AN ABSTRACT OF THE THESIS OF

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Title: A Theoretical Design of Rational Autonomy: Integrating Elementary and Early Childhood Teacher Education Through a Contemporary Derivation From Maria Montessori's Social Cognitive Field Paradigm

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The individual through earliest recorded history reveals contradictory views of the human life-span. "Am I a free and unique individual, able to make choices and decide my own destiny?, or, "Am I only a victim of circumstance, a speck of dust in the universe's whirlwind of fate?"

Each view is recognized in education and psychology, but the latter outlook is often prominent in schools which discourage decision making. Throughout the life-span, however, the individual must make choices. Allowing the young student to progress on the road to autonomy, requires a new educational outlook. How might teacher education focus on this new perspective? Rational Autonomy (RA) is an original conceptualization of the psychological foundations for a learning-teaching theory of practice; one which promotes autonomy and reasonable decision making in children and adults. Its purpose is to provide a framework for the development of an autonomous educator who may conceptualize the interaction between the dichotomies of autonomy and rationality. These values are imbedded within the leitmotif of liberty and freedom; individuality and socialization; creativity and cooperation -- all natural tensions within a democracy and a

democratic classroom.

Cognitive psychologies today advance a view reflecting an autonomous individual who is interactive, purposeful and capable of conscious decision making. Montessori (1870-1952) recognized these traits as inherent in most children. Viewing autonomy and reason as the individual's means to full cognitive and personality development, she proposed an expansive educational psychology which would anticipate this view in cognitive psychology. Until now, few psychological definitions were available to define Montessori's theories. Thus, this thesis defines existent psychology as providing a "Social Cognitive Field" frame in which to define her theories and derive a new concept.

The concept of Rational Autonomy incorporates psychological principles from human development, social, personality and learning theories. Constructs are demonstrated by interaction models of the child, family and educator. These are exemplified in a school program through a site and case study. Elementary and early childhood teacher education extends the Design into a life-span theory. The mentor-teacher relationship, curricular implications, educator group facilitation and university aims are included in the RA Design.

A THEORETICAL DESIGN OF RATIONAL AUTONOMY: INTEGRATING ELEMENTARY AND EARLY CHILDHOOD TEACHER EDUCATION THROUGH A CONTEMPORARY DERIVATION FROM MARIA MONTESSORI'S SOCIAL COGNITIVE FIELD PARADIGM

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TABLE OF CONTENTS

LIST OF FIGURES

A THEORETICAL DESIGN OF RATIONAL AUTONOMY: INTEGRATING ELEMENTARY AND EARLY CHILDHOOD TEACHER EDUCATION THROUGH A CONTEMPORARY DERIVATION FROM MARIA MONTESSORI'S SOCIAL COGNITIVE FIELD PARADIGM

CHAPTER I

INTRODUCTION

Background

> Autonomous man is a device used to explain what we cannot explain in any other way. He has been constructed from our ignorance, and as our understanding increases, the very stuff of which he is composed vanishes (Skinner, 1971, p. 191).

Skinner maintains that humans are not free, but controlled by a powerful environment which they have created. Individuals only have an illusion of freedom.

Rogers (1983) retorts with the credence that bolsters the humanistic phenomenological psychologies:

> ...The freedom that I am talking about is an inner thing, something that exists in the living person quite aside from any of the outward choices of alternatives that we think of constituting freedom...something that exists within the individual, something phenomenological rather than external...a freedom she courageously uses to live her potentialities (Rogers, 1983, p.276).

For a number of years there has been a conflict in psychology between those who

adhere to a behaviorist view of humans and those who adhere to a phenomenological view (Spodek, 1973). The dispute is a very basic one in contemporary psychology. It is a conflict between humanistically oriented psychologists, who are concerned with humanity, ideals, values and emotions and the experimentally orientated psychologists, who are concerned with developing a relatively rigorous science of behavior (Spodek, 1973).

