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A MODEL FOR INTEGRATING OCCUPATIONAL THERAPY PROCEDURES*

by

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A. Introduction

As with all professions offering service to people, occupational therapy must identify the critical factors relevant to the occupational therapy process so that the therapist may, in fact, provide the help he intends to offer. The particular focus of this review of literature is working procedures. It is an attempt to make clear the factors (learning, locomotion, and decision) involved in the structure and process of providing the help which occupational therapy "intends to offer."

In occupational therapy it is alleged that it is what the patient does for himself that provides a critical element of treatment (Wade, 1947; Florey, 1969). Occupational therapy attempts to lead a patient into those activities which give him the opportunity to exercise himself in the pursuit of function (Wade, 1947; AOTA, 1968). The give-and-take of personal interaction is necessary for the development of a working relationship with the patient (Willard and Spackman, 1947; 1954; 1963). The patient is supported by active assistance until he can maintain himself at some minimal level of self-function. In this sense it could be said that occupational therapy provides a service for threshold function. The patient is then assisted to construct his own basis of function in those tasks until he can sustain himself in some measure of adequate function. The support by active assistance and the help toward self-support oscillate throughout the therapist's contact with the patient as the therapist attempts to induce more stable self-application and more involved response with activities of increasing and/or varied difficulty. The patient is urged toward a maximum utilization of his potentialities in this process.

A self-functioning organism is the objective aim of the treatment process despite the fact that there may be permanent disability or dysfunction which will limit the result of effort (Reilly, 1969). Occupational therapy has found that permanent disability or dysfunction does no more than inhibit certain activities specific to the particular patient (Goodman, 1968–1969). Therefore, what the patient himself attempts to do is the first step toward doing (Goodman, 1968–1969; Moorhead, 1969).

These excerpts of a Master's Thesis (USC, August, 1969) which incorporated an analysis of the factors of the Montessori Method, is reprinted with permission of the author, an AMS certified Montessori teacher.

The opening section describes the situation in which the particular configuration of factors and element with which this paper is concerned were first found.

B. Historical Review

Montessori Method—Occupational Therapy Resemblance

The similarity of factors of the Montessori method and occupational therapy are described. The information revealed by separate examinations will be generalized to each method by identifying and comparing their mutual properties and systems.

Montessori Method

This section will be limited to a report of the initial Montessori experience (Montessori, 1964) and a critical, historical review of her system (Boyd, 1917).

The Initial Montessori Experience

In the first decade of this century Maria Montessori, an Italian physician, discovered in her practice while caring for the defective children of the Orthophrenic School in Rome, that carefully prepared, graded, and demonstrated sensorial and practical life tasks could be offered beneficially to her charges in a planned atmosphere of mutually protected and regarded personal rights. In this plan these children were given the option of freely choosing those tasks they wished to pursue; they were painstakingly led through an integration of movement and graded task performance; they were permitted the opportunity to practice the tasks undisturbed and undistracted, under unpressured guidance, for as long as they wished; and, they were propelled onward with the breath of personal interest. They responded with a focalization of energy which greatly enhanced their capability and prepared some of them for a leap out from institutional training and into successful participation in the activities of a regular school curriculum.

This experience launched Montessori (in 1907) into her career as an educator and developer of the Montessori method of general childhood education. The first United States edition of *The Montessori Method* appeared in 1912. Until her death in 1952 she continued to explicate, interpret, test, modify, and refine the procedures of this method.

The Three Factors and the Unifying Element

Though Montessori herself wrote extensively, her highly individualized style is not scientifically organized, nor is it structured in direct, clear language. William Boyd (1917) and many other early critics and/or exponents of the Montessori method (Harrison, 1914; Kilpatrick, 1914; T.L. Smith, 1912; Stevens, 1913; among others) sought to penetrate the Montessori style with a view toward incorporating the factors and organization of the method into general educational practice.

This study accepts Boyd as a classic author because besides performing the service of singling out, identifying, and tracing the historical roots of the basic factors in the Montessori system, he analyzed and assessed it in relation to the infant classes in several different settings and in terms of Montessori's theoretical construction.

Boyd's critical, historical review of the ideas and empirical background of Montessori's work identifies the components of the method: (1) the basic factors—individual effort, freedom, and independent ordering of learning; and (2) Montessori's unique element—the quality of the "loose relationships" among the three factors. Boyd's inquiry introduces a legacy of earlier contributions to the concepts of adaptation, learning, play, decision, sense data, and the social context of the adaptive processes.

