented a thorough-going analysis of the mechanics whereby purely experiential data is transformed into discriminated meanings--meanings which are hence capable of being dissociated from their original context and articulated with concepts.² Reflexively, one becomes able to refer to "this feeling I am having" and to refer to it as an "it," and/or to conceptualize it as "this feeling of anger about" Hence, as N processes, one may come to refer to and employ the concept of "anger" in a very abstract sense relatively divorced from any particular experience of anger, or he may refer to it less abstractedly (but still abstractly) as "this particular angry experience of mine." In the latter case, he may draw distinctions and ramifications from the experience itself with respect to other specified experiences and his concepts of them. In terms of the model presented here, both bypes or levels of abstracted discriminations become conceptual

¹ Polyani, Personal Knowledge, p. 60. Emphasis added.

² Gendlin, Experiencing and the Creation of Meaning.

elements or compounds subject to positive and negative reactions with some other compounds and no reaction with others.

Gendlin's treatise is a helpful and apposite set of conceptions concerning the transformation of V into N. However his formulation seems to regard the experiential processes themselves mainly as "feelings," at least in part at the expense of perceptual, apperceptual, and intuitional aspects of experiencing. He seems to imply (or one may infer from his formulation) that experiential knowings are of limited acuity or usefulness to integrated behavior and cognitive development until they have been specified or symbolized. It is agreed that becoming reflexive toward one's experience is a major "procedure" whereby psychic growth is accomplished and indeed in this work, education itself has been defined as reflexive awakening. However, it is also quite important for the present conception to understand that converting V into N is not always necessary or desirable for the evolution of the psyche and effective behavior. It has been observed by Jung and others that the highest forms of knowing involve the resolution of paradoxicality in such a way that the result can be known most veridically from within a state of awareness and not reflexively as a state. Referring to the "hateful crow" as an example, one may understand the poem most deeply or completely when he is disinclined to "step outside" it and attempt to specify and differentiate its meanings. This point is made to perfection by two other poems:

Though it be broken--
 broken again--still its' there:
 the moon on the water.¹

Look, and it starts misting;
 just don't look, and it clears--
 when gazing at the moon.²

Many times the administrator may have the clearest view facilitative of the most appropriate action when he does not become reflexive but simply "sees." Successional process may deepen this seeing, sometimes with and sometimes without involvement of N processes.

Still, in very large measure the evolution of the psyche toward deeper, broader, more integrated planes of experiencing, knowing and doing is propitiated through the procedure of viewing one's experience reflexively--"as an instance of itself" in Gendlin's words.³ In this way, the N processes are not constrained in their combinatorial possibilities to those that would obtain in a system of abstractions per se, but rather via the facile reflexive recourse to experience itself, new meanings can be differentiated, each having its own range of implications.

Over the span of time, it would appear that this process of emergence is not a linear one, however, proceeding unidirectionally from experiencing to differentiated meanings, but rather that it takes a spiraling

¹ Choshu in Henderson, An Introduction to Haiku, p. 185.

² Chora, in Ibid., p. 123.

³ Gendlin, Experiencing and the Creation of Meaning, pp. 173-204.

course. The meaning of a specified meaning need not remain limited within the framework of its differentiated counterparts, although such may often be the case. Additionally, meanings emerging via the N mode may themselves be connected with new emergence in the V mode. The point to be suggested is that not only is conceptualizing at both the quite abstract and the less abstract levels an experience in itself; also such conceptualizing may more indirectly vitalize or potentiate new V experience. That is, if one asks, what is the source of that new V experience which is not derived from direct internal and external sensory input and which is not concurrent with the process of conceptualizing whether reflexive or otherwise, then one must look to the realm of potential discussed earlier and wonder if there is not a way in which the N processes indirectly influence the quality and quantity of potential.

To pose a rather extreme example to illustrate the question consider a yoga adept and let it be granted that this person has anesthetized himself to external and somatosensory stimulation and cleared his mind of any conceptual thought. Still his awareness or consciousness is neither absent nor static. From where do the events in his awareness arise and do they have any connection with previous conceptualization? We have suggested that they arise from the dimension of potential, but what abets potential?

It may be hypothesized that the substrata of our experience (potential) is augmented by the efficiency of both V and N processes. From

physics, we know that "more efficient packing" of nuclear elements leads to the release of free energy. Essentially, this is what occurs in atomic fission and fusion. We may conceive by analogy of a similar process occurring in both the V and N aspects of awareness. The scientist, for example, strives for simplicity and economy. As a theory "comes together" within his awareness accounting for more and more phenomena in a more economical central formulation, it may be that the equivalent of free energy is released in his psyche. Subjectively, this seems to be the case. When we reach an insight, we feel buoyed and energized and open to yet new vistas. The so-called "Eureka!" experience is an example. The subjective sense of satisfaction we may derive from many kinds of performances may be seen to devolve from the "energy" freed or released within us as the psychic elements involved in the process become resolved together more efficiently.

Curiously, amid the positive enthusiasm brought by the resolution of disparity into integrity, we often feel a little more uncertain toward the present and future rather than a little more certain. The same seems to hold for V processes. For example, as one becomes a better dancer--as dancing becomes a more unified, comprehensive expression of awareness-movement, one is likely to become more surprising to himself rather than less so. Does it not seem that the educational administrator or any skilled professional at the peak of his powers--at the "cutting edge of his living" to use Maslow's phrase--is less predictable to himself and others rather than more?

It appears then that the amount of free energy released within the person by the more efficient "packing" of V potential and thence N into pattern is directly related to the admission of new potential into the system.

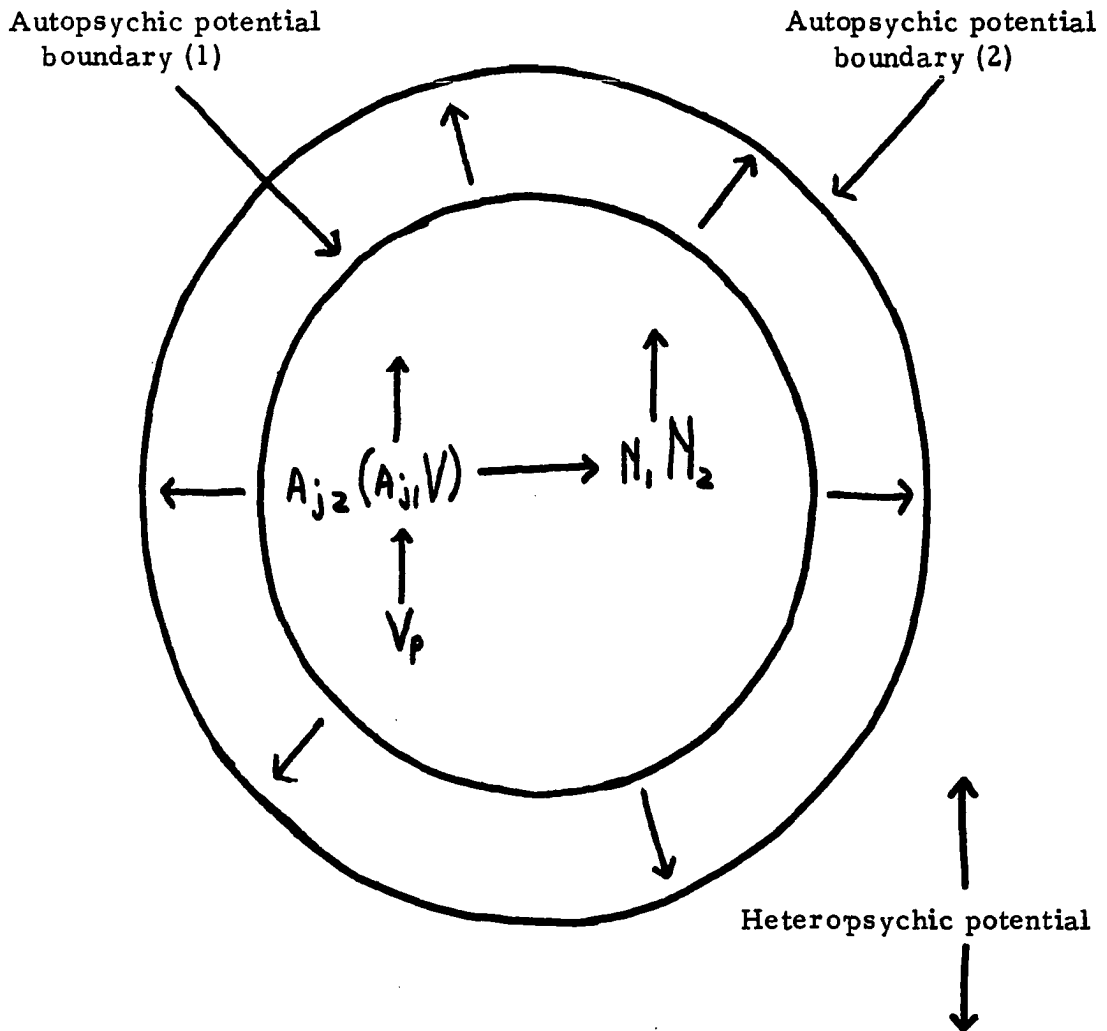


Fig. 4. --The psyche as a continuous reactor.

We come to see in awareness, then its possibility as a continuous reactor. Both the V processes and the N processes, to the extent that they are efficient, bring a simpler level of order to more complex arrays

of their respective elements. This process occurring within the person of rendering complexity, diversity, and disparity and appositionality into more comprehensive ordered simplicity releases energy into the presently unencumbered portion of the system, thereby extending its boundaries. (Actually, the concept of "energy" is not indispensable to the formulation as it is being devolved now.) The point is that the change brought about by the efficient transactions of elements in relation has the effect of enlarging the unencumbered field, that is, of extending the autopsychic boundaries to include new and more potential. We might say, the more and better we know what we know, the more we can know. As that which is potential to awareness is encumbered into form (both V and N), then that which is potential to awareness is increased, thereby, increasing the probability of the further encumbrance of potential into form and so on.

The efficient operation of both V and N may result in the expansion of potential and hence further the evolution of the system. However, N derives only from V and V devolves only from potential. Therefore, V supports N directly whereas N furthers V indirectly through the medium of potential.

In this conception of the psycho-physical process as a continuous, self-sustaining/evolving reactor, we find possibilities for a theory of development, an internally consistent "push" and "pull" theory of motivation, a theory of learning, and a content-free theory of personality. In that the criterion of the model rests at the level of successional process, we

formulate the basis for a theory which is at once nomothetic and idiographic. All of the particulars of any person in their unique relations may be taken into account via concepts which apply to the class of human beings in general. (Of course, the usefulness of such a theory in comparison with other theories need not correspond in every instance with its applicability.) And again, what is being attempted here is not a comprehensive theory but a conceptual framework which may later devolve into a theory.

The Development of Awareness

Let us now trace the process of this continuous reactor in a summary way. First, there is heteropsychic potential. At the bottom of this heteropsychic potential is positive nothingness. Positive nothingness is that level of nature which precedes all time, space, matter, duality, and awareness. It is nothing, but it is other than nothing in that something may come of it. From this positive nothingness, psychoid reality emerges appearing here as matter, space, time, and energy, and there as awareness. That is, the prime reality bifurcates into the physical and the psychical which remain connected (or connectable) albeit not conspicuously so. Hence, every individual "thing" which can ever be detected (time, space, matter, energy) together with every individual state of awareness (whether of the V type or the N type) takes shape or emerges from the "field" of positive nothingness. On the awareness side, this positive nothingness of which something may come is termed heteropsychic potential.¹

¹It should be indicated once again that the psychoid and psycho-

Now when a child is conceived, the autopsychic boundary begins to come about. The autopsychic potential is a subset as it were of the heteropsychic potential. We might visualize this process by way of analogy. Consider the formation of a thunderstorm on a hot, still, August afternoon. Though the sky may be relatively clear, it seems, does it not, that one can "feel" or "know" the potential for a thunderstorm in the atmosphere. Whether one can feel it or not, it can be agreed on the basis of our objective knowledge of the weather that certain atmospheric conditions represent the potential for the instance of a thunderstorm even though an actual storm may or may not occur. It is important to note that the potential for the storm really does exist. The potential is an actual state and not merely an abstract inference from our calculations. The condition of the atmosphere is the concrete existence in the form of potential of a particular state not yet extant. If and when a thunderstorm does begin to form, we begin to see a more particularly structured event superseding upon the non-particular (so far as we are able to observe) potential of the previous event. That is, we see entropy proceeding in a negative direction. The thunder-

physical basis of reality is an empirical question which can be (and today is being) investigated scientifically. However, the putative suggestion of positive nothingness is a metaphysical statement which probably can never be verified but only accepted or rejected in a philosophical context. We can discover the whether and how of heteropsychic potential and its connections with matter, but we probably cannot discover in the psyche that which is by definition more fundamental than psychic process. To put it another way, we can know God-ly but we cannot know God. So long as one recognizes the distinction between the metaphysical and the empirical, one is safe in viewing his own psychological appreciation of metaphysical speculations as an empirical fact. While we cannot know God, we can know what role our Godly appreciations play in our personal development.

storm is a succeedingly more organized expression of the encompassing potential. Still, we observe that there remains a great deal of potential within the forming thunderstorm. It can be punctuated with many or few flashes of lightning; it can rain or not rain; it can blow or not blow; it can produce tornadoes or not produce tornadoes; the clouds may move in any number of ways, and so on. Again, the potential of the storm is a real event and not merely an abstraction. We may also observe that the real event of the storm is indissolubly coterminous with its broader potential in terms of both time and space. We cannot grasp the storm itself without grasping also its potential to arise which exists elsewhere in time and elsewhere in space, and ultimately, elsewhere period.

Likewise is the case with the new human. Prior to conception, all the potential of the universe is extant as the matrix of conception. Anything that can happen at a particular time and place can happen. At conception, potential becomes limited by the extent of the physical, biological, and psychic concordants attending egg and sperm and their conjunction. Of course we know hardly anything of the nature of these limits. Subsequent behavior and physical characteristics may be related with varying degrees of assurance to genetic antecedents. But how about awareness? What are the qualities and structures and limitations of awareness as determined by the union of egg and sperm? When does awareness begin? Certainly the fetus has awareness of some kind before birth. Apparently fetuses spend from 50 percent to 80 percent of their time in dreaming during the latter

months of pregnancy. What do they dream about? What crosses their "mind's eye" when they have had no experience with the external world save the sensations of weight, acceleration, pressure, some muffled noises, etc.? And since they have received virtually no feedback from their actions which we believe is an essential ingredient for the organization of behavior and cognition, what particular drama or even what individual event could occur in their psyche? Since the instructions for the growth and sequential differentiation of billions of cells are present from the beginning in the genetic code of the zygote, and since development is a continuous process only artificially segmented into stages, where may we locate awareness in its most primeval form? What is the nature of this awareness? What were its antecedents? We simply do not know and probably cannot know unless we can learn to remember and return in awareness through our own experiential histories to that "age." (We might also not entirely dismiss astrology as a source of understanding of the initial psychic ingredients entering the stream of the neonate's awareness.)

In any event, it seems reasonable to suppose that just as physical and behavioral constraints are given to the child by the happenstance of his particular parents and the particular egg and sperm which unite and the conditions of the general field encompassing the uniting, we may assume also that the qualities of the child's early awareness were similarly constrained. Hence, while the potential of the universe itself is manifesting through the child physically and psychically, the child is also

unique. The child is coterminous with all that can be but is at the same time only himself. And thus the lifelong process of reconciling that which can be at the universal level with that which is at the personal level, and reconciling that which can be at a personal level with that which is temporarily within awareness--begins. Man is the universe becoming aware of itself and education is the conscientious facilitation of this awareness.

Experientially, then, we find that there is more to ourselves than we can be aware of, and furthermore, that there is more to the universe and its supporting field than we can incorporate into ourselves--and indeed it is this positive imbalance which keeps us going. Like sprinters, we are inalterably tilted forward having to dig with our toes in order to keep our balance--although in the end we may relax, throw out our chest, and surrender as we cross the tape.

The "digging" in the present case, though, is more involved than in running. It is a holistic evolutionary process rather than a linear one. At conception, we are separated from the fundamental field of potential and become a focal point as it were for some of these possibilities. But we are separated only as "through a glass darkly." We are not absolutely separated. As a thunderstorm in its early formative stages is a focal point of events in the larger field, it begins organizing as itself though it has no absolute boundary with not-self. As its organization proceeds, it draws energy from its field thereby contributing in turn to changes in potential at a distance from itself. As it continues to organize across

different levels in the atmosphere--complete with updrafts and downdrafts and seemingly chaotic eddies and currents--conspicuous highly organized structures may be formed such as tornadoes. Still the raging structure of the tornado, surrounded as it is by seemingly less structured processes, is connected with the quiet sunny skies at a distance as surely as is the earth with the sun.

So it is with ourselves. As we develop and dwell within the foci of our experience, we find our awareness structured and "directed." We find ourselves carried about in highly integrated and organized patterns of experience, behavior, and rational thought. The increasing efficiency of these patterns (in the organismic sense rather than the mechanical sense) enlarges the entire system.

The autopsychic boundary, then, is initiated at conception and serves, very diffusely at first, to separate the potential of the new being from the potential of the larger field. The autopsychic potential, while very loosely structured as to content or form from our adult, rational point of view, is nevertheless both more structured and more limited in scope than is the heteropsychic field. We may conceive of this initial store of autopsychic experience as related to Jung's conception of the collective unconscious--that set of emotionally charged archetypal ideas shared in common by all men as discussed earlier above. In his extensive investigations, Jung found striking commonalities of symbols in the dreams and artifacts of men of many and varied cultures. Jung postulates that numerous,

constantly repeated experiences of men across the centuries and across cultures have left permanent deposits in man's psychic constitution. The archetypes of the collective unconscious are not so much ideas as they are recognitions and nonspecific directives or impulsions. They are neither rational structures nor specific experiences; rather they must be embodied with the particular experiences of the individual, and they are best expressed via integrative symbols (such as the mandala or the cross) rather than through rational discourse. It is that we are expressions of the archetypes rather than the archetypes being expressions of ours.¹

The newcomer to the human race thus begins his journey thinly separated from the vast range of universal potential and personally laden with a storehouse of as yet unembodied but characteristically human experiences. These might better be conceived as "experience-abilities." He may also begin with some rather specific psychic deposits from his individual parents, and, according to some, with deposits from his own past lives. These constitute his initial autopsychic potential. In the course of his living he also accumulates deposits in his "personal unconscious"--the store of all those subliminally perceived, repressed, and/or forgotten experiences encumbered during his own individual life.

The contents of the autopsychic potential are thus available to awareness but do not constitute awareness itself. Awareness itself develops

¹Cf. Rollo May, "On Myths and Dreams," Cassette tape published by Pacifica Tape Libraries, 1971.

as the facets of the person's inner experience become "correlated" (in the most general sense of the term) with each other and correlated with the facets of the external world. It is at this point that many of our contemporary psychological theories of personality, cognition, learning, and development give aid: The ego harnesses the undifferentiated and conflictual energies of the instincts, mediating between them, the realities of the external world, and the conventions of the social world (Freud). Cognitively, the person develops by adapting to the external world via the processes of assimilation (making a response already present in the cognitive structure to a new stimuli) and accommodation (modifying a presently existing response or structure to better fit a new stimuli (Piaget). The organism develops by repeating those responses which are consistently reinforced and not repeating those which are not reinforced (Skinner).