Central to this psychological debate is the notion that to accept either Skinner's behaviorism or Roger's "Self-Theory" as one's major psychological orientation excludes acceptance of the other (Avila and Purkey, 1972). For almost three decades now, the American public school system has accepted behaviorism as the major psychological approach, unable to reconcile the major differences in these views of humankind (Eisner, 1985, p.18). Behavioral psychology, incited and maintained by the growth of the testing movement and by the demands for accountability from the taxpayer, has continued to flourish as the central psychology promoted in education (Eisner, 1985). There has been a proliferation of tests to insure behavioral objectives: "...schemes, performance contracting, graduation tests, tests for promotion, and tests to evaluate teachers,..." (Madaus, 1989). Even tests to enter Kindergarten or to "graduate" from Kindergarten infuse the schools (Putka, 1988). The testing movement continues to grow with the societal interest and emphasis on accountability. Opportunities are lacking for the individual to be viewed as "valuable, responsible, and capable of influencing his own destiny" (Avila and Purkey, 1972). Learning and teaching as Rogers views it, should not constantly be identified with tests and conclusions, but considered as a continuing process. "...for no one learns significantly from conclusions" (Rogers, 1961).

There is promise that the testing movement of the future, although it will probably not diminish, could take a new direction. This direction would be one which aids the

student in self-governance and permits the individual to be his or her own evaluator: one degree in becoming autonomous. Madaus (1989) points to the use of technology in individual instruction and evaluation where "students actually learn from their mistakes". Student's autonomy could be increased by special materials, but more so if educators accept the fact that "behaviorism is not a theory, but a process and method" (Avila and Purkey, 1972, p.125). The principles and techniques of behaviorism may be used to accomplish the theories of humanism in many forms. As studies by Andrews and Klarin (1971) demonstrate, behavioristic processes can be employed to build autonomy in the individual.

One may develop a theoretical position from behaviorism, and yet hold onto a view of humans as autonomous purposeful cognitive individuals; representing the humanistic viewpoint. The behaviorist develops the process or the "how" aspects of a given problem. For example, Block (1971) with mastery learning techniques, has been able to produce situations in which individuals have an excellent chance for success. By providing successful experiences for the learners through situations full of positive contingencies of reinforcement, the individuals may experience success. Thus, they will begin to change their feelings about self and others and their perceptions of the world (Block, 1971). It is in this perception of the world, and of themselves and others, that the humanists and the cognitive field psychologists have the most interest (Bigge, 1982). Thus for the educator, behaviorism provides a technique to enhance humanism.

Even Rogers recognized that behavior when examined scientifically is best understood by prior causation (Rogers, 1961). However, Rogers differed with Skinner's views. Rogers recognized that behavioral sciences may be used in ways to free and not control, and that to deny the reality of responsible personal choice is to deny the subjective

life of individuals (Rogers, 1961). According to Rogers, "...personal choice is the most essential element in being a person" (Rogers, 1961, p.400).

Avila and Purkey (1972) suggest a rapprochement between the two psychological perspectives. In the last decade, the humanistic theories were enacted in some schools, but not in coordination with behaviorism through "open education". Unfortunately however, the "open school movement", which is a reflection of the humanistic movement,

> ...learned too late that to provide students with freedom and self-directed learning, it is necessary for the teacher to develop a highly structured learning environment (Slavin, 1986, p.288).

The humanist view which had placed the responsibility for children to choose alternatives within the classroom was abolished. However, could there be consideration for viewing both behaviorism and humanism in a classroom situation in which they could serve each other? The debate continued and no rapprochement appeared in educational psychology. More than a dispute in educational psychology, this either/or state of affairs is destructive and deluding for educators (Avila and Purkey, 1972). To take an either/or position, precipitates a continuing neglect of one of the most important characteristics basic to the nature of individual, i.e., that trait is the ability of the individual to be actional (Bigge, 1982), and to learn to make appropriate decisions within the group (Montessori, 1949). Having no opportunity for decision making limits the full development of the individual's personality; while to promote decision making is to help develop traits of courage, responsibility and creativity (May, 1981, Montessori, 1949, Rogers, 1971). These traits are recognized in humanistic and existential psychology; and evolve from self-development, decision making and autonomy (Kobasa and Maddi, 1977). New evidence in cognitive psychology favors the humanist-existential approaches toward

learning. Humanistic existential perspectives promote opportunities for the young child to make choices that may allow for success and failure. Consequently, concepts concerning the interaction between the environmental-behavioristic view and the individual, humanistic-personal view, are becoming mediated by the cognitive psychologies (Kobasa and Maddi, 1977).