Historical roots. Boyd traces to John Locke (1632–1704) the first explicit statements about all three factors. Locke conceived adaptation as a distinctive component of individual effort. Throughout the history of mankind the factor of individual effort is recognized as an essential characteristic leading to a modification of behavior. Locke explicitly brings out the fact that children, when they are free to choose their own activity and act of themselves in accordance with their own decision, achieve the distinct advantage of independently ordering themselves so that "learning anything they should be taught might be made as much a recreation to their play as their play is to their learning" (Locke in Boyd, p. 29). Within these comments Boyd finds the second and third factors: Freedom—a decision based on freedom of choice; and an independent ordering of learning—achieved through the exercise of free choices of activity.

With this identification of the three factors Boyd follows them in their unfolding through Condillac (1715–1780), who recognized the foundation of learning as the development of the senses through social exchange, and Pereira (1715–1780), who established "the central ideas of a physiological education based on sense-training" (p. 40). Rousseau (1712–1778) was a neighbor and friend of Pereira and, according to Boyd, directed attention more specifically to the processes of knowledge, and emphasized the development of "self-determined action" (p. 49). Itard's (1775–1838) work with the Savage of Aveyron dealt with elemental sense-experience. Then Boyd quotes Seguin (1812–1880), who stated, that the fundamental problem of education is as follows: "Given an individual or a people (it matters not which), to develop all that pertains to him or it in such a fashion that the functions acquire their maximum activity, speed, extent, and precision—cerebral functions, muscular functions, sensorial functions, organs of thought, of movement, and of sensation" (p. 95).

Boyd's analysis. It is specifically to Seguin's practice and to Montessori's own studies in experimental psychology that Boyd credits the direct sources of her method. Montessori acknowledged her debt to predecessors for the ideas from which she built her system but she never clearly delineates it.

Boyd, after identifying and tracing the roots of the three factors, credits Montessori, not with originality, but with pragmatic innovation in "an aggregation . . . loosely related in her own mind, and capable of being employed in detachment from each other without any serious loss of the virtue of any one of them" (p. 138). Thus he finds in the

quality of relationship that unites the three factors the significant Montessori contribution. Inseparably bound with this quality Montessori insists that "for the educator as for the biologist the one reality is *the living individual*" (in Boyd, p. 136).

Montessori as a pre-system thinker. Boyd discusses the configuration of factors in terms of the presentation Montessori made. The description of its functions and operations acknowledge a psychological orientation in her plan. To understand what she did, a grasp of her data in the context of her presentation is essential as her system is a forerunner of a general system approach to childhood education.

This correlates with general system theory which is interested in "the way . . . components are *organized* (interrelated)" and in the way "a whole . . . functions as a whole by virtue of the interdependence of its parts" (Rapoport, 1968, p. xvii).

Montessori's configuration of factors and the unifying element are summarized in a pre-system diagram (Figure 1) according to the foregoing descriptions.

For the purposes of the model the three factors will be called by the following terms:

1. learning (for independent ordering of input);
2. locomotion (for output of individual effort); and
3. decision (for freedom of choice leading to independent ordering).

The unifying quality of "loose relationship" is represented as follows:

1. by dots to designate the quality "loose;" and
2. by triangles and solid lines to signify the structural "relationship."

Hereafter all additional data will also appear in summarized diagrams. In all subsequent illustrations triangles and solid lines will indicate "structured relationship" and dots, dotted lines, broken lines, and arrows will indicate an open or "loose relationship."

Occupational Therapy—a Task, a Plan, and Freedom

Occupational therapy is more familiar with the description of activity in the factorial terms tendered by Wade.

> The *task* may be recreational, occupational or educational in nature and should be purposeful and seriously accepted by the patient who assumes responsibility for it and carries it through to completion with a minimal amount of assistance. The task of activity should fit into a *plan* involving co-operation with others if resocialization is desired. If the patient is unable to participate actively in the plan, its existence should be kept in his consciousness as a justification for the task. A maximum of *freedom* encouraging spontaneity, expression of initiative and originality should be the final essential for a planned activity. This freedom may, in certain stages of illness, require guidance and direction but it never should be completely absent. (1947, p. 90.)

The technical system of these procedures, which is offered as a guide to occupational therapy students, contains the essentials of the factors and unifying element in a sociological context. Wade treats the task (learning factor) as a social phenomenon and she talks of the plan (locomotion factor) as method of sustaining transactions between