But the case is being developed here that such conceptions do not take us far enough toward reconciling the orderliness of man with his fundamental indeterminacy. The attempt here is to enlarge our conception of man's initial endowment on the one hand, and his ultimate possibilities on the other hand, and in the process to show that our conventional ways of conceiving of man's thought and action represent a special case rather than the general case. The diagram below may help to clarify these relations (page 169).

From the diagram, it may be observed that the person begins to inherit a store of autopsychic potential at conception. From birth to

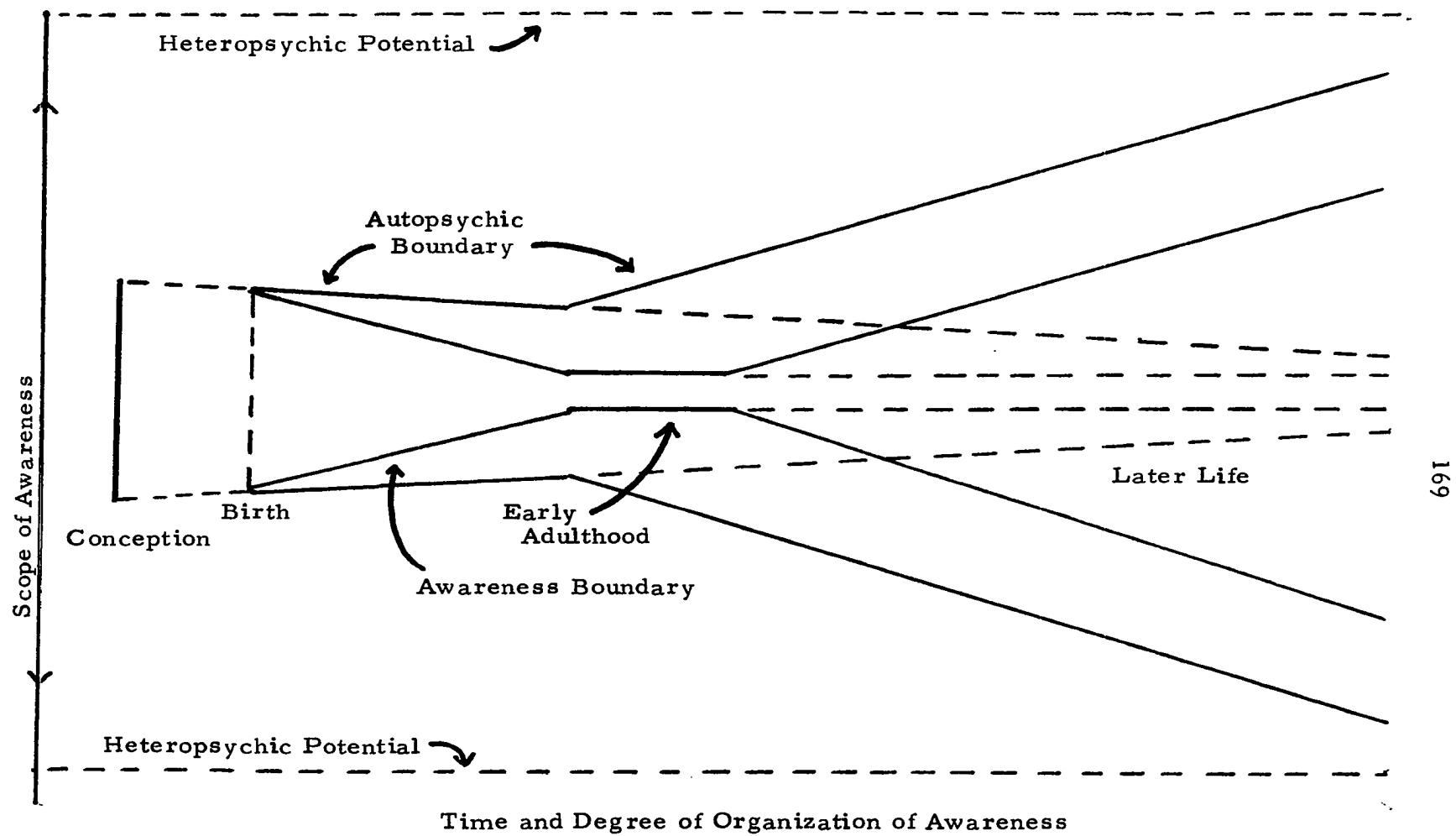


Fig. 5.--Awareness boundaries through the life cycle.

adulthood, under normal conditions, the range of awareness steadily decreases as the organization of awareness steadily increases with respect to the boundaries of autopsychic potential. Consistent with the "genetic hypothesis" formulated by Ehrenwald (as summarized on pages 91-92), the development of verbal communication abilities, reality testing capacities, and the sense of personal identity serve gradually to narrow the psyche's ability to admit to awareness that which potentially might be admitted. More and more the ego boundaries of the person preclude "extraneous" inputs which would serve to make more difficult the person's adaptation to the external world. By the close of adolescence, the die must have been cast for the person to be well situated to meet adult challenges. According to Erikson,¹ and Jung agrees,² this "getting it together" is essential during the "first part of life." It would not be the young person's advantage if the gates to awareness from the autopsychic and heteropsychic spheres remained too open during his early formative years.³

¹ Richard Evans, Dialogue With Erik Erikson (New York: Harper and Row, 1967), pp. 28-48.

² Jacobi, The Psychology of C. G. Jung, p. 22.

³ This issue of the optimum degree of openness of the child's awareness to autopsychic and heteropsychic realms, however, is not a simple one. Edward F. Edinger in his book Ego and Archetype (Baltimore: Penguin Books, 1972), pp. 260-295, analyzes the psychological meaning of a seventeenth century alchemist text written by Elias Ashmole. He quotes the text as follows and then adds his own observations which are most germane to the present discussion. Elias Ashmole: "Howbeit, there are but a few stocks that are fitted to inoculate the grafts of this science on. They are mysteries incommunicable to any but the adepts, and those that have been devoted even from their cradles to serve and wait at this

But from this point in life onward, it may be observed that two possibilities exist for the further development of the person: He may continue to dwell within the structure of his ego identity as that which is potential to his awareness gradually narrows. Or, from the secure foundation of a workable adaptation to the world, he may allow a type of process to be set in motion (or to continue in motion less restrained) which will expand the range, depth, and integrity of experiencing, knowing, and doing. Hence, a crucial problem for education up to and through the adolescent years, is how to create and manage environmental, social, and personal conditions which will facilitate youth in "getting it together" but which will at the same time preclude a permanent closing or reification of awareness-abilities.

alter." Edward Edinger: "This passage confirms an observation which has been gradually forming itself in my mind. It is my impression that those who go farthest in the process of individuation almost always have had some meaningful and indeed decisive experience of the unconscious in childhood. Jung's childhood experience is an excellent example of this. What often seems to happen is that the inadequacies of the childhood environment or the child's adaptational difficulties, or both, generate a loneliness and dissatisfaction that throw him back on himself. This amounts to an influx of libido into the unconscious which is thereby activated and proceeds to produce symbols and value-images which help consolidate the child's threatened individuality. Often secret places or private activities are involved which the child feels are uniquely his and which strengthen his sense of worth in the face of an apparently hostile environment. Such experiences, although not consciously understood or even misunderstood and considered abnormal, leave a sense that one's personal identity has a transpersonal source of support. They thus may sow the seeds of gratitude and devotion to the source of one's being which emerge in full consciousness only much later in life." (pp. 294-295).

Hence, from conception, the child begins to inherit a store or a "bank account" of human potentialities--of recognitions, impulses, and experiential forms--which are as yet unspecific and unembodied in experience. Concurrent with the biological development of the person, and as his senses awaken to events in the internal and external worlds, the neg-entropic reaction process is set underway. We should not consider the autopsychic potential or biological events or environmental events as causative. Each represents an organized data-form which, by the nature of the reaction, seeks conjunction with all other forms. The person is set in motion open-endedly toward the criterion of a succession of relatively unified fields in awareness. As the aspects of awareness come together, a V is formed: the baby's hungry discomfort, his innate sucking, grasping, and seeking responses, the fullness of the mother's breast, the baby's diffuse longing for warmth and skin contact, the sounds attending the activity, the level of tension within the mother, and so on. As these aspects begin to occur in conjunction in the experience of the baby, awareness begins to become organized--relatively boundless and undifferentiated as it may be.

In time, such awarenesses become differentiated from one another--hunger, wetness, gas, etc.--and also differentiated internally--one kind of hunger from another, one kind of getting soiled from another, and so on. At the same time, these states of awareness become reactive with other potential states. That is, they become more inclusive and integrated as they become more differentiated. Hence, as experience is

continuously reorganized into more clearcut, comprehensive, and detailed segments, awareness becomes more efficient. This increase in efficiency makes experience more reactive and hence the autopsychic potential begins to be "consumed" as it is incorporated into awareness. The advance of awareness becomes sustaining as each reorganized segment has its own reactive properties vis-a-vis potential. Consequently, we find the extremely rapid pace of learning characteristic of the early years of life.

It is beyond the present purpose to attempt to compose a developmental theory of awareness consistent with the general model. This early phase of life has been briefly discussed in order to enable the following point to be made: The new human being begins with a store of autopsychic potential (permeably adjoined with heteropsychic potential) which, together with an adequate quantity and quality of parental nurture, is sufficient to set the self-sustaining aspect of the child's awareness into motion. One often reads the statement, children do not need to be motivated; they already are motivated. Before the child's "mind" has become channelized into adult ways, he is a self-starter and an amazing learner. Still, he is in effect, operating on "borrowed capital." Indeed, his parents will not always be available or suitable as sources of nurture. Indeed the inner and outer universes are wider, richer, and harsher than his original autopsychic endowment and family matrix have purveyed him to endure. Initially then, the child learns by "consuming" his given store of autopsychic potential, catalyzed by parental nurture; he does not expand the range of his potential.

The point, then, is during the first part of life, the organization of awareness is fired by the child's initial endowment of autopsychic potential and catalyzed by parental nurture. By the character of this organizing, however, the reaction is contained largely within the given autopsychic sphere. The autopsychic potential is not enhanced or increased. The original store of autopsychic potential is consumed or "burned" or "oxidized" as it were as it is combined with quantities of parental nurture. Figuratively speaking, the resulting "ashes" of this reaction are the stable perceptual, cognitive, behavioral, and attitudinal forms which permit adaptation to and survival in the external world.

In one respect, it appears that the fire begins to dim during the latency period to be brightly rekindled during adolescence with the re-assertion of the sexual drives, or more generally, the "life instincts." Now, the young person is in an intermediate period when his egocentrism and dependence upon parental nurture for his psychic continuance are lessened, and his expansionary forces are more self-contained. He is drawn beyond himself into broader and deeper relations with others and the world at large through sexual impulses and the sublimations thereof. Thus, fuel to sustain the fires of his awareness is now derived from new and broader somatosensory, emotional, social, and intellectual sources.

But such sources of internal impetus together with their external antinomies may also at least partly be consumed as they become patterned into experiential and conceptual awareness. The universe is wider even than interpersonal love and social contribution.

Hence, it is at this point that the psyche must begin to accentuate the forms of processing which will allow the self-sustaining continuous movement of awareness toward consynthesis with universal possibility.

In describing his own rather extreme or skewed experience with this level of awareness/process, Einstein used the following words:

I went my own way and have never belonged to my country, my home, my friends, or even my immediate family, with my whole heart; despite the existence of these ties, I have never lost an obstinate sense of detachment, of the need for solitude--a feeling which increases with the years. One becomes sharply conscious, without too much regret, of the limits of mutual understanding and sympathy between one's fellow creatures. One no doubt loses something in the way of cheerful bonhomie; on the other hand, one is largely independent of the opinions, habits, and judgments of one's fellows and avoids the temptation to take one's stand on such insecure foundations.¹

Consequently, in time, as he moves toward being a separate center of orientation in the world, the person must (or may) begin to employ a quality of inner process which will press the boundary of his autopsychic potential beyond its original possibilities--ultimately into uncharted realms which are at once uniquely his own and universal. Here lies true Selfhood in the Jungian sense. One adopts life ways which are constantly renewing, constantly numinous, constantly open to surprise, constantly dwelling on the edge of awe and mystery while feeling firmly anchored in the momentary reality of oneself and the outer world. One gains the sense of the universe manifesting itself through his own awareness; it is the "cosmic religious"

¹ Albert Einstein, The World As I See It (New York: The Philosophical Library, 1949), p. 239.

sense of which Einstein wrote:

The finest emotion of which we are capable is the mystic emotion. Herein lies the germ of all art and all true science. Anyone to whom this feeling is alien, who is no longer capable of wonderment and lives in a state of fear is a dead man. To know that what is impenetrable for us really exists and manifests itself as the highest wisdom and the most radiant beauty, whose gross forms alone are intelligible to our poor faculties, --this knowledge, this feeling . . . that is the core of the true religious sentiment. In this sense and in this sense alone, I rank myself among profoundly religious men.¹

The Zen poet Baho expresses both the light and the dark sides of such a way of awareness, hinting in each case of their mutual resolution:

On a Journey

Wake up! Wake up! It's I
who want you for companion,
sleeping butterfly!

And:

(Basho's final poem; unnamed)

On a journey, ill,
and over fields all withered, dreams
go wandering still.²

It would be an error to believe that such an open, cosmic, and reactive awareness and such an elevated level of thought is the preserve only of great artists and scientists. These appreciations reside just outside the preserve of common, everyday thinking. Again, from Einstein:

¹Hilaire Cuny, Albert Einstein: A Man and His Theories (Greenwich, Connecticut: Fawcett Publications, Inc., 1966), p. 133.

²In Harold Henderson, An Introduction to Haiku (Garden City, New York: Doubleday and Co., 1958).

The whole of science is nothing more than a refinement of everyday thinking. It is for this reason that the critical thinking of the physicist cannot possibly be restricted to examination of the concepts of his own specific field. He cannot proceed without considering critically a much more difficult problem, the problem of analyzing the nature of everyday thinking.¹

Similarly, Carl Rogers and many other psychotherapists have often remarked that in the course of therapy otherwise quite ordinary people have become open, creative, and continuously evolving within their own spheres.

And so it is with us all. When early life has passed; when we are firmly anchored in the world of our senses, it is our ability to employ successional process as an habitual mode of awareness which allows us to pay attention to the data of our expanding experience, to permit complexity, subtlety, and paradoxicality to resolve themselves into free-flowing streams of behavior, to let rationality serve as a "leg up" to more effective seeing (rather than being a straight-jacket upon awareness), and to penetrate into the unknown.

Educational Administration and Successional Process

From these explorations into the processes of awareness and their antecedents, we may return now to the question of education and its facilitation. The position has been taken that living inevitably takes the direction of expansion of the range, depth, and integrity of experiencing, knowing, and doing--at least it does so under ideal conditions--and education is the

¹ Cuny, Albert Einstein: A Man and His Theories, p. 118.

conscientious facilitation of such living. Failure in living to enter upon such an expansion is the result of complex and multifarious impediments which in their details lie beyond the scope of the present work. Hence, we are left with the question, how can we bring about such ideal conditions together with as few impediments as possible? Of course this question in itself is hardly new. But on the basis of the preceding discussion, we may hopefully gain some new insight and perspective with which to approach it.

In the previous chapter, the point was developed that to consider as real (or as the criterion) the formal, intentionally created and maintained organizational structure of the school, and to attempt to mold concrete human behavior and awareness into the image of this abstraction, is fundamentally anti-educational. To do so is to commit Whitehead's "Fallacy of Misplaced Concreteness." What is real is all that which is actually occurring within and between organizational participants, and thus we require a much better way of evaluating the educational efficacy of this reality than simply comparing it to various abstract educational and organizational schemes conceived by administrators. Unless we can learn to recognize the fundamental directions and dynamics of human reality, that is, unless we can learn to discover and enhance the innate "coming to order as totalities" of human beings rather than imposing such order externally, then our efforts at education will remain grounded in serendipity, placed in the service of static, abstract values, directed by contrived systems of behavior which have no necessary relation to human maturing, and enforced

by mechanical and supercilious administrative institutions. The issue here is not one of the goodness or badness of educators. Rather, the issue is simply that we must learn to see more deeply, more attentively, more patiently, more openly into the raw event data arising in education. Then we must place all of our conceptions about what education and administration are and are not temporarily in abeyance. Then we must trust in the veracity of our "naive" abilities to recognize that which is vital, numinous, and life-endorsing in events and that which is not. Finally, we must set about refining and nurturing ourselves and each other such that as complex, evolving individual human beings we are increasingly able to perceive and participate with effectiveness in the collective expansionary drama.

In this chapter, we have formulated a conceptual framework in terms of which we may understand our personal evolution through life as movement toward and then movement within a mode of inner process which permits us progressively to be as one with ourselves and with the universe at large. It is suggested that the most fundamental tenet of human nature is movement toward and within this mode. It is the goal of life, the impetus to life, and the central dynamic of living. If this is so, then the function of the educational administrator can be none other than to facilitate such movement and to clear away unnecessary or artificial obstacles.

To offer such contributions to the organization, the administrator must first be responsible for himself. He must himself become a "continuous reactor." One cannot offer what one does not have. One cannot

"be" in encounter with others (in the positive sense) what one is not. The administrator cannot evoke in the awareness and potential of others forms of experience and thought, and successions of experiential and thought changes unless they occur within him. How can subordinates get the sense of seeing more in events than meets the eye and then gaining new conceptual understandings from their experiences--if the administrator cannot show them how? (Of course they can but it is harder and slower.) How can the administrator communicate to others the joy of progressively widening and deepening and bringing together the facets of living and knowing if these processes are not occurring within himself? In short, to bring about conditions throughout the organization which will facilitate participants in expanding the range, depth, and integrity of experiencing, knowing, and doing, the superintendent himself must open his awareness to his intuitions, to his feelings, to his sensations, to his marginal thoughts, to his dreams, and to the interpersonal and social potential encountered in his activities. (More will be said about the latter two below.) As he embodies more of the reality of himself/organization into his experience, he takes the next step of bringing conceptual form to his experience in a never-ending cycle. His theories are temporal expressions of his understandings of the organization. His theories are idiographic; they explain "how we are doing what we are doing now." The more education is transpiring in all sectors of the organization, the shorter-lived will be successive theories.

The educational organization is a socio-psycho-physical matrix

wherein successional process is the aim and criterion no more nor less for the superintendent than for students, teachers, principals, and other professional staff. The content of the process varies from person to person and sector to sector, but the process remains fundamental everywhere. In education, unlike in business, how we do is what we do--the product is the producing.

The inner processes of the administrator, then, should personify the inner processes sought to occur everywhere in the organization. The notion that students should be growing and everyone else should be performing is absurd. If anything, the balance should be tipped the other way.