> The emphasis now is shifting to theories of personality that highlight cognitive processes, consciousness, planfulness, decision making, and the like. Existential psychology is such a theory par excellence. In addition its emphasis upon the dialectic between possibility and facticity is squarely in the interactionist camp. It can be expected that existential psychology will have a leading role in the coming personalistic renaissance, with other less cognitive and interactionist theories, such as psychoanalysis, declining ...(Kobasa and Maddi, 1977, p.272).

Montessori's psychology is one of the forerunners for this particular combination of theories. The utilization of these oppositional psychological perspectives in her theory building perplexed her critics and followers (Boyd, 1914, Standing, 1962). However, Montessori saw no contradiction in facilitating the individual's personal freedom and strengthening self-image, while still providing rules and structure within the environment. Through self-correcting materials, and an environment that promoted consideration for others; Montessori realized her psychological and educational goals (Montessori, 1912).

To trust in the individual to make mistakes and learn from these mistakes without public defamation, is an educational credo which humanists have professed for centuries. Maria Montessori, when asked to define her psychology of education, replied:

> Our concept of education may be figuratively described by saying that the educator stands behind the child and allows him to go forward as far as he can, where as the other method is to stand in front of the child and prevent him from going farther than the limits imposed on him by the teacher (Montessori, 1961, p.65).

Purpose

The purpose of the thesis is to provide an examination of the psychological characteristic of autonomy and to propose a contemporary theory of autonomy acquisition, as linked to learning; that is in harmony with normative values, and social cooperation. It will also analyze a theoretical conception of a social cognitive field paradigm, as conceived in Maria Montessori's educational psychology.

The Design for Rational Rational Autonomy is a theory of practice:

- to be promoted and comprehended by the adult educator as a positive adaptation to his or her professional environment, and as actuating her or his personality for engenderment.
- to be promoted for students in their environment as an enhancement of their unique personality and as an advocacy for cognitive, social and physical development.
- as exemplified in diverse human settings, family, private preschool, public elementary school, college/university teacher education.

Whenever theories of teaching are examined, they relate to two distinct levels. "One level relates to philosophy, goals, and techniques that the method subscribes to; and the other relates to the actual classroom and what is prescribed by theory" (Berger, 1968, p.8). This thesis will examine the first level through the personality characteristic of autonomy, as it could be exemplified through the cognitive field psychologies (Bigge, 1982). The second level of "actual classroom" practice and "what is prescribed by theory", will be defined through the social cognitive perspective of personality.

The purpose of this new Design is to encourage within the perspectives of teacher

educators and novice teachers, a change in attitude toward the emerging paradigms in education. The cognitive field paradigm will encourage a move toward a new framework for education; one that emphasizes both altruism and autonomy, responsibility and creativity. The social cognitive perspective will be utilized with it to provide a theory of practice in the learning teaching model. Finally, the central responsibility for educators lies in creating their own creative "Designs" for autonomous and reasonable thinking and acting. In developing one's unique model of Rational Autonomy, it will hopefully stimulate creativity in others. Therefore, the model has an evolutionary expectation.

Maria Montessori

The focus of this thesis is upon developing a theory of practice for education of Early Childhood and Elementary Teachers. The theory of autonomy in the classroom as derived from Montessori (1912, 1914, 1916, 1949), moves the focus from the past into the present interpretation of that theory through the Design. Both child education and teacher education are considered in the models. An underlying purpose of the Design is to facilitate the educator's personal cognitive and personality development. By forwarding specific personal characteristics to develop within teachers leading to autonomy linked to normative values, it is hoped that they may positively foster the same in others. The implications of the Design are to ultimately influence the education of the child and the adult across the life-span.