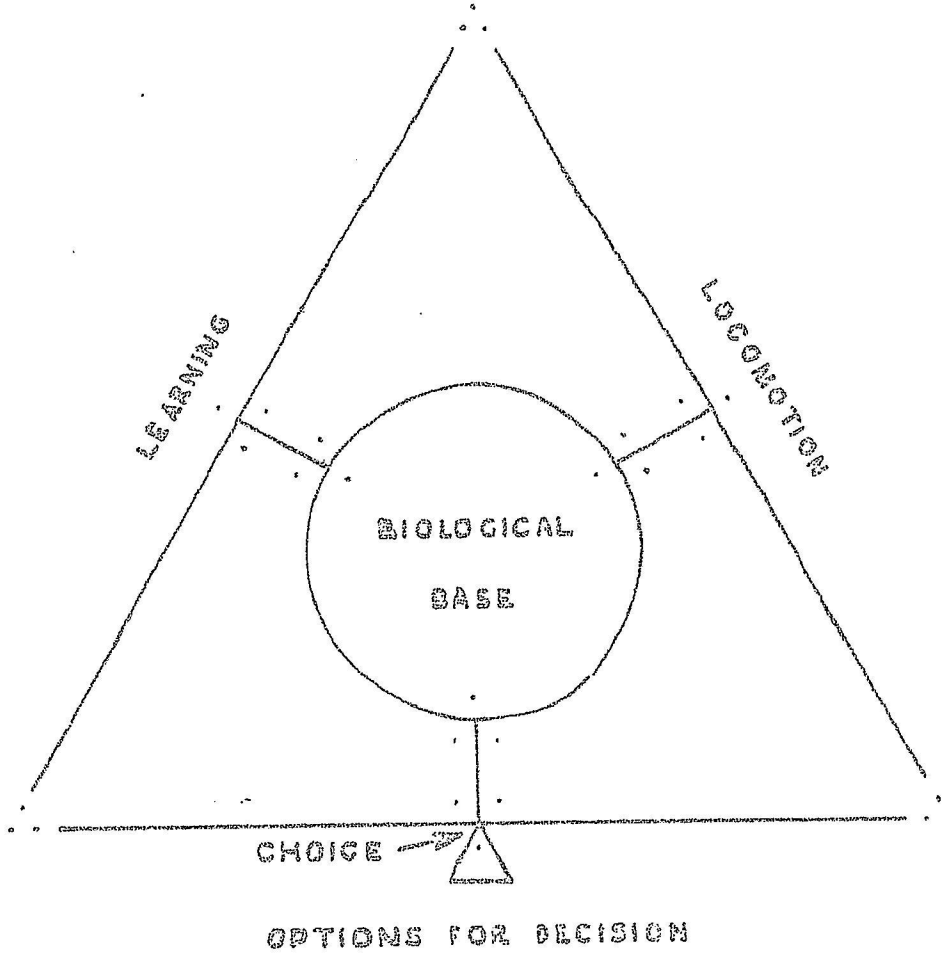


FIGURE 1. A CONFIGURATION REPRESENTING MONTESSORI SYSTEM.

people. A task may be selected from a variety of possibilities. The activity is to be accepted by the patient as his responsibility. The task becomes his occupation when these conditions are met. Freedom (decision factor) is related to personal creative action in the environment and is the third essential of planned activity.

A Task

A task as the learning and change agent is carefully linked in this statement of procedure to the self-function of the patient. Malinowski also stipulates that change is primarily "in accordance with an increasingly definite function" (1930, p. 624). Individual effort, it may be noted, is the keystone of organization toward possible change.

A Plan

The task is also integrally related to a plan of socialization. A plan is presented as a guarantee of the patient's awareness of a social purpose of the task even though the task itself may not be specifically designed as a socializing agent. An occupational role is learned by means of task performance and with it appropriate occupational behavior (Reilly, 1969; Moorhead, 1969). The patient's participation, i.e., locomotion, in the social plan of a treatment activity, preferably active but at least knowledgeably passive, is stressed as a condition of environmental function.

Freedom

Freedom, in the Wade statement, is intimated as biologically inherent and individually guided. Murphy in a similar context speaks of the creative thrust of a personal kind of understanding in breaking through the mold of an established pattern. He goes on to say that "nothing ever really becomes finally crystallized, . . . There is lawfulness in this process, and it is the process of orderly selection from among lawful potentialities that completes the conception of man's discovery of his own potentialities" (1958, p. 19).

Wade goes further and insists that freedom be a component of planned activity. There is a subtle implication here that has by-and-large escaped the attention of exponents of social, and particularly political, action. Chardin marks the point of equivocation acutely: "The social aspirations of man cannot attain full originality and full value, except in a society which respects man's personal integrity" (1965, p. 25).

The qualification with the inclusion of freedom as a component of planned activity requires mutuality and reciprocity in guarding the personal interests of each participant in the cultural milieu. Each participant is a responsible party in occupational therapy practice (Florey, 1969; Line, 1969) in guaranteeing mutual and reciprocal regard for every other person's personal integrity.

According to Murphy (1958) the central problem in such a situation is the reconciliation of the interrelationships.