Encounter in Educational Administration

Up to now in this constructive analysis of educational administration, the focus has been upon the intrapersonal level. We have been seeking to understand the qualities of processes occurring within the administrator which are consistent in varying degrees with the aim of expanding the range, depth, and integrity of experiencing, knowing, and doing--an aim which has been posited as coextensive with the underlying direction of human living in general. As the administrator himself comes to embody successional process, he is poised to facilitate others--other administrators, teachers, counselors and students--in taking the same processual directions.

But this movement toward and within successional process is not, hopefully, a task to be undertaken by individuals atomistically. The school does not become only an aggregation of individuals each going his own way

in moving toward education. Recognizing individual differences, recognizing the uniqueness of personal interests and proclivities, we do not conclude that the student should regard the school as merely a variegated resources to draw upon in becoming educated in his own way of living. No, the school is a collective and a social enterprise. Successional process in the intra-personal realm is in no way inconsistent with the interdependence and mutual regulation implied in collective endeavor. In fact, in the same way that we have defined our individual evolution as human beings in terms of the qualities of process we come to embody, so we may define our collective evolution as a school, a nation, or a race in terms of the qualities of process we embody together.

How pale it seems that we should guage our collective advancement on the basis of levels of wealth, technology, the accumulation of scientific knowledge per se, or even our "survive-ability." It is not that these values are wrong or bad. To the contrary. The point is that such values in and of themselves lead us nowhere. They lead to the question, survival for what? Or survival, so what? In the main, they are neither means nor ends to something higher; they are simply expressions of the more fundamental dimensions of our collective process. Taken in themselves, they may represent process which is good and/or bad and/or neither; we have no real way of knowing. Hence, if we wish to arrive at a basis for guiding our destiny and evaluating our progress, a basis which is rooted in our nature rather than in abstract, a priori choices, we must deal with these

more fundamental dimensions.

To say this is not to inveigh against instrumentalism--that the value of anything or theory resides in what it allows us to do. Rather, it is to take the instrumental position at a different level. At the collective level of focus, the value of any particular (object, technique, theory, etc.) resides in its role in the human processes we are tracing together. The value of wealth is that it gives us a certain freedom from oppressive daily toil and allows us to be more relaxed and leisurely and accessible in our dealings with one another. The value of technology is that it provides one avenue for collective participation in the drama of bringing tangible form to our appreciations of the universe. The value of scientific knowledge is that it provides us with a conceptual "platform" upon which we may collectively strive to raise our levels of awareness and appreciation of the universe to yet higher levels. The value of our ability to survive is that we may work and live individually and collectively within a firm sense of continuity--that we may cast our momentary activities within the perspective of a normal life cycle and that we may experience self-transcendence in time that our own living has issued forth from the ancient evolutionary struggles of our forebears and that yet new life and experience will issue forth from ours. Value lies, then, within the quality of process we collectively embody in our experiencings, knowings, and doings and not in the abstract or "tangible" referents.

Thus, to evaluate the efficacy of educational administration and of education generally, we must look always to the quality of process collectively

embodied. Again, administrative process, organizational process, and educational process are not means to ends; they are the ends themselves!

We do not seek to enhance organizational process in the school as a means of increasing effectiveness and efficiency in achieving some external educational criterion because organizational process within the school is education itself. Efficacious organizational process in the school does not cause educational aims to be better achieved. It is itself the achievement of education for all concerned. The relation between organization and education is not cause and effect; it is identity.

It is beyond the scope of the present work fully to develop this idea of the identity of administration-organization-education. But we may go part way by extrapolating from the conceptual framework developed above concerning the role of potential. We may consider individuals acting in structured roles or positions within an organization as equivalent to N. Ideally, structured relationships within the school represent temporal "symbolic" expressions of the underlying or surrounding order of movement reality. Hence, both V and N orders of process may be observed at the collective as well as at the individual level of analysis. Among the structured activities, which may be symbolized in job descriptions and role and norm analyses, and so forth, a certain range of reactive and combinatorial possibilities exist. This range may be considered finite. (Whether or not it is actually finite is unimportant.)

Taking the simplest case, the organization chart together with its

attending job descriptions, one may observe that these functions may be recombined and reallocated in a large number of ways. A school, for example, may present material to students in a modular schedule rather than a regular schedule. Such has been the formalist approach to administration. Let us analyze or break our organization down into its constituent units and then recombine these elements in a more efficient way. Just as a theory represents a collective of conceptual elements which may be construed in a number of as yet unactualized ways, the formal organizational structure contains within it a range of possibilities beyond those presently extant in fact. Likewise, however, in the same way that a theory contains within it its own rational limitations, the organizational structure (both formal and informal insofar as the structure is enduring) is also so limited. Now, furthermore, parallel to the way conceptualization has been suggested to function in the psyche, we may observe that when organizational elements are reshuffled by "more efficient packing," some kind of free energy or whatever it is is released into the system as a whole. That is, the more efficient combination of structured elements in the organization does enhance the potential of the organization. Less energy needs to be bound in maintaining structured relations and hence this energy is now available for more useful purposes, and increases the range of that which may be experienced and taken into account within the organization.

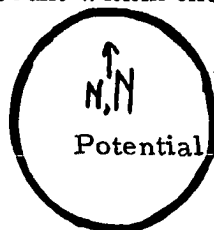


Fig. 6.--Organizational potential and conceptual re-organization.

But as in the psyche, these structured relations and the forms of process associated with them (secondary processes) are only part of the system and by themselves cannot lead directly to the higher levels of processual evolution which has been identified with education. The V levels of process must also be accounted for. It is in the effective conjunction of V and N together with the enveloping potential which enables true education to transpire. As in the psyche, N may become relatively dissociated or incompatible with V bringing the development of the organization to a halt, binding its resources into an impossibly oppositional form. Hence, we must attempt to grasp the nature of the organizational potential; the nature of the V orders of process within the organization, and the means whereby V operates in conjunction with N.

Perhaps the best way to get at the nature of V in organizations is to think of it as "encounter." Encounter represents a level and a quality of interpersonal and collective process which both precedes and succeeds structured or N orders of transaction. It is a collective form of awareness reality which on the one side rests upon the boundless, timeless, nascent imminence of potential, and on the other side leads to predictability, differentiation and a level of order suitable for abstract comprehension.

J. L. Moreno, a father of our understanding of "encounter" defines it as follows:

Begegnung [encounter] conveys that two or more people meet not only to face one another, but to live and experience one another-- as actors each in his own right. It is not only an emotional rapport, like the professional meeting of a physician or therapist and a patient

or, an intellectual rapport, like teacher and student, or a scientific rapport, like a participant observer with his subjects. It is a meeting on the most intensive level of communication. The participants are not put there by any external authority; they are there because they want to be--representing the supreme authority of the self-chosen path. The persons are there in space; they meet for the first time, with all their strengths and weakness--human actors seething with spontaneity and zest. It is . . . togetherness, sharing life. It is an intuitive reversal of roles, a realization of the self through the other; it is identity, the rare, unforgotten experience of total reciprocity. The encounter is extemporaneous, unstructured, unplanned, unrehearsed--it occurs on the spur of the moment. It is "in the moment" and "in the here," "in the now." It can be thought of as the preamble,¹ the universal frame of all forms of structured meaning. . . .

Encounter, then, is what makes administration (and indeed education) "for real"! When encounter is happening, administration is not merely a strategy, not merely the carrying through in activity of an abstract exercise, not goal-seeking activity, not a power play, not a dynamic analysis; it is for real. It is just these people, being as they are together, in a shared enterprise. As was Kierkegaard's insight, "the aspect of eternity enters the moment." Even the mundane cannot remove the sense of realness, potentiality, suspense, aliveness, and sincerity from education if encounter is present. Encounter represents the coming into shared awareness of experiential forms derived from shared potential. The sharing may be telepathic, intuitive, and empathic. And it may evolve successively into more profound and encompassing depths and scopes. Each successive re-

¹"The Viennese Origins of the Encounter Movement: Paving the Way for Existentialism, Group Psychotherapy and Psychodrama," Group Psychotherapy, XXII (1969), 7-16.

organization allows the boundaries of potential in the relation to move outward.

Encounter is most often described as a momentary, short-lived, recurring experience which usually passes without being named by the persons as such. One may encounter afresh a person he has known daily for years. Or, he may experience in a glance with a stranger a brief moment of truth albeit of a different nature. These moments transcend the continuous progress of time. They are breaks in the string. They may be remembered years later when a thousand other things have been forgotten. But as Maslow and others have wondered, it may be that these "peak experiences" of encounter are so transitory simply because the participants have not found it possible to endure them for longer. As an aside, Robert Frost is reported to have said that one cannot really read good poetry for more than a few minutes or his mind would be "burned to a crisp." In any event, encounter for the most part is likely to be a quality of experience which comes and goes in awareness. Nevertheless, its occurrence remains dependent upon the amount and quality of potential from which awareness springs. As the boundaries of potential are moved outward, the probability increases that the reaction will become self-sustaining.

Short-term groups specifically organized to bring about the encounter experience have been increasingly used in management development programs and administrator preparation programs for the past two decades.

The long-term beneficial effects of these group experiences are still unclear. Typically, participants report much enthusiasm and some benefit from the groups. However, objective follow-up research has generally failed to verify important lasting effects.¹ A common statement is that the administrator cannot implement or sustain the changes he has made in the group when he returns to organizations which are not supportive of openness and directness in their own processes.

A more fundamental explanation for this ambiguity, however, may be that an encounter group experience at best cannot be expected to more than open the door--briefly to clear the cobwebs from before the administrator's evolution. In other words, when we consider the administrator, the teacher, or the student as a "continuous reactor," we see that we are dealing with him in terms of all-pervasive qualities of living. We are not dealing with limited, separable segments of his experience and behavior. No artificially created encounter experience or series of them (just as no sequence of books and courses) in itself is likely to change vectorally organized persons into successive processual ones. Such change requires great amounts of time, consistent support of persons for the duration, great determination on the person's own part, frequent experiences of his larger possibilities, and environments which facilitate making small movements

¹Robert T. Golembiewski and Arthur Blumberg, Sensitivity Training and the Laboratory Approach (Itasca, Illinois: F. E. Peacock Publishing Co., 1971).

in the direction of successive process matters of habit. It is the establishing of these pervasive, long-term conditions, then, which is the underlying task for those who prepare administrators--just as it is the very same underlying task which befalls the practicing administrator once underway. It is within this overarching framework that continuities between the universities and public education practitioners may be established.

Participation and Educational Administration

Encounter may thus be viewed as the experiential medium through which interpersonal or collective potential arises into form, and hence becomes understandable by way of V and N. As such understanding proceeds, more potential comes into play and the collective reaction becomes self-sustaining. Thus to view encounter as a potentiating mode of consciousness is to expand the "range of convenience" of this construct (George Kelly's term). Broadened in this way, encounter serves as an experiential bridge between levels of Mitwelt--levels of "being-with" human beings. It is the experiential vortex for the linking of "being as oneself" and "being as a part."

Let us ask, that is, is it possible for one to encounter not only one or a few other persons, but a whole collective as well? If so, the collective ceases to be mainly an abstraction and becomes an embodied "human being" in a way which transcends the singular and the plural. The individual encounters the collective in its becoming--at the level of his/its successional process. The individual encounters or experiences the collective as an evolving being--not losing himself in it, not isolating himself

from it, but being starkly, wholly in relation with it.

This route may be seen as one solution to the problem: individual versus group. The perceived incompatibility of individual and collective has represented a continuing conundrum in American life. The requirements of collective cohesion and individual freedom have often been seen as irreconcilable except through compromise and half-measures. Chris Argyris has elucidated many dimensions of this problem in the context of formal organizations.¹ As indicated in the previous chapter, Chester I. Barnard believed that a total relation between individual and organization was inconceivable and in his concept of "cooperation" indicated that it was the executive's task to induce individuals to contribute part of their participation in life to organizational aims.² Douglas McGregor's "Theory Y" of management, which recognizes (a) the centrality of managerial cosmologies (and is a cosmology itself), (b) intrinsic motivation, (c) self-actualization, and (d) "organic control systems" in organizational process, goes far toward reconciling individual existence with organizational contingency.³ The principal difference of Theory Y with the present conception of "organization as being" is that Theory Y continues to recognize the organization itself as a tool through which managers and others extend themselves and

¹ Chris Argyris, "The Individual and Organization: Some Problems of Mutual Adjustment," Educational Administration: Selected Readings, ed. Walter Hack (Boston: Allyn and Bacon, 1965).

² Barnard, The Functions of the Executive.

³ Douglas McGregor, The Professional Manager (New York: McGraw-Hill Book Co., 1967).

commit themselves to purpose. Indeed, this conception may only be proper with regard to business organizations whose product, unlike in education, is something other than the producing of ways of producing. Theory Y recognizes organization as Umwelt--as one's being in relation to the world of things and symbols--but it slights the organization as Mitwelt. Hence, even when all due respect is paid both to the self-actualizing needs of individuals and to the transactional nature of purpose in organizations, the "I-am" and "We-are" character of the organization as an organism is not sufficiently recognized.

This difference may seem minor at first glance, but it is not. It is subtle but it is not minor. In his final work, Maslow outlined "Theory Z" and compared it with Theory Y.¹ The conditions of Theory Z seem to be consistent with the notion of encounter as it pertains to organization-as-being although Theory Z is a description of a kind of organizational process rather than a description of relationship between person and organization. Theory Z cannot be detailed here.

It would seem, then, that it is possible for one man to be-with an organization such as a school--to encounter it as a living, breathing locus of becoming whose being is changed by him and changes him in turn. An organization can be a kind of being one can share with, mourn with, love with. It can be an embodied, alive, direction-full form of human life. It

¹ Abraham Maslow, The Farther Reaches of Human Nature (New York: Viking Press, 1971), pp. 280-295.

can be the acorn viewed in awe for the oak into which it may unfold. It can be the promise of youth, the compassion of age, the struggle to meaning.

Now how can this be so? One cannot very well see an organization all at once. When one talks and listens, it is with individuals and not with the organization. How can an organization like a school be other than an abstraction from real events which occur within and between individuals?

Our ability to conceive of and draw upon the realm of potential makes it possible for us to become aware momentarily of an entire organization by way of V processes. The heteropsychic potential is that n-dimensional realm which may supply to awareness forms of experience held among the collective. At the heteropsychic level, we are all potentially impinging upon one another in an indeterminant number of ways and facets. We are connected acausally, physically and psychically, according to an indeterminant number of dimensions. These connections, if we are able to allow them to occur, will give rise to form in our awareness which allows us to be in contact with an organized order of experience and reality which is transpersonal. As we are able to allow a more open intercourse to transpire between our awareness and the heteropsychic realm, we find ourselves experiencing the organization as a totality in a highly personal sense--not personal in the egocentric psychotic sense with its many spurious imputations of cause and effect--but personal in the sense that one is involved in an evolving web of psychic and physical events which are meaningfully and multidimensionally connected beyond the pale of anyone's intentions. Many "coincidences" and instances of "good luck" occur which are meaningful

and interconnected. Upon subsequent analysis, one may find patterns of events have been developing over time, at a distance from himself in the organization, which have nothing to do with planned organizational activities and which have not been brought about intentionally by anyone--but which nevertheless congeal so meaningfully that a group may be shocked in collective recognition and examination.

In the same way that Ehrenwald has posited a permeable boundary between the autopsychic and heteropsychic realms, we may here posit a permeable "autopsychic" boundary which separates the organizational heteropsychic realm from the heteropsychic realm in general. Ehrenwald has indicated that Psi-phenomena or synchronistic events have been found to follow known psychodynamic laws--particularly in that they occur between individuals who are intensely related with one another. Hence, as organization members--teachers, administrators, and students--become intensely related, and as they come conjointly to embodying potential into awareness and hence to bringing more potential into regnancy, it may be expected that the boundaries of their relations would become a functional organizational heteropsychic realm.

The organization itself may then become a "continuous reactor" in the service of education. The student, the teacher, and the administrator are now no longer strictly on their own in addressing their life-task of bringing form in awareness to that which is potential to awareness. Now in addition to the heteropsychic realm in general, and augmenting the personal auto-

psychic realm, the organization itself provides a charged field of potential among intensely related individuals. This field does not dispose itself or arrange itself simply on the basis of contributions to and derivations from single individuals. That is, it is not an interactional field. Rather, it disposes itself in a wider scene involving the complex interplaying of the awarenenses, activities, and physical environments of the multiplicity. This field of events is not a "group mind" in the sense that all members of the collective share a nearly identical set of awarenenses. Rather, it is a process which parallels that of psychic life at the individual level in which the variety of the many is resolved into the complexity of the one--a process which, unlike conventional administration, does not reduce variety, and in fact may increase it, but a process which orders variety.

Now we may see that being-as-oneself and being-as-a-part may be completely resolved together without compromise. In the purest sense, one can be completely himself--a unique center of orientation, self-choosing, self-responsible, nonconforming in the usual sense--and, equally and at the same time, one can be completely as a part of the group--guided by it, "controlled" by it, arising out of it, a unique expression of it. Again, here we find at the collective level those same primary orders of process discussed earlier with respect to the intrapersonal level. Opposites cease logically to exclude one another and become coordinates in a moving field. In the words of Lao Tzu:

The greatest straightness looks like crookedness.
 The greatest skill appears clumsy.
 The greatest eloquence sounds like stammering.¹

Ch'u Chai explains the meaning of this passage as follows:

This passage does not mean that there something [sic] emerges at a point midway between straightness and crookedness, skill and clumsiness, eloquence and stammering, but rather that they have been blended into a synthetic whole. That is to say, they are of a straightness which contains crookedness, of a skill which contains clumsiness, and of an eloquence which contains stammering.²

Such thinking, while it may not square well with our common sense, is actually highly pragmatic. In everyday life such a resolution of opposites without compromise is an obvious occurrence. Consider the following statement by Erik Erikson:

. . . the total fact of finding, via the climactic turmoil of the orgasm, a supreme experience of the mutual regulation of two beings in some way takes the edge off the hostilities and potential rages caused by the oppositeness of male and female, of fact and fancy, of love and hate. . . This is a rather concrete way of saying something about a process which we really do not understand.³

While organizational intercourse and sexual intercourse are far apart in many respects, the underlying dynamic of resolving being-as-oneself and being-as-a-part, together with other forms of oppositionality via a kind of "mutual regulation" based upon trust, intensity, openness, vulnerability,

¹ I. Ching: Book of Changes, trans. James Legge (New York: Bantam Books, 1964), p. ixxx.

² Ibid.

³ Childhood and Society (New York: Norton, 1963).

and respect, may be a very general one. It may be one which underlies many forms of evolutionary human process across levels of analysis from the intrapersonal level to the organizational level to participatory democracy at the community level. Actually, what we observe as mutually regulatory activity among elements may be the tip of an iceberg as it were in which the individual actors are but foci in complex fields of potential.

Such experiences of resolving the disparity of individuals into the complex integrity of the collective are quite beyond the illusionary issue of free will versus determinism. The unique development of the individual and the unique development of the collective may be part and parcel of the same process--without necessary opposition, without compromise, without attenuating the highs and lows, the blacks and whites, the thisses and thats--but by allowing these to come to form successively.