To view the education of the individual as "a whole", becomes the most important part of the new paradigm included in the Design. Many psychologists have considered this psychological perspective, but it is not a common part of all learning theories. The "Gestalt" psychology promotes a perspective of the whole person (Bigge, 1982). The

"Gestalt" is a German noun with no English equivalent; the closest word is "patterns". Gestalt psychology examines the "patterns" or "perspectives" within an individual's viewpoint. These perspectives create a "field" or unique viewpoint for each individual. The autonomy of each person is recognized as a foundation for the ability of each individual to create his or her unique perspective of her or his world. This should be taken into account by anyone educating another. Tolerance, acceptance and understanding of another's viewpoint is thus rudimentary to executing the Gestalt perspective within the classroom. Other names such as "organismic", "phenomenological", and "cognitive field psychology" have become associated with the Gestalt perspective (Bigge, 1982). The existential psychologists also incorporate similar language and views (Hall and Lindsey, 1978).

Montessori's views of education coincide with these perspectives:

> Life must not be cut in two, moving the limbs by sport, and then the mind by reading. Life must be one whole, especially at an early age, when the child is constructing himself (Montessori, 1959, p. 60).

Montessori's psychology coincides with "field" psychology and is relevant to the emergent cognitive field theory in education. The purpose of the thesis then, is to examine her theories as a basis for a theory of practice in light of the emergent cognitive field theories (Bigge, 1982).

Many studies have been conducted on Montessori's theories and her "method", but few have attempted to relate these to the American public school system with implications for teacher education. Montessori's theories (1912) have been interpreted in public education as a model for Head Start programs (Roopnarine and Johnson, 1988) and as a model for remedial education for older children (Gitter, 1972). Evidences are seen for

Montessori's ideas in a few public Kindergartens and elementary curriculum materials (Lay-Dopyera, and Dopyera, 1982). However, any tribute to the significance of Montessori's cognitive psychology and its relationship to the development of personal autonomy harmonized with classroom cooperation is seldom comprehended. A partial intent of this thesis is to point out Montessori's contributions to current cognitive and human development theories. The origins of her work have established an educational paradigm from which others have extended her field research.

Montessori's profound contributions to early cognitive psychology and the education of the "whole" personality, have been largely ignored; perhaps because there was no contemporary learning theory which could delineate this framework.

The purpose of the thesis and Design is to bridge the poles from theory to practice. It is the intent to demonstrate that the implementation of her theories within the classroom are to be found partially within the social cognitive perspective (Bandura, 1977) and most completely within the cognitive field perspective. Thus, with Bandura's work (1977) and Bigge's (1982) emergent theory of the cognitive field perspective, Montessori's (1912, 1949) psychology might now be better understood for teacher education as a "social cognitive field" paradigm.

Need for Theory of Autonomy

Every decade, American education is assailed with reform and rhetoric from national commissions, books and the press. Federal and state legislatures propose new laws and guidelines in response to the changing political economy and citizenry interest. With the emphasis on reform, it would seem that educational improvements would change the schools. However, Quattrociaocchi (1984) reports that:

> ...the structure of education has not changed... America's education has been organized around a production or an industrial model for the past fifty years;....like factory workers, students have little influence over their own learning. This 'mass education' method has never worked well for the majority of our students and will work even less well in an age of increasingly divergent students (Quattrociaocchi, 1984, p. 16).

Why haven't students had more opportunity to influence their own education? The importance of becoming a decision making individual cannot be denied as throughout the life-span, the individual must make choices. The individual must be "self-governing", or autonomous. This implies choosing, and subsequently acting or not acting upon the choice. What allows the individual to progress on the road of increasing self-governance? Educators often rely upon the principle that an individual's publicly recognized success will promote pleasure and reward. The educator hopes to continue the individual's motivation for success by creating pleasure and reward, and subsequently less pleasure and reward for those who fail to succeed.