The similarity of occupational therapy and the Montessori method is found in th congruence of their working procedures. The situation of the initial Montesso experience (previously reported on p. 2) is typical of those found in occupation therapy settings. Each is a plan of a complexly interrelated system dealing with a extensive repertoire of activity. Both desire independence on the part of the subject ar his freedom to act of himself at his level of function.

The correspondence between the working procedures of the Montessori method ar occupational therapy will be discussed in three sets with each factor describe constrained, and modified in its own set by the other two factors (Homans, 1950). A action as an operational organization within each set may be expressed properly in relation between an actor as a unitary or unified system and a situation (Parsons, 1961 Allport notes as a criteria of an open system that "there is extensive transaction commerce with the environment" (1960, p. 43).

Learning—Perceptual Organization

An independent ordering of learning changes entails a decision from among choic and the individual effort of locomotion needed to support the choice. An independe ordering of changes also demands an alertness to the events that occur and to a appropriate use of things that are the tools of learning.

Bruner situates the idea of tools and tool-using in a broad perspective with regard learning (1966; White, 1960). He classifies one group of tools in a "perceptual field (Bruner, 1966, p. 29) with the actor as the integrating agent. The perceptual too require a choice of sensory input which is then organized in the perceptual process.

Tools of locomotion are referred to in a manipulative and active system of a soci character. This is an affective response to the perceptual organization of input and itself organized in the social process.

Tools of decision, which include perceptual choice and social commitment, a referred to in a symbolic or technical system. This is a summation of perceptual choi and social commitment which is organized in the adaptation process.

Piaget places the input of tool data in a context of assimilation into the percepti organization. Then an accommodation of the input through an acceptance modifications within the perceptual organization occurs. Adaptation is the summati of the process of tool-using in an event (a real result) (Flavell, 1963).

The process of learning permits a sensorial and cognitive re-ordering of chang through perceptual organization. These changes then feed back to restructure t unitary system. For this reason the actor must be presented the opportunity to invol himself in the process so that his own principles of integration are taken into accou

Wade (1947) recognizes the broad connotations of task orientations in a compr hension of interrelational specifications. Florey notes that "Occupational Therapy h always placed high value upon and has been dependent upon the patient's participati

in his treatment" (1969, p. 51). Montessori (1964) provides extensively programmed instructions for tasks; and she bases the organization of her infant class environment on the inclusion of a broad range of sensorial and practical life tasks. The actor can approach autonomy when he chooses for himself and constructs his own pattern of independent ordering according to his choice (Allport, 1960).

Locomotion—Social Organization

Individual effort that is expended in personal movements within and among the areas of perceptual, social, and technical organizations of learning, locomotion, and decision supports self-esteem. It is both perceived and felt (Parsons, 1961). Parsons notes that at the base of all social organization there is this human response because of the meaning the situation holds for an actor. Locomotions are social action since they are made with reference to others (ibid.). Thus self-esteem is not only a function of individual effort but is also a part of a social context. Locomotion becomes a mutuality of concern for affective interchanges among cultural events involving social and personal action (Murphy, 1958). The environment must be protective of the field of operation for these exchanges (ibid.). Each actor in an environment is entitled to the opportunity for individual effort in an atmosphere of mutuality and reciprocity among members of a group. Murphy speaks of this as an opportunity for "breaking through the mold" (p. 18) of cultural conformism.

Wade and Montessori both require responsible individual effort among actors. Florey reports that the literature of intrinsic motivation suggests as one of the critical variables of task mastery that "the environment must make the individual responsible for the outcome of the task" (1969, p. 60). Opportunities for individual effort should be planned, permitted, and encouraged in order that each individual may acquire self-esteem and develop his own integrity.

Decision—Technical Organization

The decisions that are made in a planned environment must be within the realm of possibility for individual effort (Montessori, 1964; Wade, 1947). Both Wade and Montessori insist on freedom as the medium in which spontaneity, initiative, and originality may grow. Murphy places decision in the continuum of the creative process: There is first a sensitization and affection for the activity—coping; then over a period of time there is an accumulation of experiences—choices and commitments; next, an incubation process of continued involvement in the activity repeats and enriches the delight of the actor in his enlarging storehouse of experiences until a sudden decision point of inspiration is reached—adaptation; and, in the final commitment period, there is a critical shaping of the creation which results in internal and external satisfaction—competence (1958). The decision points are thus reached through a process of technical action.

Decisions may be made in the perceptual and social areas of personal organization for choice and commitment as well as in the technical adaptive area of the three systems at issue—learning, locomotion, and technical decision. Guiding a person in the selection o a workable choice so that his decision will actually permit his self-ordering toward commitment goal assures him (in the systems of the Montessori method an occupational therapy) of an opportunity for affective integral function.