Denouement

We have come full circle. We have seen that education is no more nor less than the conscientious facilitation of the fundamental human life process itself--that of awakening--that of bringing to form in awareness and action that which is potential to awareness as it resides in the environs of psychic, social, and physical reality. We have seen that educational administration is differentiable from the more general process mainly by virtue of its perspective or "angle of approach." The administrator does not sit atop this awakening process in his school or school system maintaining it in some abstract form; rather he is enmeshed in it, himself

awakening, casting the rays of his own perspective into the common illumination. Teacher and student are separated not by information, by techniques or roles or causes or effects but by their respective positions in the developmental process--as veterans and initiates in the common unfolding drama. Finally, the individual and the collective are connected in this unfolding through a common stuff. The processes of coming to form in awareness and activity within the individual and within the collective are not merely analogous; they are co-emergent from the same extant and incipient reality.

Now we may turn our attention back to the empirical inquiry into the nature of facilitating awakening. Awakening is not inevitable. Education is not inevitable. Though we tend toward awakening, though we may awaken, human awareness does not inevitably assume the forms of process which permit the continuous expansion of the range, depth, and integrity of experiencing, knowing, and doing. It may become sidetracked into other forms which lead to stagnation amidst the unreal rather than progress amidst the real (or realer).

In terms of the conceptual framework developed above, it was hypothesized that a continuous reaction could be augmented by efficiency in both V and N processes. Both instances may lead to the incorporation of more potential into the autopsychic realm where it may become accessible to awareness. However, it was suggested that only V may arise directly out of potential and N must always arise out of V. In this formulation, then, V is more central in the process of education although it is not necessarily any more essential. Hence, in attempting to facilitate the expansion

of the range, depth, and integrity of the experiencing, knowing and doing of administrators, those charged with preparing administrators would be expected to concern themselves most centrally with V variables on the assumption that if V processes can be helped to operate efficiently, then N processes will naturally follow suit as an integral part of the reaction whereas the reverse is more problematical.¹

Given our concern with educating effective practitioners of educational administration, and given the apparent widespread ambivalence nowadays concerning approaches to administrator preparation on the part of both professors of administration and practitioners, as noted in Chapter I, it would be useful to know the perceptions of both groups concerning the relative centrality of V and N variables. If each group were free to design administrator preparation experiences in any way they wished, would they give centrality to V (experiential) variables or to N (conceptual) variables? Is there consensus or consistency within each group? Is there consensus between groups? Do professors and practitioners view either set of variables as necessarily more central than the other?

Answers to these questions would aid on the one hand in comparing the perceptions of those now preparing administrators and those actually administering education today with the framework formulated here. Is this conceptual framework consistent with what those who are concerned with

¹For the present study, however, in light of professional norms, it has been hypothesized that professors will view the N dimension as more central.

administrator preparation believe they are doing or would like to be doing?

Does it help us to formulate or recognize alternative approaches to administrator preparation which now may be only latent in our understanding?

On the other hand, studying the perceptions of those involved with preparation may raise questions which would lead to revision of the conceptual framework.

The overarching purpose of this combined conceptual and empirical inquiry, then, is to take one step toward arriving at a conceptual framework concerning administrator preparation which can serve to bring order to debate and which may ultimately allow us to predict and control (broadly speaking) the consequences of differing approaches to preparation.

CHAPTER IV

METHOD AND DESIGN OF THE STUDY

Synopsis

Samples of professors of educational administration and public school superintendents were asked to rank order sets of ten educational objectives for the over-all curriculum of administrator preparation programs; and ten individual professorial contributions to prospective administrators. Additionally, the sample of professors were asked to rank order a set of ten professionally related personal strengths. Five of the items in each set are representative of the V or "personal" level of process and five of the N or "conceptual" level of process, as these levels were discussed in preceding chapters. Items were to be ranked according to their perceived centrality in furthering administrative skill. By ordering the sets of objectives, professorial contributions, and personal strengths, it is considered that each respondent will reveal the conceptual Gestalt through which he approaches the problem of administrator preparation. Rankings of each set by each sample are statistically tested for internal concordance. Secondly, rankings are compared between samples for rank order correlation. Thirdly, a heuristic analysis is performed on the data in an attempt to

identify other particular commonalities and disparities.¹

Procedures for Collecting Data

A major effort was made to present respondents with instruments which would be interesting to work with and not overly time consuming, thus to ensure a higher rate of response. The educational objectives, professorial contributions, and personal strengths were presented to respondents on 3" x 8" cards, each card presenting one item of the set. The respondent could spread these cards on his desk and consider them together with greater ease and simultaneity than would be possible with a paper and pencil procedure. The first card in each set contained instructions for ranking. Additionally, a "Personal Data Card" was included which solicited the following information: Name, position, mailing address, previous position, and location of previous position. In addition to verifying the respondent's name and present position, such data may later facilitate a second order analysis of the data should such an analysis be warranted.

The initial order of presentation of the cards was determined by the investigator rather than through utilizing a formal randomizing procedure. The objective of this ordering was to disguise the fact that the cards contained two categories of statements. Hence, if the two types of statements were alternated perfectly or if too many of one type were pre-

¹Heuristic is defined as valuable for empirical research but unproved or incapable of proof. An examination of summed rankings in rank order will not reveal any fact to be found in nature but nevertheless is useful. The limitations of such an analysis are discussed on page 231.

sented in contiguity, it was considered that the classification might artificially be revealed. With such a small number of items comprising the two types of statements (five of each type in each set), it was considered that a more diffuse stimulus pattern could be better insured by the investigator's own design than by a formal randomizing procedure.

The instruments were mailed to respondents, together with a cover letter signed by Dr. Jack Parker and the investigator, during the period from July 17, 1973 to July 25, 1973. Returns were heaviest during the last two weeks of August and the month of September. However, returns continued sporadically through October and November.

Description of Instruments

The sets of educational objectives, professorial contributions, and personal strengths, together with their respective instructions, are presented in Appendix A. The order in which items are shown in the Appendix corresponds with the initial order of presentation.

The first set of cards pertain to educational objectives for the over-all curriculum of administrator preparation programs. These objectives are stated at a general level and do not concern the content or subject matter related to aspects of administrator preparation. The purpose of stating objectives thusly is to serve as a stimulus the respondent may use to organize his perceptions and valuations of processual end states promoted by the curriculum according to the dimensions under investigation in this study. If the objectives serve this stimulus function, it is not important

whether the objectives represent previously conceived, commonly discussed, or novel objectives for administrator preparation.

Instructions for this set of cards emphasize "for the over-all curriculum." This emphasis is intended to focus respondents' attention not only on groupings of academic courses, but also on instructional means, internships, peer relationships, informal social processes involved in the total experience with the institution, and upon physical facilities. All of these aspects of the curriculum are subject to a degree of intentional influence and hence have a bearing upon inferences and implications to be derived from the results of the study. Movement in the directions of these objectives, then, is cast as a function of the total curriculum rather than of any subparts thereof.

The second set of cards to be ranked, professorial contributions, focuses on a different level--individual professor's and administrator's expectations, desires, and hopes vis-a-vis each other as individual persons. Perceptions at this level yield different behavioral and experiential implications than at the level of the over-all curriculum. It is problematical whether professors and administrators have different expectations across these two levels and between each other as groups.

The third set of cards (sent to professors only) represent professionally related personal strengths. This set may be viewed as parallel to the set of educational objectives for administrators. Both of these sets examine the centrality of various facets of professional competence on the

part of each group respectively. From this set, it can be determined how professors view the centrality of experiential vs. conceptual strengths with respect to their own profession compared with the practicing administrator. Instructions for this ranking emphasize the centrality of each strength "over the period of a career." This emphasis is intended to cast the strengths in the widest possible frame of reference--to give respondents the opportunity of looking beyond temporal professional norms per se--but to do this without forcing the issue so as to artificially bias results. The instructions also, while they ask respondents to order the items according to perceptions drawn from their own lives, are nevertheless directed toward the respondents' personal ideal of the professor of educational administration. In this way, personally experienced and valued end states should be derived. These may then be compared with the end states valued by professors for administrators.

Validation

Internal validity of the items used in the three sets was established by (a) phrasing items such that they meet the criteria listed below, and (b) pretesting the items together with their instructions on a group of graduate students in educational administration. Criteria for phrasing items to be ranked are that all items must:

- (1) be stated in common language;
- (2) not contain terms utilized in the hypotheses themselves such as "experience" or "conceptualization";

- (3) have clear pertinence to concrete administrative tasks on the one hand and to one of the two types of underlying processes being investigated on the other hand;
- (4) be stated at about the same level of generality;
- (5) be stated in a positive way;
- (6) be free of highly value-laden qualifying adjectives and adverbs insofar as is consistent with the dimensions under investigation. (The experiential dimension entails affective elements.);
- (7) be conceivably independent of all other items;
- (8) be free of jargon and technical terms;
- (9) be stated at a medium level of abstraction;
- (10) contain a minimum of redundancy within and between items.

The sets of items to be ordered by both professors and administrators were pretested on twenty-eight students enrolled in a graduate class in educational administration at the University of Oklahoma. The pretesting was done to determine (a) whether directions were clear and adequate, (b) whether any individual items were perceived as unclear or otherwise faulty in any way, and (c) whether any items would be consistently ranked first or last and thereby not discriminate among respondents. Directions were found to be adequate and no items were discarded as a result of the pretest.

Construct validity for items contained in the sets of rankings was established by gaining a consensus of three out of four expert judges that the items used are, in their perception, indeed derivatives of experiential

and conceptual dimensions respectively. The validating instrument together with results are presented in Appendix C. Four professors of education, including one administrator, one psychologist, and two philosophers, each with some prior familiarity with the two dimensions under consideration, were first presented with written, idealized descriptions of an administrator oriented toward the existential point of view and an administrator oriented toward the logical positivist point of view. These "ideal types" were described in rather extreme terms for the sake of emphasis and differentiation. After studying these descriptions, each judge was asked to discuss them with the investigator until he felt confident that the idealized Gestalt of the administrator he had in mind was consistent with the investigator's version. Finally, each judge was asked to check those items from lists of educational objectives, professorial contributions, and professionally related personal strengths which he regarded as consistent with the respective ideal types.

The rationale for composing and validating statements of educational objectives, professorial contributions, and personal strengths within an existential-logical positivism framework is as follows: The objective of the present empirical inquiry is to identify and compare perceptions of professors and administrators as to the centrality of experiential and conceptual modes of process in the development of administrative skill. These modes were discussed as V and N in the previous chapter. The previous discussion approached these processes in both a highly abstract

and a highly concrete way--referring to man-in-time as potentially a continuous reactor (abstract) and calling attention to everyday exemplary experiences such as walking, listening, having sexual intercourse, observing smoke streams, watching thunderstorms, noticing coincidences, and so forth (concrete). In terms of the model, education itself proceeds as one becomes able to experience the universal in the particular and as one is able to experience the particular within the universal frame of reference. Rational thinking thus serves as an intermediate process emerging from the ineffable and leading into the ineffable--the ineffable being on the one hand the global, overarching, intuitive appreciation of universal order, and on the other hand, our appreciation of the detail, complexity, and numinosity of momentary, particular states of awareness. Furthermore, the range, depth, and integrity of the ineffable in both general and particular is not a constant but is evolving. Over time, one comes to see more broadly, deeply, and meaningfully into both the totality and the momentarily particular. This relation is shown as Framework A below.

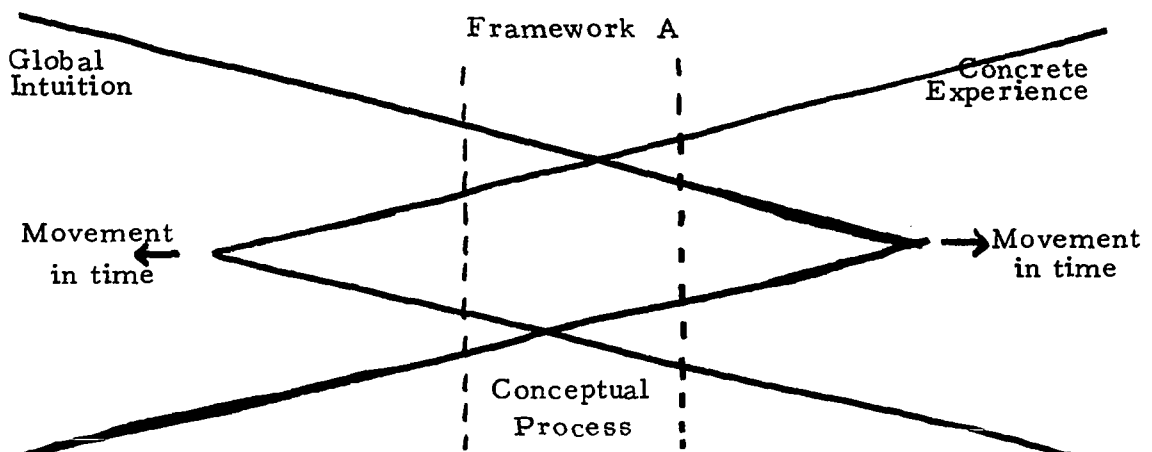


Fig. 7.--Intuition, experience, and conceptual process: an integrated, non-oppositional conception.

Our conceptualizing, among other things, facilitates the integration of our global "understanding" and our concrete acuity. While it has been shown that experience is more central than conception, the evolutionary process is a cyclical one. Experience is more central in an absolute way and a cyclical way but not necessarily in a linear way.

While everyone may operate in this manner in varying degrees, we may not always recognize what we are doing. In fact, our conventional "mind set" regarding administration as discussed in Chapter II may actually obscure this evolving process. Our conventional way of approaching the relationships between the global, the concrete, and the conceptual might be diagrammed as follows:

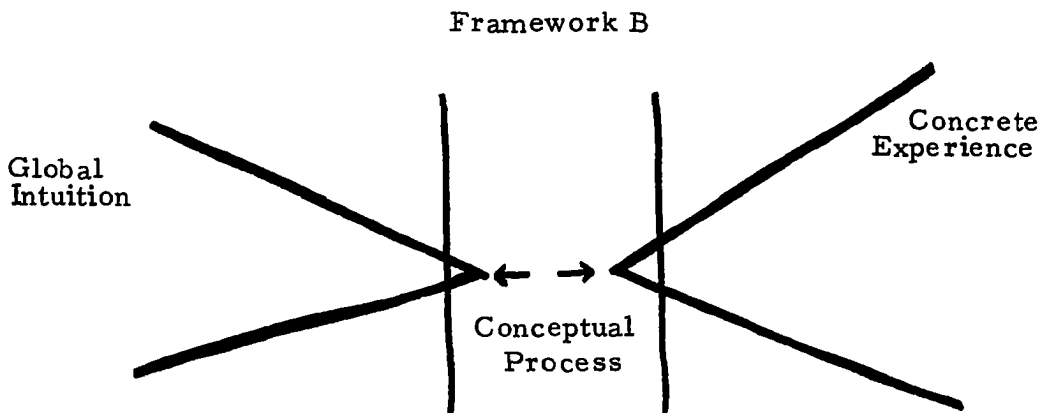


Fig. 8.--Intuition, experience and conceptual process: a non-integrated, oppositional conception.

Framework B forces us to make a linear distinction. One invariably comes prior to the other without respect for cyclical development in time. The question thus becomes, how can we compose meaningful statements of educational objectives, professorial contributions, and personal

strengths so that they may be arranged by respondents in such a way as to be meaningful in the context of Framework A above, when as a group, respondents are likely to interpret stimuli within the context of Framework B? Because respondents may not be familiar with Framework A (and there is no reason why they should be familiar with it), how can their perceptions of the centrality of its various elements be tested?

If one were to compose statements of educational objectives, etc., derived directly from Framework A, they would seem necessarily to be so abstract and/or so concrete, and/or so unfamiliar to respondents that they would not be meaningful stimuli. To comprehend Framework A, one must recognize the possibility of many types of information coming to form simultaneously and successively. Experience and conception are not posed in permanent opposition but are processually related in a way which makes the issue of centrality a complex one.

Framework B finds experience and conception in simple opposition--either-or instead of both-and. Should the totality of the acting administrator be dominated or controlled by his conceptual faculties or his experiential faculties? Statements of educational objectives, professorial contributions, etc., derived from this framework would be easily recognized by respondents. Yet it has been argued above that this question is actually irrelevant not to say insoluble.

How, then, may one study perceptions of Framework A when Framework B is likely to be the starting point or initial frame of reference? In Chapter I it was indicated that the experience-conception problem has a long

history. This polarity has been expressed in many ways: art vs. science, feeling vs. thinking, heart vs. mind, romanticism vs. classicism, practice vs. theory, intuition vs. rationalism, and existentialism vs. logical positivism. These dichotomies are part of everyday thinking. It may be possible to select one of these dilemmas and derive from it statements which will allow bridging the gap between Framework A and Framework B with respect to educational administration. We need concepts which, if they do not represent, at least point to actual processes occurring within the person and these processes must be comprehensive enough and differentiable enough to represent much of what was described as V and N processes. That is, respondents need to be enabled to find intimate personal referents in their own activities for statements derived from both the experiential and conceptual dimensions. (Romanticism vs. classicism, for example, would not provide these kinds of referents.) Secondly, statements derived from a dichotomous idea need to have obvious pertinence to the administrative task. In other words, each statement should evoke two kinds of responses in the percipient: (a) "Yes, that's me. That's the way I function internally," and (b) "Yes, this is an issue in the activity or task of administration." The question is now which of these processes is more central in furthering administrative skill? By moving in this way, we would have not two separate philosophies or two logically mutually exclusive ideas to be ordered on conceptual grounds alone, but rather two sets of differentiable inner processes which enter into the administrative task itself.

The idea of existentialism vs. logical positivism would seem to allow us empirically to tread this middle way between the unfamiliar notions of potential, continuous reaction, and successional process on the one hand (existentialists point to these processes though seemingly less explicitly than here), and conceptual processes as it occurs within the person on the other hand. (The logical positivists seem less concerned with how we do think rationally than with how we should think rationally. In other words, positivism points in a rather detached or abstract way to the concrete ways in which we actually grasp the external world rationally.)

Hence, the ideas of existentialism and logical positivism are familiar enough to be meaningful, yet they point or direct our attention rather well to the conceptual framework developed here. Even though it has been argued here that existentialism vs. logical positivism is at a fundamental level a false problem, we may still use statements derived from those ideas to explore perceptions of the real problem.

Statements of educational objectives, professorial contributions, and personal strengths will now be commented upon individually to indicate their derivation and their meaning from the investigator's viewpoint.

Educational Objectives

- (1) To develop in students the ability to think of and formulate administrative decisions as hypotheses to be tested and verified.

Perhaps more than any other conceptual educational objective, this one epitomizes the "scientific" or positivist approach to administration.

It poses a virtual identity of the rational scientific method with the activity of administration. It implies that the principal function of administration is making decisions and that these decisions can be formulated in much the same way as one would design an empirical study.

- (2) To develop in students a commitment to scientific thinking as the most dependable source of truth in the administrative setting.