Behavior as controlled by outside contingencies is one viewpoint that is commonly used, but the ultimate goal of most educators is that future acts will be controlled by inner direction of the individual. The educator and the parent realize that they will not be present to administer the rewards and punishments indefinitely. Higher education, employers, friends and family, become first recipients of the young adult's testing of the reward system (May, 1976). When these persons and institutions fail to continue to meeting his expectations of rewarding contingencies, the loss is encountered by both individual and society. The individual may develop poor attitudes toward the educational system or the employer, and toward the democracy which provides the "freedom to learn" (Bettleheim, 1969). Those who "adjust" to adult life, often do so with great personal effort (May,

1981).

May recognizes that a period of "extended adolescence" is becoming a reoccurring theme in America; sometimes accompanied by drugs, delinquency and feelings of alienation (May, 1976). It is very difficult for a young person to remain independent from adolescent group pressures. But a child cannot conform to a mass education which provides little opportunity for choice, and then suddenly demonstrate independence and moral courage a few years later (Dearden, 1972). The habituation of the society in acculturating its young and later the adults, to a reward and punishment system, may be removing one's decision making ability. In this respect, Skinner's (1971) predictions could be realized. However, when the young child is confronted with decisions that do not fit into the normal patterns of living, does one even recognize them as decisions? Is there a way that educators could be assisting the young in decision making without resorting to behavioristic or authoritarian methods?

To instigate autonomy development in the elementary and early childhood years, therefore, becomes a central problem. Teacher education emphasizes "classroom management techniques" rather than "classroom democratic living". The emphasis upon the teacher and the school as the sole authority does not allow the child to realize the consequences of one's own decision making. As many psychologists have noted, this might be accomplished within the social structure (Bandura, 1973, Dewey, 1916, Dreikurs, 1968).

Elementary teachers may have attempted group decision making, but there are probably few teacher programs which attempt to educate teachers in the importance of encouraging individual decision making. The "open classrooms" and informal teaching model of the progressive education movement were based upon the popularized views of

the psychology of John Dewey (1922), Jean Piaget (1954), Carl Rogers (1969) and others. This model remains a part of the humanistic psychology which teachers often acquire at the university. Both developmental theories and humanistic psychology are appreciated and understood by educators. However, neither has many accompanying models of instructional theory. Teachers are currently familiar with many techniques which reflect the behaviorist traditions. However, there remains a need for a conceptual model of autonomy which will relate to contemporary learning theory providing a basis for a theory of instruction which promote independent thinking in children and adults.

How does a model of rational autonomy relate to present educational psychology? The emphasis upon the new cognitive psychologies, (Baars, 1986; Bruner, 1983; Gardner, 1988), and the interest by educators in "cognitive instruction" (Jones, 1986) has increased the stress placed upon both rational and independent thinking. This interest is creating a new model for education.

Wales, Nardi and Stager (1986), titled their review in Educational Leadership; "Decision Making: A New Paradigm for Education." They maintain that, "... schooling should not focus only on knowledge, but on the decision making skills students need to use knowledge intelligently". Quoting Glaser (1984), the authors point out that as individuals acquire knowledge, they also should be empowered to think and reason. The consideration that the student should be "empowered" indicates that there is a need for "a new relationship between students and their subject matter in which knowledge and skill become objects of interrogation, inquiry and extrapolation" (Wales, Nardi, and Stager, 1986). Wouldn't it also follow, that this "new relationship should begin in the child's early years?

Montessori (1949) recognized that the "empowerment" was not only an interaction

between the child and the environment. She placed responsibility for the educator to prepare both the environment and himself. The educator was to become a positive model with one's personality reflected through example and interaction with the student. As an example, Montessori points out that the older child is capable of retaliating against the "tyranny" of an adult, but that the young child cannot. "The adult is right simply because he is adult" (1936, p.121). The environment might provide for cognitive and social development, but the educator's personality remains the dominant influence (Montessori, 1949).