Goal-setting as a commitment to action is the agreed-upon objective of all actio (Allport, 1960; Parsons, 1961). Westphal indicates that consciousness of behavior give man the capability of "guiding and planning actions for his own self-realization" (1967 p. 8). The capability for effective learning choice is revealed very quickly when decision is put to the test of the individual effort of a locomotion commitment. Th organizations of the three factors will be specified in the next section.

Reconciliation Definition

In this section a reconciliation state is defined for the data of the Montessor method-occupational therapy resemblance. The adherence of occupational therapy an the Montessori method to an optimal conditioning of relationships among the system of factors—learning, locomotion, and decision—is revealed in their literature as a highly complex organization. The diagrams on the following pages (figures 2a, 2b, 2c, and 2d have been designed by the author as summaries of the structure and function of each o these systems of factors. The ground rules of relationship as established in th Montessori method and occupational therapy have been pictorially represented.

As noted on p. 4 and following the same procedure summary diagrams ar constructed from the material of this historical review. The ground rule for the learnin choice is Figure 2a; the ground rule for the locomotion commitment is Figure 2b; th ground rule incorporating Figures 2a and 2b into the organization for technical decisio toward adaptation is Figure 2c; and the ground rule incorporating Figures 2a, 2b, and 2 into the organization for adaptive competence is Figure 2d.

The ground rules refer to the way in which the combinations of the thre factors—learning, locomotion, and decision—are used in the three sets of relationships (1) perceptual organization; (2) social organization; and (3) technical organization. Th interrelationships have been explored and certain fundamental properties of th environmental milieu that can lead to optimal functioning of a unitary system (th actor-patient-pupil) are seen to be required. Internally each factor of the system has it own set of interacting operations that makes use of the data of the other factoria components to modify its own pattern for external adaptation. The sets are to b self-integrated for an optimal unitary system of external competent performance. A definition of ground rules by means of their internal and external organization follows.

Internal Organization

Learning ground rule (Figure 2a). In the learning ground rule the learning data of a event enter the system by means of sensations (primary input) and cognitior (secondary input). The sensations and subsequent cognitions are perceptually organize to provide the summation of the data for a decision of choice (see Learning—Perceptua Organization, p. 7).