This statement is an attitudinal objective which equates the degree of confidence one may place in the veracity of knowledge pertinent to the administrative setting with the degree of scientific objectivity, rationality, and rigor through which the knowledge was sought. The highest quality and most reliable or useful truths for administrators are those derived scientifically. Whenever the term "science" is used in these statements, it is assumed that respondents will interpret the term in its narrow, formal, objective sense rather than its broader sense which makes room for intuition, mystical appreciation, and the like.

- (3) To develop in students the ability to let social science guide one in selecting the facts and making sense out of what is happening in the organization.

This statement emphasizes the role of social science in the practice of administration. Social science seems to be regarded by some persons as different from administrative science or organization science. The statement also implies a relationship between a conceptual knowledge of theory and the administrator's ability to observe and evaluate concrete organizational events.

- (4) To develop in students skill in performing critical analyses of empirical research in relevant areas.

A considerable portion of the curriculum for the preparation of doctoral students in administration in many institutions is directed toward developing skill in the analysis and performance of empirical research. How is this skill perceived as being related to or supportive of administrative skill per se?

- (5) To develop in students the ability to utilize administrative theory in diagnosing problems and formulating action strategies.

This statement focuses upon administrative theory per se and poses the relation of such conceptual knowledge to situational analysis and the formulation of specific problem-solving strategies. The statement differs from statement number one above in that the present statement is confined to administrative theory, is more situational and problem-oriented, and implies a less formalized approach.

- (6) To develop in students the capacity to persevere in the face of frustration, anxiety, and disappointment with respect to one's own effectiveness in bringing about positive change.

This statement, the first of the five experiential educational objectives, conveys the impression that educational administration is a dramatic, stressful, and human activity which ultimately calls upon the deeper, more spiritual recesses of the administrator as a person. It implies that the administrator take a broad, accepting, wisened orientation toward himself and the evolutionary possibilities of the educational process.

- (7) To develop in students a grasp of one's personal strengths and weaknesses as a professional administrator.

This statement implies the administrator's recognition that he, as a complex human actor on the scene, has personal limitations and handicaps which may detract from his administrative efficacy as well as strengths from which he may draw satisfaction. It implies the self-awareness of a person who is not entirely "other directed," to use David Riesman's term. The administrator takes action with an awareness of himself as a variable in the social process.

- (8) To develop in students an appreciation of and ability to respond to subtle emotions, intentions and desires flowing beneath the surface in one's interpersonal affairs.

This statement recognizes the role of the implicit, the subtle, and the unintentional in interpersonal administrative affairs. It points to the role of subjective acuity in perception and expression in the activity of administration. It addresses a level of psychological and social process not easily accessible through rational means of knowing.

- (9) To develop in students a passion for helping others and oneself live life to its fullest in spite of resistances encountered.

This statement recognizes that educational administration is related to the helping process in human development. It recognizes the evolutionary quality of living which underlies education and its administration as well as the growthful momentum which some regard as important to effective administration.

- (10) To develop in students the sense of having a mission to contribute something of oneself to others, as individuals and in organizations.

This statement recognizes a level of over-all personality development, with its manifold implications, wherein giving has become paramount over getting. The classical psychoanalytic theory of Freud among others traces the development of the personality from infancy to maturity in terms of the transformations of the desire to be loved or given to into the desire to love or to give actively. Greenson points to the enormous differential consequences which flow to and from those persons whose primary orientation as adults is to get from those whose primary orientation is to give. How is this dimension perceived by educational administrators and professors of educational administration?

Professorial Contributions

- (1) The professor offers to help the student get into the habit of quantifying human behavior such that it can be measured and evaluated clearly.

Implicit in this statement is the professor's role in socializing the student to proceed in terms of scientific academic norms. It also recognizes that human behavior can be understood and evaluated most clearly after it has been quantified.

- (2) The professor offers inculcating in the student the value of objectivity.

This statement also implies the professor's personal role in socializing the student to scientific norms and helping him to set aside or

call into question personal biases and idiosyncratic viewpoints.

- (3) The professor offers an understanding of theory and research from several social sciences which has relevance for the task of administration.

This contribution is a didactic one but implies awakening the student to the fact that the administrator may eclectically draw upon a wide range of social science research in coping with the administrative task.

- (4) The professor offers an appreciation of the tributaries to historical and contemporary administrative theory.

This contribution may be interpreted as orienting the student to his intellectual present within the framework of concepts developed in the past, thus lending depth and perspective to contemporary administrative theorizing.

- (5) The professor offers training in expressing oneself in a logical, cogent, well-organized manner.

This contribution recognizes the practical value to the administrator of being able to communicate in a clear and cogent manner. Even more, it implies that clarity and rationality of thought is a prerequisite to authentic knowledgeability in general.

- (6) The professor offers opening the student's eyes to the personal commitment to furthering education which can come with educational administration.

This statement, the first of the five experiential contributions, indicates that the professor shows the student by his own example that the administrator is first a committed educator concerned with the well-being of youth and that such a commitment must devolve from deeper personal levels.

- (7) The professor offers conveying the meaning of personal growth, compassion, and taking responsibility for oneself.

The professor helps the student to recognize the relationship between his own ontological development as a person and the task of administration. The student is shown the necessity of discovering and affirming his own values and of taking personal responsibility for living them whatever organizational realities may dictate.

- (8) The professor offers pressing the student to come to grips with such questions as: What is the value of education? What has led him to want to become an educational administrator? And so on.

The professor is not content to let the student enter the profession of administration on the basis of unexamined personal motives and assumptions about education. The student is helped to integrate his own background and personal directions with thoroughly explored fundamental understandings of the aims he is about to pursue.

- (9) The professor offers to be the kind of person with whom one can experiment and take risks in discovering one's values and abilities.

With this contribution, the professor recognizes that students cannot grow unless they have both intellectual and experiential room to grow in. The professor makes it understood that with him, the student may safely experiment with ideas and behaviors which might prove unacceptable in the "real world." The professor provides honest, dependable feedback to the student regarding his communications--authentically rejecting behaviors and ideas but not rejecting the student. In this way, the student

comes to be self-directing rather than a conditioned exemplar of normative behavior.

- (10) The professor offers insight into the sources of internal conflict and personal pressure one is likely to experience as an educational administrator.

The professor serves as a model of a seasoned, veteran administrator or educator from whom the student may learn via the process of identification. The student, temporarily and partially at least, takes on the professor's personal ways and thereby gets the "feel" of being an administrator.

Professionally Related Personal Strengths

- (1) The ability to exclude one's own intellectual biases and passions from one's academic work.

This item is consistent with the scientist's obligation to be dispassionate, objective, and impersonal in his sciencing. Not all academic work in educational administration, however, is scientific or intended to be scientific. Nevertheless, this item implies a more general point of view that academicians should generally remain rather personally detached from their scholarly productions.

- (2) The ability to conduct and publish sound, sophisticated empirical research in relevant areas.

Most publication in educational administration has not taken the form of empirical research. Yet the trend in recent years has been to esteem such work more highly. To what extent is empirical research considered a relative personal strength by members of the professorship today?

- (3) The ability to employ the conceptual tools devised by social and administrative scientists in analyzing concrete situations existing in the field.

This strength addresses the professor's ability to bring conceptual knowledge to bear upon concrete situations. In what way is this strength esteemed by professors today?

- (4) The ability to help students develop all their powers of rationality and to bring these to bear on questions in administration.

This strength addresses the teaching function of the professor from a conceptual or analytical point of view.

- (5) The creation of and/or knowledge of theories appropriate to educational administration of the kind which can be verified in principle.

This strength addresses the general knowledgeability of the professor with respect to the broad range of empirically based theory across disciplines which may have relevance to educational administration.

- (6) The capacity to persevere in the face of frustration, anxiety, and disappointment with regard to one's own effectiveness in fostering positive change in students.

This strength is the analog for professors of the sixth educational objective stated for administrators. The same comments apply.

- (7) A sense of shared fate with one's community and a desire to contribute to it.

This strength recognizes the professor as an integral participant in his own academic community and its encompassing public community in contrast with viewing the professor as an independent professional plying his trade from locale to locale. In what way is it viewed as a strength for

the professor to sink his roots and cast his fortunes with a given community or series of them?

- (8) A merging of one's deepest personal and professional identities.

How central is it for professorial efficacy for the professor as a person to merge with the professor as a professional? Can and should a distinction be drawn by professors between their private, personal living and their professional activities?

- (9) An attitude of compassion, sorrow, and hope for those attempting to make a success of education.

This strength indicates a recognition of the pathos and seriousness of the educator's mission and at the same time recognizes the inescapable tragedy perpetrated by all those forces which make genuine education mainly a fruitless endeavor. The strength indicates the resolution of a paradox: a willingness to continue to try to help those in the public and in educational organizations (and oneself too) who are often their own worst enemies and even the enemies of education.

- (10) The ability to encounter people in an open, empathic, honest way.

This strength encompasses many nonintellectual aspects of the professor as a person and as an educator.

Sampling

Instruments were mailed to 297 public school superintendents and 490 professors of educational administration.

The superintendent sample is comprised of all superintendents of cities with populations of 50,000 or greater who are listed in the Roster of the American Association of School Administrators. The professorial sample is comprised of all professors of education or educational administration listed in the Roster of the AASA for 1973, subject to the following qualifications:

- a. Only university faculty were included because it was assumed that most doctoral candidates preparing for the superintendency would be enrolled there.
- b. Deans, associate deans, and assistant deans of colleges of education were not included, partly as a means to limit sample size to practical proportions and partly because their concern is less likely to be concentrated upon the preparation of school administrators per se.

While not all professors of educational administration are members of the AASA, particularly some strongly research oriented professors who prefer membership in the American Educational Research Association, the AASA nevertheless seems broadly representative of the professorship and considerable overlap exists of membership in the two organizations. Furthermore, professors involved mainly in the preparation of practitioners (the interface investigated in the present study) seem more likely to be members of the AASA, if indeed they belong only to one professional association.

Hypotheses and Statistical Treatment

Hypothesis 1

Professors as a group will use the same or similar criteria when rank ordering items of any particular set; hence, a high degree of consensus will emerge among professors in their rankings of educational objectives, professorial contributions, and personal strengths respectively. Superintendents also will agree consensually in their ranking of items in each set.

The consensus or concordance of rankings within each sample for each set of rankings is tested with Kendall's Coefficient of Concordance (W). A significant value of W does not indicate the correctness or incorrectness of any order of rankings with respect to some external criterion. It indicates only that rankers have employed the same or a similar criterion in ranking the items. Hence, the testing of Hypothesis 1 will reveal the degree to which professors and superintendents respectively are homogeneous in the criteria they employ in order items in each set.

The statistical significance of W will be tested in each instance to allow comparison of samples by sets of items. However, for present purposes, it would not be meaningful to establish a particular alpha level for accepting or rejecting the hypothesis.

Hypothesis 2

With respect to the sets of educational objectives and professorial contributions, it is expected that in each case professors will rank con-

ceptual items as more central and superintendents will rank experiential items as more central. Hence, a negative rank order correlation between the two groups is expected.

Kendall's tau is used to determine these correlations. As with W, the significance of tau is tested, but it would not be meaningful to establish a particular alpha level for the acceptance or rejection of the hypothesis.

Hypothesis 3

Professors are expected to rank conceptual educational objectives as being more central to administrative skill but experiential strengths as more central to their ideal Gestalts of professors of educational administration.

Chi-square is used to determine the relationship between the sums of ranks of conceptual and experiential statements for educational objectives and personal strengths for professors. The establishing of an alpha level would not aid in interpreting results of this comparison.

Heuristic Analysis of Results

Aside from examining the consensus of rankings within samples and comparing rankings between samples, additional insight from the results may be gained in the following two ways:

- a. The ordering of items in each set by each sample derived by summing the ranks may be examined for its heuristic value.¹

¹ This statement is elaborated on page 231.

- b. Are there sizeable, contrarily oriented subgroups within each sample? That is, with respect to each set of items to be ranked, is there one large group of professors who rank conceptual items as more central and another large group of professors who rank experiential items as more central? If so, this finding would be revealing in itself concerning the homogeneity of viewpoints within samples. Furthermore, these subgroup differences would have the effect of canceling each other out when summing the ranks of each sample. A conceptually oriented respondent may be defined as one who assigns a rank of between one and five to four of the five conceptual items in a set. An experientially oriented respondent may be defined as one who assigns a rank of between one and five to four of the five experiential items in a set. By determining the numbers of conceptually and experientially oriented respondents in each sample for each set, and evaluating these frequencies in conjunction with those expected by "chance" (using X^2), the meaningfulness to respondents of the conceptual vs. experiential dimension as an ordering principle for educational objectives, professorial contributions, and personal strengths may be appraised.

CHAPTER V

RESULTS

In this chapter, the rate of participation in the study is discussed; findings are reported and discussed hypothesis by hypothesis; and summed rankings are examined for their heuristic meaning.

Rate of Participation

Of the 297 sets of instruments mailed to superintendents, 180 were returned completed and 2 additional sets were returned uncompleted. In all, 61 percent of the sets mailed to superintendents were returned. Of the 490 sets mailed to professors, 292 were returned completed and 5 uncompleted for an overall response of 61 percent also. Hence, results may be considered to be adequately representative of the samples queried and reasonably representative of the national populations of superintendents of cities greater than 50,000 in population and university professors of educational administration concerned with the preparation of superintendents.

Hypothesis 1

It was hypothesized that a high degree of consensus as determined by Kendall's Coefficient of Concordance would be found among professors

and among superintendents in their rankings of each set of items. High values of W indicate that respondents were applying the same or similar criteria in making judgments about the items in a set. Table 3 shows values of W and levels of statistical significance by respondents and by sets of rankings.

TABLE 3. --Consensus of Ranking Among Professors and Superintendents

	Values of W	Levels of Statistical Significance
Professors:		
Educational Objectives	.141	$p < .001$
Professorial Contributions	.094	$p < .001$
Personal Strengths	.299	$p < .001$
Superintendents:		
Educational Objectives	.135	$p < .001$
Professorial Contributions	.108	$p < .001$

A high degree of concordance was found for both groups in their rankings of each set of items. These results indicate that some common ordering principle was applied by respondents generally in their rankings. However, this finding must not be interpreted representing some degree of identity in the perceptual sets of respondents. (This issue will be discussed more fully near the end of this chapter.) Professors are somewhat less in accord in their perceptions of centrality of professorial contribution items. They were in extreme accord in perceiving items central to their Gestalt's of the ideal professor of educational administration.

Hypothesis 2

Professors were expected to rank conceptual educational objectives and professorial contributions as being more central in administrative skill than experiential or personal objectives and contributions. Superintendents were expected to rank personal items as more central in these categories. Results of a X^2 analysis of the sums of ranks for conceptual and personal items are shown in Table 4.

TABLE 4. --Centrality of Dimensions: By Professors and Superintendents

	Sums of Ranks		X^2 Value	Levels of Significance
	Conceptual	Personal		
Professors:				not
Educational Objectives	7991	8030	.094	significant
Professorial Contributions	8399	7660	34.01	$p < .001$
Superintendents:				
Educational Objectives	5161	4733	18.52	$p < .001$
Professorial Contributions	5129	4782	12.15	$p < .001$

Professors as a group gave about equal centrality to conceptual and personal items among educational objectives. Hence, the hypothesis that professors would rank conceptual objectives more highly was not supported.

Professors ranked personal professorial contributions as much more central to administrative skill than conceptual contributions. This finding ran directly counter to the direction predicted but was statistically significant at $p < .001$.

Superintendents perceived the personal items among both educational objectives and professorial contributions as generally more central to furthering administrative skill than conceptual items. These findings, statistically significant at $p \leq .001$, supported the hypothesis. Thus, both groups gave considerably greater centrality to the personal dimension with the exception of professors' rankings of educational objectives in which no direction was observed.

Because professors and superintendents were predicted to give greater centrality to the conceptual and personal dimensions respectively, it was hypothesized that a negative correlation would emerge between the summed rankings of the two groups for educational objectives and professorial contributions. Kendall's tau was used to test this hypothesis. Results are given in Table 5.

Contrary to the predicted negative correlations, strong positive correlations were found between rank orders of professors and superintendents. Clearly, more similarities in perceptions of the centrality of aspects of administrative skill are apparent between the two groups than are differences.

Hypothesis 3

It was hypothesized that professors would perceive conceptual educational objectives as more central to administrative skill but would perceive personal or experiential strengths as more central to their Gestalt of the ideal professor. Findings did not support this hypothesis and went

TABLE 5.--Rank Order Correlations: Professors and Superintendents

Educational Objectives: Rank Order Correlation

Statement	M	O	N	I	R	P	K	Q	J	L
Order of Ranks by Superintendents	1	2	3	4	5	6	7	8	9	10
Order of Ranks by Professors	1	2	5	3	4	7	6	10	8	9

$$S = 35$$

$$= .78$$

significant at $p = .00047$

Professorial Contributions: Rank Order Correlation

Statement	M	R	O	J	P	K	N	Q	I	L
Order of Ranks by Superintendents	1	2	3	4	5	6	7	8	9	10
Order of Ranks by Professors	1	2	4	7	6	3	8	5	10	9

$$S = 29$$

$$= .64$$

significant at $p = .0046$

strongly in the opposite direction. Professors gave centrality to neither the conceptual nor the personal dimension regarding educational objectives for administrators. However, they strongly perceived the centrality of conceptual aspects in their Gestalt of the professor. These findings are shown in Table 6.

TABLE 6. --Centrality of Dimensions Concerning Personal Strengths:
Professors

	Sums of Ranks		X^2 Value	Level of Significance
	Conceptual	Personal		
Professors:				not
Educational Objectives	7991	8030	.094	significant
Strengths	7388	8391	63.74	$p < .001$

Professors clearly perceive that conceptual strengths are more central to their Gestalt of the ideal professor of educational administration than are personal strengths.

Heuristic Analysis of Results

The consensual rank order of statements of each type may be regarded as the order of statements found by summing the ranks. It is important to recognize that this order does not necessarily correspond with the rank order given by any individual professor or superintendent. In the present case, such summed ranks cannot be supposed to represent any fact to be found in nature as can be the rankings of individual persons.

These consensual rankings reveal nothing about respondents actual frames of reference either as individuals or as collections of individuals. The summing of rankings which spring from and are descriptive of individuals' perceptual Gestalts cannot follow the same rationale as that whereby judges' perceptions of independent traits of stimulus objects, for example, might be summed because the aspects of a Gestalt have meaning only with respect to other aspects of the same Gestalt. Nevertheless, the rank order given by the superintendents and professors collectively may hold interest. While it is apart from the conceptual structure and intent of this inquiry, items may be examined at the group level as though they had been assigned ranks independently of each other. These summed rank orderings are presented in Appendix B.

Examining first educational objectives in the order ranked by superintendents, it may be noted that "the ability to utilize administrative theory in diagnosing problems and formulating action strategies," was ranked highest. This finding flies in the face of the stereotyped notion that practicing administrators are indisposed to recognize the practical value of theory in practice. It also may hint that administrators turn to their intellect or powers of rational analysis first and foremost as a means of approaching the administrative task. This suggestion is supported by the relatively high rank (fourth) assigned to "the ability to think of and formulate administrative decisions as hypotheses to be tested and verified"--seemingly quite a formal way of approaching administration.

At the same time, however, administrators assigned high ranks to having "a grasp of one's personal strengths and weaknesses . . ." and to "the capacity to persevere in the face of frustration, anxiety and disappointment. . . ." Both of these objectives represent administrators' recognitions of their need for self-understanding and for a certain existential depth or toughness in order to be as efficacious as they desire. This observation is corroborated by the ranking of "having a mission to contribute something of oneself . . ." and ". . . the ability to respond to subtle emotions . . ." as fifth and sixth respectively. Four of the six highest ranked items were derived from the personal or experiential dimension.

Administrators ranked as ninth "a commitment to scientific thinking as the most dependable source of truth . . ." This ranking appears somewhat inconsistent with the ranking of other science oriented objectives in first and fourth place. Perhaps this reveals a certain enduring ambivalence toward the use of formal conception by administrators. "Skill in performing critical analyses of empirical research" was ranked last.

To make one summary generalization of the collective rankings, it might be inferred that administrators are making a strong effort to heighten their intellectual acuity in dealing with administrative challenges but continue to recognize underlying factors at the experiential level as crucial.

Turning to educational objectives as ranked by professors, it is interesting to note that professors ranked the same two statements as first and second as did practitioners--one conceptual statement and one experiential statement. With minor variations, professors' rankings continued

to follow the same pattern as administrators'. Professors ranked last "a passion for helping others and oneself to live life to its fullest in spite of resistances encountered"--ranked eighth by practitioners. This finding may be taken as somewhat ironic when one considers that from their (hopefully) quiet chairs in academe, and as teachers themselves, professors should be in a better position to contemplate deep questions concerning the relationship between education and living life to its fullest.

The most striking generalization to be inferred from comparing the rankings of professors with those of administrators, however, is their similarity rather than their differences.

Examining now professorial contributions as ranked by both superintendents and professors, it is again of interest that both groups ranked the same two statements as first and second: "training in expressing oneself in a logical, cogent, well-organized manner" and "insight into the sources of internal conflict and pressure one is likely to experience. . ." The first of these may well express a considerable frustration on the part of members of both groups with their plight of being immersed in situations of much muddle and confusion--perhaps part real and part apparent. In that perhaps the most tangible aspect of education is talk, this frustration may be understandable and possibly inevitable. Nevertheless, this statement expresses an ancient educational aim of bringing clarity to muddled thinking. The second and third items as ranked by superintendents (the third being ". . . the meaning of personal growth, compassion, and taking responsibility for oneself") strike at deeply personal levels. Professors ranked in third

place "an understanding of theory and research from several social sciences. . ." indicating a rather high esteem for the value of the social sciences by contemporary professors. Administrators ranked this item sixth. Interestingly, administrators ranked "inculcating in the student the value of objectivity" in fourth place whereas professors ranked it in seventh. It may be that administrators were interpreting "objectivity" in the sense of fair play and professional integrity in interpersonal dealings rather than in its more "scientific method" sense. It is also ironic that administrators ranked "to be the kind of person with whom one can experiment and take risks . . ." near the bottom (eighth) whereas professors ranked it fifth. One would expect those in the learning role to be more aware of and desirous of preceptors who permit experimentation and risk taking than would be those in the teaching role. It may be that inhibitions about taking growth enhancing risks reside more within students than they derive from professors.

Again the rankings of both groups for professorial contributions are conspicuous more for their similarities than for their differences.

Examining professionally related personal strengths which were ranked by professors only, it is observed again that a conceptual statement was ranked first: "the ability to help students develop all their powers of rationality and to bring these to bear on questions of administration." The most central element to the professorial endeavor in educational administration was seen by many respondents to revolve around the powers of rationality. This statement, also, however, contains within it the aspect

of teaching and furthering development; it is not an egocentric strength. Second rank was given to "the ability to encounter people in an open, empathic, honest way." The ideal professor was recognized as having his deeply personal aspect too. Third and fourth places respectively, "the ability to employ . . . conceptual tools . . . in analyzing concrete situations in the field" and ". . . knowledge of theories . . . of the kind which can be verified," imply first an emphasis upon applied science and second an emphasis upon "theoretical" science. Fifth place was given to "the capacity to persevere . . . in fostering positive changes in students." Hence, the first five items in the order show a strong conceptual "academic" bent but also emphasize personal openness and integrity and a concern for steadfast teaching.

"The ability to conduct and publish . . . empirical research" was assigned ninth place indicating that empirical research is not now widely regarded as central to efficacy in the professorship. Last place was given to "an attitude of compassion, sorrow, and hope for those attempting to make a success of education." This statement may have appeared overly dramatic to some professors and this may have accounted for part of its low rating. It may have appeared enigmatic to others which constitutes a different issue. This statement implies (to the investigator anyway) that education is "for real"; that it is a deeply and prototypically human endeavor; that in education reside some of our keenest hopes and tragedies; that educating is an extremely difficult if not impossible endeavor which demands all of one's resources which even then may be insufficient--that education

is anything but a strictly instrumental affair. Perhaps such an appreciation cannot be evoked by a one sentence stimulus. On the other hand, perhaps we are unaccustomed to thinking of education in this dimension.

A second way in which the data of the study may be examined for heuristic meaning is by noting the number of respondents who assigned at least four out of five of their five most central ranks to the subset of five conceptual statement or five experiential statements and comparing this number with that expected by chance. In the most extreme case, for example, the five conceptual educational objectives would be assigned ranks of one to five and the five experiential objectives would receive the ranks of six to ten. Such a ranking would indicate that (a) the conceptual-experiential dimension was meaningful for the respondent, and (b) that he perceived one dimension as more central to administrative skill than the other.

Given the nature of the ranking instructions (rank central to peripheral) a basic assumption underlying the methodology of this study is that there exists no randomness or chance in the rankings. Randomness may be defined as the equal probability of any one event occurring in a class of events as any other event in that class occurring. If randomness were a factor in the rankings of a given person, then to that extent items would have an equal probability of being assigned any rank. But, regarding the rankings, this assumption is invalid for several reasons. First, following Freud, it has been assumed that all events occurring in the mind are connected--however obscurely or circuitously. There is no such thing as an

isolated event in the mind. As dynamic psychology has demonstrated, even unconscious events are meaningful, that is, organized. Secondly, the locus of the determination of randomness resides within the percipient. Events may be regarded as random only insofar as the percipient has no criterion by which to see order in the events. Physicists regard the Brownian Motion of molecules as random; however, it may well be that such motion appears random to the observer because he has no adequate theory by which to perceive its order. This difficulty is especially apparent in communicational events. For example, if one were given 1000 small dashes with which to construct a message on a blackboard, and one were to spell out the word, "hello," then an observer would certainly not conclude that the elements had been arranged randomly. However, if one were to take the mode of the abstract artist and meticulously arrange the dashes over the blackboard at different angles and positions with respect to each other, an observer might conclude that the dashes had found their positions randomly because he would have no criterion or way of perceiving the orderliness which the artist had in mind as he arranged the dashes.

Thirdly, each set of rankings by respondents represents a unique Gestalt. In this sense, to add rankings together across respondents is like adding a piece of an orange to a piece of an apple to a piece of a pear, and so forth. It is even conceivable that two respondents who ranked items in exactly the same order were actually expressing different Gestalts.

If all of this is true, how can the data of this study be considered

collectively? First, the finding of a high degree of concordance (W) has been of some utility in indicating that there have been some similarities in perceptions of centrality across respondents. On the basis of concordance, it cannot really be said that respondents have acted on the basis of similar Gestalts, but it can be said that they have acted somewhat alike, and this information can be useful in instances where behavioral commonalities among persons within a group are an important factor. Correlating summed rankings between groups provides a similar kind of useful information when the objective is to compare groups rather than individuals. In the present case, of course, positive correlations were found which were statistically significant at $p \leq .005$.

But how may information be gained concerning the basis upon which rankings have been made by collections of persons? The statements ranked were conceived and derived dichotomously. Thus, by summing the totals of ranks accruing to the two categories and comparing these two totals, it may be determined that a group as a whole has ascribed greater centrality to one category or dimension than to the other. This procedure was done using Chi-square. This information reveals nothing about individuals and relatively little about groups, but it does reveal something--that elements in one category were more often perceived as more central than elements of the other category. Such information may be useful in making certain kinds of decisions about curriculum. The main limitation of this procedure is that in the summing of ranks, differences among respondents--even polar differences with respect to the two dimensions--are blurred. For example,

if half of the respondents in a sample give the five most central ranks to elements in the conceptual dimension and the other half of the sample give the five most central ranks to the experiential dimension, then when all of these ranks were summed, no differences would be apparent between categories taken as a whole. The ten items would appear in a thoroughly mixed order even though no respondents had mixed them individually. It could be that two extremely polarized subgroups composed each sample and that this polarization was masked by the procedure of combining all of the rankings.

How could such a polarization be discovered? Rather than assuming that mixed rankings across the two dimensions represent randomness, it could be assumed that, in these cases, the dichotomous dimension posed by the investigator did not serve as a criterion (at least not as a simple criterion) or ordering principle used by respondents in ranking. Was the conceptual-experiential dimension used in deriving the statements actually one used by respondents in ordering the elements? If this dimension was not meaningful to respondents and if they used another, idiosyncratic ordering principle, then it would be expected that few respondents would tend strongly to assign centrality in one direction or another. That is, if respondents were not using the conceptual-experiential dimension for ranking, then the probability that the elements of the conceptual dimension would receive four out of five or five out of five of the most central ranks would be no greater than chance. In other words, observed responses may be compared with chance expectation when chance is understood to mean that respondents were simply not using the investigator's criterion. Hence, while

no set of rankings is truly random, they may be random from the point of view of a given criterion. If it could be established that a significantly greater than chance proportion of respondents found the conceptual-experiential dichotomy meaningful, then the relationship between the conceptual structure of the inquiry and the empirical findings would be strengthened. Furthermore, more confidence could be placed in the assumption that those whose rankings were more mixed nevertheless took account of the experiential-conceptual dimension.

Hence, defining a "conceptually oriented respondent" as one who assigns four or five of the five most central ranks to elements of the conceptual dimension, and defining an "experientially oriented respondent" as one who assigns four or five of the five most central ranks to elements of the personal dimension, a Chi-square analysis was performed to determine if there were more conceptually and experientially oriented respondents in the samples than would be expected by "chance." Results of this analysis are presented in Table 7.

With the exception of superintendents' rankings of professorial contributions, all sets of rankings revealed significantly greater numbers of conceptually and experientially oriented respondents than would have been expected by chance. This finding indicates, then, that the conceptual-experiential dichotomy was recognized by respondents and played a role in ordering their rankings. It also indicates that while there was considerable consensus among respondents within each group concerning the rankings of

TABLE 7. --Centrality of Dimensions: Between Individual Comparisons

	Conceptual	Personal	X ²	Level of Significance
<u>Superintendents</u>				
Professorial Contributions				
Expected	33.66	33.66		
Observed	27	31	1.53	p>.2, p<.3
Educational Objectives				
Expected	33.66	33.66		
Observed	40	53	12.30	p<.001
<u>Professors</u>				
Professorial Contributions				
Expected	55	55		
Observed	41	67	6.18	p<.02
Educational Objectives				
Expected	55	55		
Observed	67	65	4.44	p<.05, p>.02
Strengths				
Expected	54	54		
Observed	80	26	27.04	p<.001

individual items (as revealed by the concordance analysis), there was also considerable polarization of respondents within each group as to the centrality of the two dimensions themselves. In many instances, then, it may be inferred that those items ranked sixth to tenth in the combined rankings were ranked third, fourth, and fifth in individual rankings.

Summary of Results

A high degree of consensus was found within both groups for each set of rankings. In terms of the overall centrality ascribed to the two

dimensions, both groups gave greater weight to personal professorial contributions. Superintendents gave greater weight to personal educational objectives whereas professors assigned greater centrality to neither dimension. Professors perceived conceptual strengths as much more central to their Gestalt of the ideal professor than personal strengths. Rank order correlations between the two groups were strong and positive--in direct opposition to the hypothesized direction of correlation. A heuristic analysis of items in each set in the order of the summed ranks by groups suggested in different ways that stereotyped notions about professors and practitioners are inaccurate. Finally, in four of the five sets of rankings, considerable polarization of respondents in terms of the conceptual-experiential dichotomy was discovered leading to the conclusions that (a) the conceptual-experiential dimension constituted a meaningful ordering principle for respondents, (b) that there was more agreement at the individual level on the relative centrality of individual items and less agreement on the centrality of dimensions, and (c) that greater differences exist within the professor and superintendent groups than between the groups.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Our aim of Chapter II of this dissertation was to explore a fundamental conceptual paradox which has increasingly importuned those attempting to reconcile science with administration ever since administration has become an identified field of study. Science as we have mainly understood it to the present assumes causality and determinism. The scientist assumes that nature herself exists prior to our knowledge of her. Nature occurs in an orderly, lawful fashion; our challenge as scientists is to discover this lawful order. The scientist creates conceptual order which corresponds reciprocally with nature; he does not create order in nature herself. The scientist controls nature in his experiments and inquiries only as a means to understanding her innate variability more clearly.

Administration on the other hand, has conventionally been conceived as the control of nature herself to the criterion of preconceived human aims. The administrator determines how nature, in the form of living, working human beings, should be arranged so as to correspond with his aims or his conception of society's aims or whatever. The administrator identifies a desired state of affairs in the form of products and processes and then sets about arranging nature to the desired criterion.

Hence, the scientist begins with his observations of nature in her apparently chaotic form and proceeds to discover order in nature and to represent this order in conceptual form--that is, in theories. The working of nature is the criterion of the theory. The administrator begins with the theory, a conceptualized structure of event processes resting upon arbitrary or transcendental human values, and sets out to bring nature into conformance with these conceptual ends or values. The scientist attempts to allow his experience and intellect to be guided by nature and to follow her trail wherever it may lead. The administrator attempts to control nature such that his desired a priori conceptual structure will be actualized.

In the realm of physical science, these two antithetical pursuits may operate in relatively harmonious conjunction: the pure scientist and the applied technologist. The scientist formulates the workings of nature; the technologist puts these formulations in the service of human aims by arranging nature into novel and useful configurations. There remain great questions as to whether the fruits of various technologies are in fact operating in the service of our consensual or transcendental a priori values, to wit, the hydrogen bomb, biological warfare, etc. However, perhaps even these vexing issues tax our ethics less profoundly than does the issue of scientific administration.

The appliers of knowledge derived from the sciences of man--the scientific administrators, educators, therapeutic behavior modifiers, and politicians--cannot readily be compared with their technologist counterparts in the physical and biological science arenas. The manipulation of one man's

behavior and experience by another is more ethically problematical than is man's manipulation of ordinary matter. We can perhaps agree unequivocally that our power in itself to control physical nature is inevitably desirable even though particular applications of such power may be undesirable. We cannot, however, agree that the power of man over man, regardless even of its beneficent application, is inevitably desirable. The sense of each man's agency and responsibility in his own behalf seems irradicable. If man had complete power over physical nature, man individually and working together hypothetically could enrich his life immeasurably. But if man had complete power over mankind and chose to use such power even in the noblest intent, the results would be either utter vacuity on the part of those controlled or a bellum omnium in omnes, B. F. Skinner's arguments to the contrary notwithstanding. If the school administrator, for example, applying a consummate social science, could completely arrange the living in all participants in a school in its every aspect, even were he to construct a Garden of Eden, would not one wait with bated breath for the first suicide? Or would not some sneaky subordinate spirit away the social science handbook and construct his own kind of garden for the administrator?

The power of one man to control another is in every instance tragic when such power is not mediated by the latter's innate coming to order. Of course anarchy is no solution. The point is that there are other ways in which we may employ our scientific understanding toward the criteria of order, harmony, and evolution rather than through tyranny--however covert

and well intended such tyranny may be. Both the scientific effort and the administrative effort in education might seek to be guided to the aim of revealing to himself man's continuous, innate coming to order. As we know order, if we know it deeply enough, we become yet more orderly in an unending spiral. Unlike physical matter, an individual man's knowledge of his own workings allows him to work differently, more orderedly, more efficiently, and more evolvingly. The use of the science of man must be not to control in the active sense but to foster and augment the innate coming into control which is the distinguishing feature of humanity as a life form. As we know individually and together, we enter into higher orders of organized complexity. Human nature changes as we change.

In summary, if one is truly to be scientific in one's mode of administration, one must remain oriented to discovery and one must understand how man, unlike physical matter, consumes knowledge--uses it as nutriment in his self-regulated evolution. Our knowledge of ourselves individually and collectively can allow us not to control one another toward arbitrary criteria, but rather to be in control together as we conjointly move continuously into more complex, integrated, and fluid forms of process.

Science does not move toward simplicity per se. Science moves toward the simplified expression of greater and greater apprehended complexity. Hence, in truly scientific educational administration, the aim must be to promote the veridical apprehension of complexity by conceptually simplifying it, thus making it comprehensible and useful. We allow reality

to become more complex as we allow our understanding of reality to become simplified, i.e., integrated. By bringing complexity and simplicity into a mutuality of process in this way, our participation in reality becomes more orderly and negatively entropic. Conversely, if we pervert both science and the evolutionary nature of man by attempting to simplify reality itself, coercing it to fit our abstract schemes, we become entropic. It is a pernicious irony, especially in education, that administering in the name of order, we actually promote disorder or entropy. When the facts of reality representing the full individuality of all participants in a school are reduced nomothetically into preconceived arrangements of roles and behaviors, then the natural coming to order of persons individually and collectively is frustrated and entropy ensues. The set of inputs which the system may take into account in organizing itself becomes limited and the paradigm for processing these inputs becomes fixed, while the facts which might be taken into account and the dynamics giving rise to these facts remain in operation at some level, thus leading to the incipient decay of the original structure. This decay, however, leads not to the evolution of a more veridical structure but rather to an increase in the number of events which occur without respect to central organizing principles.¹

¹ At the psychological level, McReynolds has discussed these dynamics in the genesis of schizophrenia with his concept of "unassimilated percepts." Paul McReynolds, "Anxiety, Perception, and Schizophrenia," The Etiology of Schizophrenia, ed. by Donald D. Jackson (New York: Basic Books, 1960).

To be more concrete about this, if a teacher and a student and the criterion of their mutual interaction are defined by administration, but if in fact more (and different) is occurring within and between the two than the criterion structure permits, then the additional elements must be ignored or repressed or given expression in opposition to the structured criterion. We cannot stop living from occurring in the schools by defining it away. If we try, we make living and growing painful, tortured, anxiety provoking, rebellious, and self-destructive. As a consequence, we find in schools on the part of all concerned aimlessness, sabotage, passive aggression, neurotic preoccupation, and occasionally violence and vandalism. So much of reality is defined out of existence in the name of creating ostensible order and organization (via job descriptions, behavioral objectives, accountability, professional norms, etc.) that the result is the undermining of order and its replacement with dis-concerted and disintegrated actions. Unless we can trust in the orderliness of ourselves and let it come to pass, we shall not have it. As administrators, unless we can put rigorous conception in the service of a constantly changing and evolving reality instead of the obverse, then we shall be fundamentally antieducational.