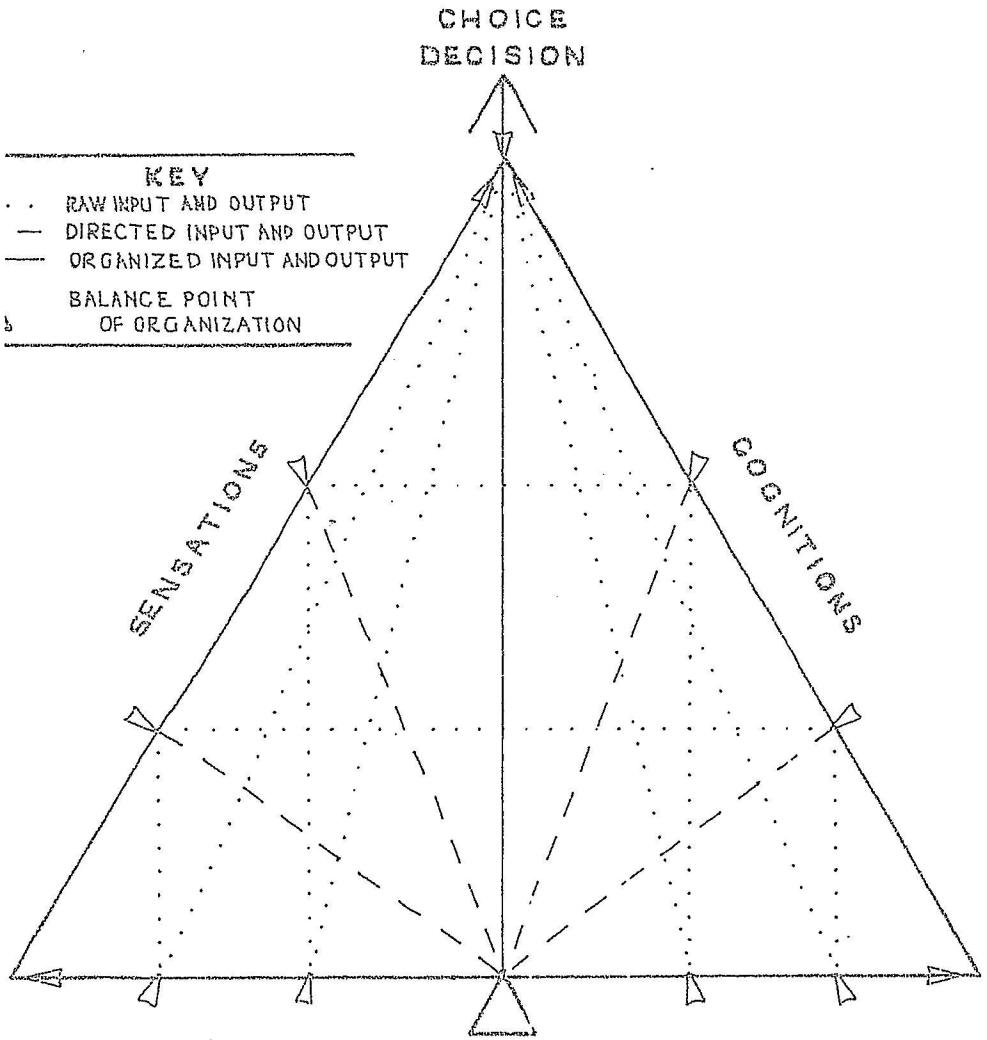


FIGURE 2a. A SUMMARY DIAGRAM OF THE GROUND RULE OR THE LEARNING CHOICE.