In Chapter III, we attempted to show that expanding the range, depth, and integrity of experiencing, knowing, and doing, is of the essence of man. And while this process occurs naturally (though subject to many restraints, inhibitions, and perversions), education is the conscientious facilitation of the process. We attempted to state the direction taken or the "goal" of human living in such a way that all a priori values across

individuals, cultures, and ideologies could be subsumed. This "goal" is not a particular end state but is an order of process which any individual, with some help and practice, can learn to identify, participate in, and use as a criterion in living.

This goal is value-free in the sense that it is innate and discovered rather than chosen. Value is found as increasing complexity finds its way into increasing simplicity and integration in experiencing, knowing, and doing. We find that what we recognize as evil at all levels and in all its manifestations (destruction of self or others individually, interpersonally, and collectively) can be defined as movement away from the negatively entropic process and we find such movement not as innate in the human constitution, as Freud found, but as expressions of inferior or oppositional modes of process which are even yet directed toward unity, harmony, and orderedness. The integrity of one system must be enhanced by the destruction and/or reorganization of another (in lieu of the mode of process whereby logical opposites may find their way into relativistic, motionful coexistence thereby enriching the complexity and integrity of the entire field).¹

Value is thus not something which stands outside science but is part of the substance of science itself. As we come to understand men and their experiences more widely, more deeply, and more integrally, we our-

¹ For other perspectives on the underlying seeking of unity through inferior modes of process, see Andras Angyal, Neurosis and Treatment: A Holistic Theory, and Margaret Mead's remarks at the 1973 convention of the American Association of the Advancement of Science.

selves take on these qualities of range, depth, and integrity and thereby discover value in the process. As we grow in understanding ourselves and others, we find pleasure, joy, compassion, vitality, and a natural sense of ethics whereby, without trying, we are nurturant, trustworthy, acceptant, non-exploitative, giving, and facilitative. Like value, ethical behavior is discovered in the innate impulsion to move into higher levels of processual order.¹

Also in Chapter III, we attempted to point out that the human being as a processor of information is capable of bringing order to complexity at levels far beyond those we usually assume as limits. By enobling our conceptual faculties with the term "higher mental processes" rather

¹ It must be emphasized that the way which one takes via self-discovery to the positive is necessarily fraught with many encounters with the negative in one's own personality. Because self-discovery is a life-long, never-ending process, and because we discover ourselves not mainly in isolation but via our abradings with other people, it is unlikely that even the most consummate adepts of the higher processes will transcend the evil aspects in his nature once and for all. Our own evil aspect, that is our susceptibility to inferior orders of process, is our constant companion and must be paid its due at least insofar as its conscious recognition in order that we may transcend it via the higher processes. The admission of the inferior is part and parcel with the commission of the superior. Evil appears in its purest when it is dissociated or autonomous from the totality, and as the superior is a developmental process in time, then sometimes it is necessary to admit and even permit the presence of an evil aspect in our dealings with one another. But as such evil is admitted to the scene, it is simultaneously mitigated and transcended to the extent that the superior processes have been able to evolve. Hence, to transcend evil over time, one must find the courage to accept and recognize its presence in himself and the compassion to forgive its presence in others. Evil is defused as we are able to accept it; not as we grant it rejected autonomy.

than viewing them as playing an intermediary role in an evolutionary spiral, we are distracted from paying attention to everyday feats of enormous intelligence which derive from other forms or modes of knowing. We need not discount the utility and stabilizing power of intellection in order to appreciate the incredible complexity and integrity of process represented by the most mundane instance of empathy. To know with some degree of reliability how another person is feeling, seeing, thinking, intending, and wishing is an information processing feat of staggering proportions. Likewise, to take a simple conceptual insight and allow one's orientation to the woof and warp of everyday life to be altered even slightly is a similar feat. For example, if one sets out to perceive the sun and the moon as spheres rather than discs, his orientation to his place in the universe may be altered dramatically. Such a change of orientation may seem virtually ineffable at first but later may be expressed in lines of rational thought apparently far removed from a knowledge of the three-dimensionality of heavenly bodies. When one dreams at night, to have his next day vitalized and "opened up" by the dream, he has had access to an order of process far more complex and truthful than that of ordinary thinking.

When the administrator is asked, then, to trust more in the orderliness of his organization, to notice life in it, to evoke life from it, to encounter the personhood of others, to facilitate the ordering of the evolving process by understanding it and himself experientially and conceptually, and to communicate this understanding to others, he is not being asked to do the

impossible. As human information processors, we are ideally suited to dwelling within such complexities. Such adaptability, changeability, and reorganization-ability of an evolutionary sort is our most singular distinguishing feature in comparison with other life forms.

Pursuing the life value and the life ethics as educators, we discover that the meaning of life lies none other than in day-to-day living itself. The issue of success for its own sake, the issue of saving somebody or some organization or the world from a ruinous destiny--these ephemeral aims which keep our youth and ourselves distracted from paying attention to living itself, fall away. As we become continuous reactors firmly rooted in the simple/universal events arising in our everyday lives, dichotomies melt away: formal sciencing with everyday thinking, self with organizational role, means with ends, work with leisure, friends with professional colleagues, the present with the future. Einstein once said that he would gladly wait on a bridge in London for an indefinite time for a friend uncertain of his schedule because his work went on wherever he happened to be.

As continuous reactors incessantly bringing to higher orders of form in experience and thought, either purposefully or effortlessly, the facets of existence potential to us, we find the concrete demands of specific occupations and professions to be less and less determinative. The businessman, the mechanic, the engineer, the scientist, the medical doctor, the teacher are all connected via potential to the same psychic hinterlands. They all travel the wheel of birth and death and can pay attention to that in day-to-day living and interaction. They are all subject to the weather and

the changing seasons.¹ They all dream and intuit and think and perceive and concentrate seeking to understand. In short, they are all deeply connectable with other human beings and the physical world as participants in the saga of existence. It is here that we find the true basis of egalitarianism. When we focus on the qualities and depths of daily experience, illusory and invidious distinctions between persons fall away and real, vitalizing, enjoyable differences come into focus. In schools, if we would teach our youth to pay attention to the underlying dimensions of experience through which all of us arise and become integrated as humans--the underlying dimensions which unify the vagaries of daily life in every style and occupation--they would be better off within the context of the conceptual framework developed here. Probably their occupational choices would come easier.

In Chapter II, it was shown that the issues we have been discussing here are not new ones. Indeed, our challenge to resolve our continuous experiential dimension with our discontinuous, conceptual dimension is an

¹ Why not talk about the weather? In the words of Seth Brooks, "For, I said, with fall returning, back goes my memory to the leaves turning yellow and brown and golden and scarlet. And wherever I am when snow covers the ground, I think of the campus deep with tracks worn by the feet of passing generations of students. And wherever I am when spring comes, I remember that first night each spring when the first breath came up from the meadow and we knew the season had turned as it kissed us on the cheek. The campus with buildings, and, waving from the mast, the colors of our alma mater." Is the weather irrelevant to education? The Beta Theta Pi, Vol. 2 (November, 1973), 173.

ancient one equally numinous in Eastern and Western culture. So ubiquitous is this issue that its apparent unresolvability has entered our folklore in the form of oppositional dichotomies. We are led unquestioningly to accept the incommensurability of subjectivity with objectivity, of art with science, of romanticism with rationalism, of existentialism with analysis, of practice with theory. With the right hand side of these dichotomies, we have identified our hopes for order, productivity, achievement, and advancement. The left hand side is relegated to the category of self-indulgence. The right hand is the hard, the dependable, the disciplined, the trustworthy. The left hand is the soft, the unreliable, the shifting--the treacherous tie with our primitive past. The left hand is for the spectators to the main event.

For all of our tough-minded rational objectivity, have we really created a dependable world? Can we feel secure and at home in this world? Can we in fact trust and rely upon ourselves? Can we count on each other for understanding and nurture? Do we find harmony and order in our participation together and with nature? One might suggest perhaps not.

Is our fundamental aim not as primitive as ever: temporal survival in a hostile world? Is not our rational wit taxed to the breaking point simply to ward off one impending catastrophe and another? How can it be said that those who have so admirably suppressed their treacherous subjectivity have in turn constructed an orderly, dependable, lawful, consensually known world? The more one ponders this irony, the more curious it becomes to say the very least, particularly with respect to the role of

education in the affairs of the world. Here is not the place to detail the relations between the process of education and contemporary world conditions. However, it is germane to the conceptions formulated in this inquiry to bear in mind that very highly educated persons, persons of very "realistic" rational dispositions are involved in activities which we may sense with some assurance are antithetical to the developmental possibilities of man. Some of the nation's finest scientific minds are engaging themselves in the creation of weapons of cataclysmic destructive power. Some of the nation's most realistic activists in international affairs have made weaponry the United States' largest export business. One need only read the Watergate transcripts to hear men of worldly sophistication, keen intellect, and long educational training in the law exercising their rational faculties at their dubious best. Unhampered by mushy sentimental democratic mythology, they were enabled to state their objectives in clear, operational terms and to formulate methodologies or empirical designs clearly hypothesizing relations between independent variables (burglaries, payoffs, carefully constructed communiques, etc.) and dependent variables (the actualization of the President's social mandate).

Traditionally, the view has been accepted that science is value free, that is, science is concerned only to elucidate the way things are and not the way they should be or might be. Hence, values are the products of religion, philosophy, social consensus, and/or individual choice. Unfortunately, these bases for value are rather insubstantial. Virtually any

travesty can be rationalized convincingly. Thus we find ourselves acting seemingly in consonance with our chosen values (freedom, peace, dignity of the individual, gracious ways of living) and yet we are uncomfortably aware that the results of these collective endeavors seem to be the obverse of those intended. We become the prisoners of our jobs and at war with each other in questing for the standardized, plastic artifacts which we believed represented gracious living. How very confusing. Trying to do right, things seem to work out wrong.

The conceptions formulated in this inquiry have suggested that values can be directives which may be discovered via the continuous reactor individual and collective mode of information processing rather than chosen deductively. It may be that the confusion devolving from our attempts to actualize our chosen values derives not from the values themselves but rather from the oppositional ways of experiencing and thinking which constrain the values. It may be that we can learn to teach youth ways of thinking and experiencing whereby they can discover their ways in the world rather than choose them--ways in which their outer conduct will become the consequent expression of innate tendencies toward the reconciliation of the archetypal foundations of experience one with the other and with the facets of the external world, thereby bringing to our collective participation the quality of a dance rather than a march.

The genesis of such an order of process requires that the product of education be understood as the quality of the producing itself--the quality

of communication within the school. Such communication involves the same dynamics for administrative, pedagogic, and student activity as those discussed in Chapter III. In this way, the school sheds its factory-like persona and becomes a bastion of reflection. It allows the quiet waters of intuition, imagination, and purposeless encounter to flow. It permits the zestful tranquility, the luminous mysteries, and the steadfast passions of living to flow into being through participants.

From these deep wells will flow a new kind of doing, a doing which is indeed dependable and orderly, a doing in which we will feel at home, a doing which is not distraction, a doing which will lead us to the higher, more pleasurable planes for which we are destined.

We must come to understand conception as neither a higher nor a lower form of process but as an intermediate step in the evolutionary spiral. As we assume the universe to be in order, so may we assume ourselves as the knowing aspect of the universe to be in order. As through perception we come to recognize what we see, through conception we come to recognize what we know, and through this recognition, our knowing is widened, deepened, and connected together leading to new recognitions. As our knowing changes, we change (our nature changes), hence evoking yet new recognitions and modes of participation. From the centrality of that portion of us which knows in n-dimensional complexity arises that portion of us which knows grossly and superficially but recognizably, thus directing our attention back to the center from which all things arise, now with new acuity.

It is difficult to conceive of youngsters grown up in such a school participating in the activities we find so treacherous and potentially disastrous in the world today, but it is not difficult to conceive of such youth becoming skilled professionals, scientists, craftsmen, businessmen, artists, and educators. Our outward activities need not change drastically but rather it is that an inward evolution in our ways of understanding (living) will lead over time away from mutual destruction and toward our greater potential.

In Chapter I, we saw that this problem of reconciling knowledge gained through concept with knowledge gained through experience has caused much concern both to practitioners and professors of educational administration. How may curricula be designed for administrators such that they may truly be prepared to advance education? We indicated that as the process of educational administration is coextensive with the process of education itself, so also must the means of preparing educational administrators be grounded in an integrated understanding of how we evolve into knowing persons.

We observed the historical development of the movement to bring administration and educational administration to a sounder conceptual basis. Increasingly, administrators have been urged to let theory be their guide, and we have seen this movement to result in a considerable increase in intellectual sophistication among both professors and practitioners of administration. At the same time, we found evidence of lingering doubts on the part of both groups that the emphasis upon theory per se held promise

for really resolving the complex dilemmas facing the practitioner. Calls from leaders among professors and practitioners were observed for an integrating conceptual framework which would place in conjoint perspective conceptual pursuits with "reality oriented instructional techniques." From surveys and informal observation, it appears that while the old dichotomous stereotypes continue uppermost in mind, incipient recognitions of the inherent mutuality of conception and experience seem to be gaining a hold.

Hence, two general questions presented themselves for empirical investigation: First, do professors and practitioners as groups distinguish themselves on the basis of giving primacy to either the conceptual or the experiential dimension of knowing with respect to administration? Second, is there a consensus within and/or between groups as to how the separate aspects of the conceptual and experiential dimensions might best be ordered in terms of their centrality in developing administrative skill?

From surveying national samples of professors of educational administration and practicing superintendents, asking them to order mixed sets of conceptual and experiential statements in terms of their centrality to administrative skill, a high degree of consensus was found both within groups and across groups in ordering the statements. Professors and practitioners as groups did not differentiate themselves into opposing camps perceiving centrality in one dimension or other. Strong correlations were found between the summed rankings of both groups on each ordering task. The principal conclusion to be drawn from these findings is that

academicians and practitioners in educational administration are apparently not oriented dichotomously toward each other as folklore would lead us to believe, and in fact, taken together as groups, they appear rather homogeneous.

From a heuristic analysis of the summed and consensual rankings, it was observed that statements from the two dimensions were arrayed in mixed orders. Both groups on both card ordering tasks gave greatest centrality to a conceptual statement, but experiential statements were also given high centrality. On the other hand, some of the conceptual statements were consistently ranked near the bottom, that is, as very peripheral. Professors, however, ranked the conceptual dimension as a whole as much more central to their Gestalt of the ideal professor than they did the experiential dimension.

This heuristic analysis was found interesting and useful. However, it was pointed out that interpreting sums of ranks, when each individual set of ranks represents a Gestalt in itself, must be done with caution. To illustrate, if half of each group ranked all five conceptual statements as central and the other half ranked all experiential statements as central, the summed rankings would appear thoroughly mixed, masking the real polarity in the data.

Hence, a second analysis was performed to reveal the degree to which individual respondents strongly oriented themselves to the centrality of either the conceptual or experiential dimension. In most instances it

was found that a significantly greater number of respondents gave a high degree of centrality to one dimension or the other than would have been expected if the dimensions had not been meaningful to respondents. That is, a greater degree of polarization was found within each group than would have been expected by "chance." Undoubtedly, then, these polarities canceled each other to some degree when dimensions were compared by summing the ranks. The conclusion to be drawn here is that considerable disagreement concerning centrality of dimensions exists between individuals within groups.

To draw general conclusions or summary conclusions from the empirical study, it may be said that professors and superintendents taken together comprise a surprisingly homogeneous group. That is, perceived incompatibilities between academicians and practitioners, to the extent that they do exist, would appear to be based upon other determinants than the theory-practice, science-art, or conceptual-experiential dichotomies. However, when the two groups are taken together and individuals are compared, the dichotomies do appear to be determinative. In short, between group differences are relatively minor whereas between individual differences are relatively significant. These within-group differences in no way detract from the meaning of the results because indeed they are polar differences rather than random differences.

The inference may be drawn from the results as a whole that the stage is set for a more productive debate to occur in educational admini-

stration concerning the well-springs of administrative skill. This finding is consistent with the general impression one gains from reviewing the literature concerning administrator preparation addressed in Chapter I. A beginning has been made, however, to bring some order into the heretofore apparently stereotyped or random differences in perceptions concerning the experiential learning-conceptual learning dilemma. It has been suggested repeatedly in this dissertation that empirical inquiry in social science should serve the purpose not of revealing terminal relations among variables but rather of elucidating temporally extant processual relations such that these relations may thereby, through recognition, evolve into higher forms. The present empirical study has been in this vein. No final or ineluctable truths have been revealed concerning the optimal role of conception and experience in administrator preparation. But, by being enabled to see more clearly the nature of some of the variables involved, and the patterns of ways in which we currently assign meaning to these variables, we may now be able to move into more complex and integrated patterns than the ones revealed here. As we discover the nature of our perceptions individually and collectively in the field of administrator preparation, we enable our perceptions and consequent actions to evolve, only to be studied again.

The criterion for administrative skill, teaching skill--for growthful information processing in general--as developed in the conceptual framework presented in Chapters II and III, is a way of changing and evolving; it is not one static form of process or another. The methodology adopted for the empirical study is probably inadequate for representing the level of com-

plexity suggested in the conceptual framework. Both the existential statements and the positivistic statements do not in the main imply evolving orders of information processing. However, we believe that having asked respondents to order the statements in terms of their centrality-peripherality, this inadequacy has been at least partly mitigated. Certainly constructing the ranking instructions in this manner requests respondents to bring to bear a more relativistic or holistic mode of information processing than would more linear instructions.

In any event, further studies might be constructed bringing the card ordering technique into conjunction with (a) the use of in-depth interviews, (b) group discussion and other forms of group process, and (c) psychological tests of personality dynamics and cognitive styles. If card-ordering profiles could be correlated with a number of variables relevant in administration, then the use of the card sorts might prove of value in screening personnel, in self-exploration, and as a survey-feedback technique for use among faculty and administrative organizations.

Whether or not the specific instruments used in this study are employed, it would appear that further studies which inquire into the experiential-conceptual dimension in terms of arraying the aspects of this dichotomy as to their centrality-peripherality in complex personal skills, would probably be quite fruitful. While such studies would have empirical value in their own right, perhaps their greatest value lies in the stimulation they would necessarily bring--intellectually and experientially--to investigators and participants alike. The functional relations between the digital

and analogic modes of information processing are exceedingly complex and dynamic. To map these relations in detail in both their nomothetic and ideographic aspects promises to be a monumental task--one with literally mind-bending implications.

Of course the psychoanalytic theory (among others) has already brought us a long way toward an understanding of the relations between the primary processes of the id and the secondary processes of the ego. However, as was discussed in Chapter III, psychoanalysis does not adequately give perspective on the heteropsychic roots of our knowing nor on man's potential continuously to evolve into modes and realms of consciousness in daily living which at present lie beyond our most unlikely fantasies.

To study successional process itself meaningfully and first-hand, we will need to participate in disciplined modes of inquiry which heretofore have not been accepted as scientific. That is, we must learn to explore consciousness inwardly but objectively and consensually. To this end, Charles Tart has proposed the creation of "state-specific sciences." Willis Herman of the Social Policy Research Institute at Stanford has pointed out the rapidly growing ascription of legitimacy within the scientific community to such participative, inwardly oriented modes of inquiry. He refers to this change as equivalent in magnitude to the Copernican revolution.