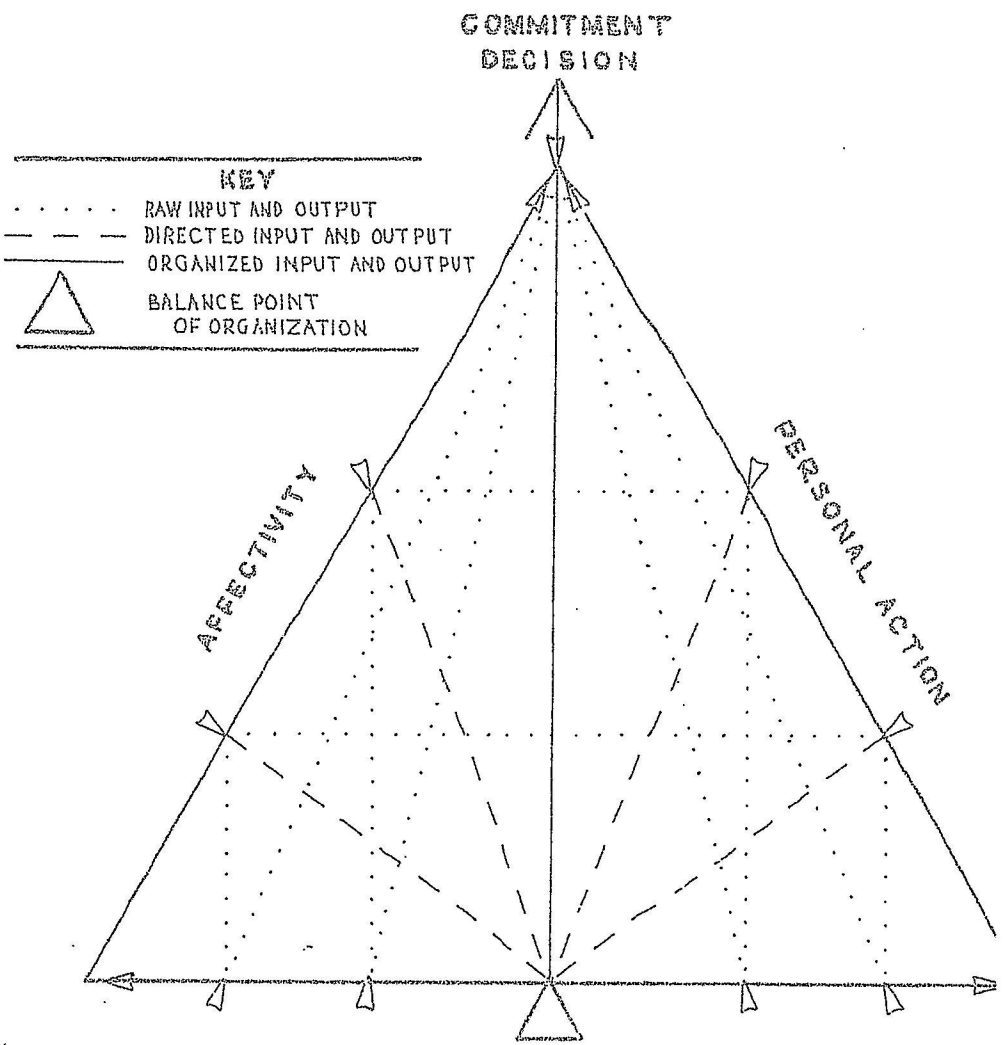
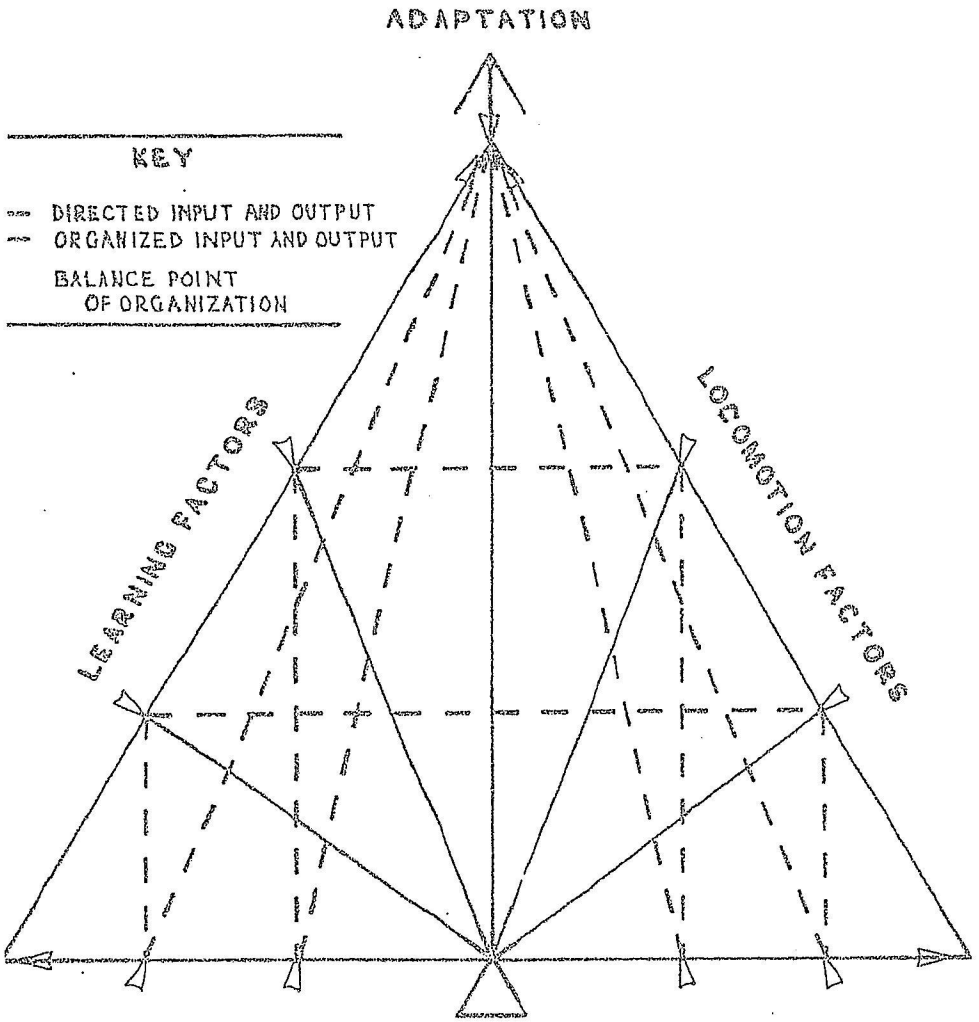
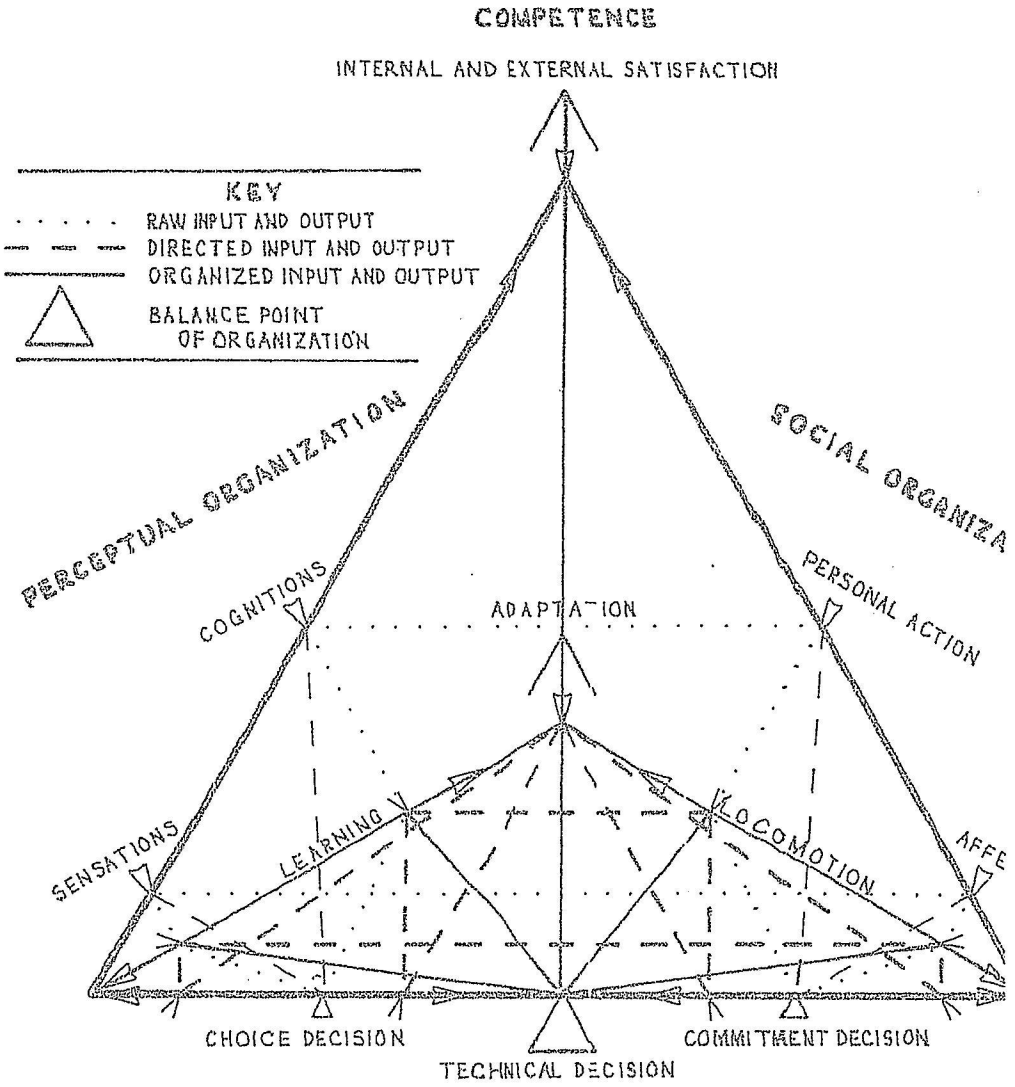


FIGURE 2b. A SUMMARY DIAGRAM OF THE GROUND RULE FOR THE LOCOMOTION COMMITMENT



TECHNICAL ORGANIZATION FOR ADAPTATION

FIGURE 2c. A SUMMARY DIAGRAM OF THE GROUND RULE & THE TECHNICAL DECISION TOWARD ADAPTATION.



TECHNICAL ORGANIZATION FOR COMPETENCE

FIGURE 2d. A SUMMARY DIAGRAM INTEGRATING THE GROUND RULES FOR ADAPTIVE COMPETENCE.

Locomotion ground rule (Figure 2b). In the locomotion ground rule the locomotion lata of an event enter the system by means of an effective and personal action response o sensations (primary input) and effective and personal action response to cognitions secondary input). The affective feelings and subsequent personal actions are socially organized to provide the summation of the data for a decision of commitment to action see p. 7 and Locomotion—Social Organization, p. 8).

External Organization

Decision ground rule (Figure 2c). In the decision ground rule the learning factors—sensations, cognitions, and choice decisions—and the locomotion factors—affective responses, personal actions, and commitment decisions—are technically organized to provide the summation of the data for systemic adaptation (see p. 7 and Decision—Technical Organization, p. 8).

Integration of the ground rules (Figure 2d). An integration of the ground rules by means of an incorporation of the perceptual, social, and technical organizations is portrayed by Murphy (1958). The perceptual organization and the social organization summate to an adaptation capability by means of the technical decision process. The utilization of adaptation capability summates to the technical organization for the internal and external satisfaction of competence.

Because of the necessary "other" in systemic organization an external plan of operational organization is needed to assure the unitary system of awareness of its own options for function. Therefore, a plan must include provisions for self-responsibility in selecting and carrying out a task as well as self-responsibility for maintaining the operational opportunities in a system of communication with the other actors in the environmental milieu.

Implications

Satisfaction of internal and external organizational needs assures the unitary system of a competent operational organization (Murphy, 1958). White proposes that an actor's competence includes dealings with "manipulations, locomotion, language, the building of cognitive maps and skilled actions, and the growth of effective behavior in relation to other people" (1960, p. 137).

But Maslow is not content with the achievement of competence. It "leaves out something and therefore is a partial blindness" (1962, p. 173). He wants a development of the next choice—for the actor "to perceive the object in its own nature with its own objective, intrinsic characteristics rather than abstracting it down to 'what is useful,' 'what is threatening,' etc." (ibid.). Maslow would project a sense of being for the unitary system.

Thus a hierarchical organization of internal and external systemic function achieved through interdependent activity focalizes the energy of the entire system (White, 1967).

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