In conclusion, one is led to expect that the next score of years will see opened up vast new vistas on the question of what it means to be alive. We may expect the assumptions upon which we conduct our daily personal,

academic, and educational pursuits to be shaken at the very foundations. Education has been one of our most conservative social institutions. Yet it is becoming clear, if it has not always been clear in the backs of our minds, that education is charged with the most radical task of all--helping our new recruits to life to learn to live not as we have but as they might. Regardless of the many forces which seem to make real education and educational administration almost an impossible task, we are living in one of the most hopeful ages ever. Perhaps never before has the contrast been so sharp between the decadence of a once vital cultural and intellectual tradition carried out to its conclusion and the luminous reemergence of long-buried, integrative human archetypes on a wide scale. In that human history is cumulative and irreversable, we may expect that the increasing possibilities for leisure which our technology affords, our greatly strengthened conceptual facilities, and our incipient awareness of ourselves as indeterminant, open-ended processes focused at the vortex of a cosmos even more expansive and varied in its inner dimensions than in its outer ones, will lead us into ways of human personal and social mutuality never before known. In any event, as we supplement our intermediate concern with the vexing intricacies of mass society and recognize again the unification of the small and simple with the universal, we may see our way clear of alienation. That is to say, bureaucracy or no, one small school can become a continuous reactor in the service of living and no force can stop it. Could one expect a better opportunity than that? When our own small collective can be at once universal and independent of mass ignorance, indeed there is hope for education.

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APPENDIX A

INSTRUMENTS WITH INSTRUCTIONS IN
ORDER OF PRESENTATION

Instructions: Educational Objectives

Below is a deck of 10 cards. On each card is written an educational objective which might be adopted for an entire curriculum for the preparation of public school superintendents. Assume that means are available to accomplish each objective. Please arrange these objectives in terms of those which are most central to comprehensive skill in administering educational organizations. When you have finished, the card on top should contain the most central objective (in your judgment) and the card on the bottom should contain the most peripheral objective. Finally, replace the rubber band around the deck and put it in the return envelope along with the personal data card.

- 1) The ability to utilize administrative theory in diagnosing problems and formulating action strategies.
- 2) The sense of having a mission to contribute something of oneself to others as individuals and in organizations.
- 3) An appreciation of and ability to respond to subtle emotions, intentions and desires flowing beneath the surface in one's interpersonal affairs.
- 4) Skill in performing critical analyses of empirical research in relevant areas.
- 5) A grasp of one's personal strengths and weaknesses as a professional administrator.
- 6) A commitment to scientific thinking as the most dependable source of truth in the administrative setting.
- 7) The capacity to persevere in the face of frustration, anxiety, and disappointment with respect to one's own effectiveness in bringing about positive change.
- 8) A passion for helping others and oneself live life to its fullest in spite of resistances encountered.
- 9) The ability to think of and formulate administrative decisions as hypotheses to be tested and verified.
- 10) The ability to let social science theory guide one in selecting the facts and making sense out of what is happening in the organization.

Instructions: Professorial Contributions

On each of the 10 cards below is written a contribution individual professors of education ideally might make to students preparing for the superintendency toward developing the student's comprehensive administrative skill. Please look into your own past academic and practicing experience and call to mind professors who have made outstanding contributions to your administrative ability. Within this framework, arrange the cards from those contributions which are the most central (top) to those which are the most peripheral (bottom) to furthering administrative skill. When you have finished, replace the rubber band and put the deck in the return envelope.

The professor offers:

- 1) Insight into the sources of internal conflict and personal pressure one is likely to experience as an educational administrator.
- 2) Training in expressing oneself in a logical, cogent, well-organized manner.
- 3) Opening the student's eyes to the personal commitment to furthering education which can come with educational administration.
- 4) An appreciation of the tributaries to historical and contemporary administrative theory.
- 5) To help the student get into the habit of quantifying human behavior such that it can be measured and evaluated clearly.
- 6) An understanding of theory and research from several social sciences which has relevance for the task of administration.
- 7) To be the kind of person with whom one can experiment and take risks in discovering one's values and abilities.
- 8) Pressing the student to come to grips with such questions as: what is the value of education? what has led him to want to become an educational administrator? and so on.
- 9) Inculcating in the student the value of objectivity.
- 10) Conveying the meaning of personal growth, compassion, and taking responsibility for oneself.

Instructions: Professionally Related Personal Strengths

On each of the 10 cards below is written a professionally related personal strength which might characterize professors concerned with educational administration such as yourself. You are asked to call to mind all of the strengths and capacities which come together over the period of a career to form your ideal of a professor. Now you are asked to arrange the cards below from those most central (top) to those most peripheral (bottom) to your ideal Gestalt of the professor of educational administration. Finally, replace the rubber band and put the deck in the return envelope.

Strengths:

- 1) A merging of one's deepest personal and professional identities.
- 2) The ability to conduct and publish sound, sophisticated empirical research in the relevant areas.
- 3) The ability to employ the conceptual tools devised by social and administrative scientists in analyzing concrete situations existing in the field.
- 4) An attitude of compassion, sorrow, and hope for those attempting to make a success of education.
- 5) The capacity to persevere in the face of frustration, anxiety, and disappointment with regard to one's own effectiveness in fostering positive changes in students.
- 6) The ability to help students develop all their powers of rationality and to bring these to bear on questions in administration.
- 7) The creation of and/or knowledge of theories appropriate to educational administration of the kind which can be verified in principle.
- 8) The ability to encounter people in an open, empathic, honest way.
- 9) A sense of shared fate with one's community and a desire to contribute to it.
- 10) The ability to exclude one's own intellectual biases and passions from his academic work.

APPENDIX B

**EDUCATIONAL OBJECTIVES, PROFESSORIAL CONTRIBUTIONS,
AND PERSONAL STRENGTHS IN THE ORDERS RANKED
BY PROFESSORS AND SUPERINTENDENTS**

Educational Objectives in the Order Ranked by Professors

To develop in students:

- 1) The ability to utilize administrative theory in diagnosing problems and formulating action strategies.
- 2) A grasp on one's personal strengths and weaknesses as a professional administrator.
- 3) The ability to think of and formulate administrative decisions as hypotheses to be tested and verified.
- 4) The sense of having a mission to contribute something of oneself to others, as individuals and in organizations.
- 5) The capacity to persevere in the face of frustration, anxiety and disappointment with respect to one's own effectiveness in bringing about positive change.
- 6) The ability to let social science theory guide one in selecting the facts and making sense out of what is happening in the organization.
- 7) An appreciation of and ability to respond to subtle emotions, intentions and desires flowing beneath the surface in one's interpersonal affairs.
- 8) A commitment to scientific thinking as the most dependable source of truth in the administrative setting.
- 9) Skill in performing critical analyses of empirical research in relevant areas.
- 10) A passion for helping others and oneself to live life to its fullest in spite of resistances encountered.

Educational Objectives in the Order Ranked by Superintendents

To develop in students:

- 1) The ability to utilize administrative theory in diagnosing problems and formulating strategies.
- 2) A grasp on one's personal strengths and weaknesses as a professional administrator.
- 3) The capacity to persevere in the face of frustration, anxiety and disappointment with respect to one's own effectiveness in bringing about positive change.
- 4) The ability to think of and formulate administrative decisions as hypotheses to be tested and verified.
- 5) The sense of having a mission to contribute something of oneself to others, as individuals and in organizations.
- 6) An appreciation of and ability to respond to subtle emotions, intentions and desires flowing beneath the surface in one's interpersonal affairs.
- 7) The ability to let social science theory guide one in selecting the facts and making sense out of what is happening in the organization.
- 8) A passion for helping others and oneself live life to its fullest in spite of resistances encountered.
- 9) A commitment to scientific thinking as the most dependable source of truth in the administrative setting.
- 10) Skill in performing critical analyses of empirical research in relevant areas.

Professorial Contributions in the Order Ranked by Professors

The professor offers:

- 1) Training in expressing oneself in a logical, cogent, well-organized manner.
- 2) Insight into the sources of internal conflict and personal pressure one is likely to experience as an educational administrator.
- 3) An understanding of theory and research from several social sciences which has relevance for the task of administration.
- 4) Conveying the meaning of personal growth, compassion, and taking responsibility for oneself.
- 5) To be the kind of person with whom one can experiment and take risks in discovering one's values and abilities.
- 6) Pressing the student to come to grips with such questions as: What is the value of education? What has led him to want to become an educational administrator? and so on.
- 7) Inculcating in the student the value of objectivity.
- 8) Opening the student's eyes to the personal commitment to furthering education which can come with educational administration.
- 9) An appreciation of the tributaries to historical and contemporary administrative theory.
- 10) To help the student get into the habit of quantifying human behavior such that it can be measured and evaluated clearly.

Professorial Contributions in the Order Ranked by Superintendents

The professor offers:

- 1) Training in expressing oneself in a logical, cogent, well-organized manner.
- 2) Insight into the sources of internal conflict and personal pressure one is likely to experience as an educational administrator.
- 3) Conveying the meaning of personal growth, compassion, and taking responsibility for oneself.
- 4) Inculcating in the student the value of objectivity.
- 5) Pressing the student to come to grips with such questions as: What is the value of education? What has led him to want to become an educational administrator? and so on.
- 6) An understanding of theory and research from several social sciences which has relevance for the task of administration.
- 7) Opening the student's eyes to the personal commitment to furthering education which can come with educational administration.
- 8) To be the kind of person with whom one can experiment and take risks in discovering one's values and abilities.
- 9) To help the student get into the habit of quantifying human behavior such that it can be measured and evaluated clearly.
- 10) An appreciation of the tributaries to historical and contemporary administrative theory.

Professionally Related Personal Strengths in the Order Ranked by
Professors

- 1) The ability to help students develop all their powers of rationality and to bring these to bear on questions in administration.
- 2) The ability to encounter people in an open, empathic, honest way.
- 3) The ability to employ the conceptual tools devised by social and administrative scientists in analyzing concrete situations existing in the field.
- 4) The creation of and/or knowledge of theories appropriate to educational administration of the kind which can be verified in principle.
- 5) The capacity to persevere in the face of frustration, anxiety, and disappointment with regard to one's own effectiveness in fostering positive changes in students.
- 6) A merging of one's deepest personal and professional identities.
- 7) The ability to exclude one's own intellectual biases and passions from one's academic work.
- 8) A sense of shared fate with one's community and a desire to contribute to it.
- 9) The ability to conduct and publish sound, sophisticated empirical research in relevant areas.
- 10) An attitude of compassion, sorrow, and hope for those attempting to make a success of education.

APPENDIX C

VALIDATING INSTRUMENTS

INSTRUCTIONS

STEP I

Given below is a description of an ideal educational administrator. This administrator might be considered ideal by persons who identify themselves with the philosophy of existentialism. You are asked to read this description carefully and then temporarily to adopt this characterization of an ideal administrator as your standard.

The Ideal Educational Administrator (Type E)

The Type E educational administrator is personally committed above all else to affirming life in every way he knows. He is keenly aware of the tragedy in human life of stunted growth, blocked potential, the alienation of man from man, and man from himself. His life and all life is too precious to go blithely unexamined or to be frittered away on superficial purposes not grounded in the core of being. He is committed to nurturing emergent life (including his own) and takes pleasure in seeing people and organizations bloom. He suffers willingly and learns from it in perfecting himself. He has faced the dread of meaninglessness and has chosen to become what he truly is in spite of uncertainty and social conventions which may dictate otherwise.

He pours himself into his work with concentration and discipline approving of what he does even when not successful. He listens to the soft voices of his intuition and hunches and trusts them. He has faith in himself and his judgment, but he has humility enough to surrender to masters of his calling and to trust in and learn from their genius. He employs his cleverness inwardly against his own double-mindedness and evasions of truth.

He meets others without guile or cloak or ulterior design. He seeks always a meeting--eye to eye, persons to person, being to being--accepting differences and identities alike; never losing sight of himself but free to appreciate and wander in the reality of the other.

He conceives of his organization as being like a garden--beset by pestilence, wilted by desiccation, stunted by starvation--but struggling for renewal, hopeful of vigor, yearning for completion. He values each variety in the garden, and seeks to know and arrange for what it needs to grow. But he does not hesitate to pluck out weeds.

STEP II

After you have read this description carefully, you are asked to discuss any ambiguities you might feel about the description with the investigator. Your objective in this discussion is to become sure that the ideal man you envision from the description is about the same as the ideal man he envisions from the description. When you are sure that the standard you are adopting is concurrent with the standard the investigator intends for you to adopt, proceed to STEP III.

STEP III

Given below is a list of 7 educational objectives for the preparation of educational administrators. Place a check mark (✓) beside those objectives which you judge to be consistent with the ideal educational administrator characterized in the description.

Educational Objectives

To develop in students:

- 1 ____ The capacity to act decisively in the presence of uncertainty and conflict
- 4 ____ An appreciation of and ability to respond to subtle emotions, intentions, and desires flowing beneath the surface in one's interpersonal affairs
- 3 ____ A grasp of his personal strengths and weaknesses as a professional administrator
- 3 ____ The capacity to persevere in the face of frustration, anxiety, and disappointment with respect to one's own effectiveness
- 4 ____ A passion for helping others and oneself live life to its fullest in spite of resistances encountered
- 2 ____ The ability to organize and take responsibility for the disposition of his time
- 3 ____ The sense of having a mission in life to contribute something of oneself to others as individuals and in organizations

STEP IV

Below is a list of 7 contributions individual professors ideally might make to students of educational administration toward developing the student's administrative skill. Place a check mark (✓) beside those contributions which you judge would help the student become a Type E educational administrator.

Contributions

The professor offers:

- 4 ___ Insight into the sources of internal conflict and personal pressure one is likely to experience as an educational administrator
- 2 ___ To serve as a model of a seasoned administrator possessed of savvy with whom the student can identify as a learning experience
- 4 ___ Listening to the student and expressing faith and confidence in his possibilities
- 4 ___ Pressing the student to come to grips with such questions as: what is the value of education? what has led him to want to become an educational administrator? and so on
- 3 ___ Conveying the meaning of personal growth, compassion, and taking responsibility for oneself
- 3 ___ To serve as a stable point of reference with whom the student can take risks and discover the consequences in a noncatastrophic way
- 3 ___ To open doors to facets of education the student did not know existed

STEP V

Assume that the ideal person described as Type E is a professor of educational administration rather than a practicing administrator. Listed below are 5 professionally related strengths which might characterize such a person. Place a check mark (✓) beside those strengths which you judge to be consistent with the Type E professor.

Strengths

- 3 ___ A merging of one's deepest personal and professional identities
- 4 ___ An attitude of compassion, sorrow, and hope for those attempting to make a success of education

- 3 ____ The capacity to persevere in the face of frustration, anxiety, and disappointment
- 4 ____ The ability to encounter other people in an open, empathic, honest way
- 3 ____ A sense of shared fate with one's community and a desire to contribute to it

STEP VI

Given below is a description of another type of ideal administrator. This administrator might be considered ideal by persons who identify themselves with the philosophy of logical positivism. You are asked to read this description carefully and then to discuss it with the investigator just as before to clear up any ambiguities. Then you are asked temporarily to adopt this characterization as your standard for judging the appositeness of three sets of educational objectives, professorial contributions, and personal strengths.

The Ideal Educational Administrator (Type P)

The Type P educational administrator is committed to achieving educational objectives in rational ways. He is suspicious of those who would attempt to justify their actions by invoking the opinions of "experts," by stating meaningless or untestable maxims and platitudes, and by relying upon custom. The only expertness esteemed by the Type P administrator is entailed in the scientific method itself. Educational decisions are too important to rely upon causistry or lazy logic. Man has the power to specify what he means in ways that every man can concretely observe. Man has the power to arrange events in such a way that their inherently orderly relationships can be tested and made manifest.

Because the educational administrator is charged with the responsibility of inducting coming generations into an increasingly demanding and complex world, the administrator is abnegating his moral responsibility if he settles for less than the highest standards of rationality and rigorous logic in designing educational systems. His primary task is thus to remove his own emotional biases, informal theories, and idiosyncratic methods and personal desires in favor of a way of knowing in which truth can be verified and agreed upon.

Science has labored long and hard to discover reliable ways of interpreting, predicting, and controlling events--including human behavior. The administrator is thus blessed with a cumulative legacy of knowledge and method which to ignore would be an affront to the social evolution of man.

Science is founded upon man's singular advantage: rationality. Science, calling upon the rationality of all men, demands consensus in the actions of

man subject only to the advance of science itself. Therefore, when the administrator, as the instrumentality of socially sanctioned values, employs the fruits of science in organizing the activities of those he is responsible for, he is on the soundest and safest grounds possible.

The administrator brings science to bear in every link in the administrative process. Science can test the efficacy of values, aid in decision making, provide strategies for the exercise of power, and test outcomes of administrative programs.

STEP VII

Given below is a list of 7 educational objectives for the preparation of educational administrators. Place a check mark (✓) beside those objectives which you judge to be consistent with the Type P ideal educational administrator characterized immediately above.

Educational Objectives

To develop in students:

- 4 ☐ The ability to utilize administrative theory in diagnosing problems and formulating action strategies
- 4 ☐ The ability to form cognitive maps of complex social processes through the application of social science theory
- 4 ☐ Skill in performing critical analyses of empirical research in relevant areas
- 4 ☐ A commitment to scientific method as the most dependable source of truth in the administrative setting
- 4 ☐ The capacity to stimulate others to think logically about organizational processes
- 4 ☐ The ability to think of and formulate administrative decisions as hypotheses to be tested and verified
- 4 ☐ The ability to let social science theory guide one in selecting the facts and making sense out of what is happening in the organization

STEP VIII

Please place a check mark (✓) beside the professorial contributions in the following list which you judge to be appropriate for furthering the administrative skills of the Type P administrator.

Professorial Contributions

The professor offers:

- 3 ___ Training in expressing oneself in a logical, cogent, and well-organized manner
- 3 ___ An appreciation of the tributaries to historical and contemporary administrative theory
- 2 ___ To serve as a model of a rational administrative strategist and problem-solver
- 4 ___ An understanding of theory and research from several social sciences which has relevance for the task of administration
- 4 ___ Inculcating in the student the value of objectivity
- 4 ___ To help the student get into the habit of quantifying human behavior such that it can be measured and evaluated clearly
- 1 ___ Getting the student interested in publishing his own research as a practicing administrator

STEP IX

Now assume that the ideal man described as Type P is a professor of educational administration rather than a practicing administrator. Listed below are 5 professionally related strengths which might characterize such a person. Place a check mark (✓) beside those strengths which you judge to be consistent with the Type P professor.

Strengths

- 3 ___ The ability to conduct and publish sound, sophisticated empirical research in relevant areas
- 4 ___ The ability to employ the conceptual tools devised by social and administrative scientists in analyzing concrete situations existing in the field
- 4 ___ The ability to help students develop all their powers of rationality and to bring these to bear on questions in administration
- 4 ___ The creation of and/or knowledge of theories appropriate to educational administration of the kind which can be verified in principle

- 4 ____ The ability to exclude one's own intellectual biases and passions from his academic work

Thank you for your help!