> When the teacher instead of imposing herself on the mind of the child, sympathetically watches his development, not only does the child learn better, but there is an expansion of the personality of the child. We witness, as it were, the freeing of an energy. (What is relevant is not the capacity or the brilliance of the teacher.) Independently of the teacher, the child expands itself. We behold with surprise, this energy which previously did not appear to exist and which did not manifest itself (Montessori, 1948, p.75).

Thus, the way to assist the child in self-governance and independence was through the educator's ability to construct the content of curriculum within a prepared environment and to learn new ways of teaching. The context the teacher would prepare was to be represented through liberty, freedom and affection (Montessori, 1948).

Jean Piaget, was another psychologist who investigated the development of cognitive processes as they unfolded in children. From birth through infancy, childhood, and adolescence, he connected the child's learning process to autonomy development (Piaget, 1954). Piaget saw the goal for education as helping children learn to do new things, to be critical, and to distinguish between what is proven and what is not (1954).

Dewey (1938) recognized that with the promotion of autonomy and freedom for

children in the classroom, came the accompanying characteristic of responsibility for "social control", which was derived from the teacher's attitude toward classroom decision making (p.58). However, the educator, in having choice, must provide choice for the child. "Choice is an element in freedom and there can be no choice without unrealized and precarious possibilities (Dewey, 1922, in Archambault, 1964, p.85). Dearden (1968, p.46) examines autonomy from both the positive and negative views, but advocates it as an educational aim.

> There are two aspects to such an autonomy, the first of which is negative. This is independence of authorities, both of those who would dictate or prescribe what I am to believe and of those who would arbitrarily direct me for what I am to do. The complementary positive aspect is, first, that of testing the truth of things for myself, whether by experience or by a critical estimate of the testimony of others, and secondly, that of deliberating, forming intentions and choosing what I shall do according to a scale of values which I can myself appreciate. Both understanding and choice, or thought and action, are therefore to be independent of authority and based instead on reason. This is the ideal (Dearden, 1968 p.46).

Independent thinking and decision making has been the ideal extolled by both the psychologists and philosophers. From recent reform measures proposed in teacher education, to the claims of educational psychologists, there is a need for autonomy acquisition.

Definitions and Assumptions

"Autonomy" is derived from the Greek "autos", meaning "self" plus "nomos", or "law". "Auto" denotes "by oneself", and connected to the "law" is defined as "having self-government" (Webster, 1984, p.42). From an educational perspective, the ability to possess this personality characteristic of self-governance, seems to be connected to the

parallel development of cognition within the individual. Montessori (1949) sees this as self-identification phases, proceeding until "will" or self-discipline is present.

That part of cognition which incorporates reasoning abilities in relation to other's rules and social/cultural values is based upon reasoning in reference to others. This element will be defined as "rationality" (Holdstock & Rogers, in Corsini, 1977, p.133). The adjective form is "rational", and derived from "reason"; the Latin root "reri"; to think logically (about); analyze; to argue or infer. The word "reasonable" as an adjective is thus defined as "able to reason"; just; fair; sensible; wise; not excessive (Webster, 1984, p.498). Again reasonable is relative to the cultural or societal norms. "Rationality", is defined as the act of using reason to arrive at a decision. In contrast, "rationalism", will be defined here as "the practice of accepting reason as the only authority in determining one's opinions on a course of action, and "rationalistic" will be the adjective defining that practice (Webster, 1984, p. 95).

The total phrase, Rational Autonomy, will be defined as a psychological characteristic in the original Design. It will be examined in the psychological literature and utilized in the educational models.

The intentions of the words "autonomy" may induce confusion to the average reader. Maligned by the media with inordinate usage, the word has assumed numerous connotations. Briefly examining the word's origins and denotations in education and psychology, and then proceeding to investigate their significance for education, the author anticipates providing a structure for examination, understanding and utility.

The word "autonomy" may be employed as a personality characteristic or as a political mark. "Autonomy" may refer to an individual, a group or a country . As both a personality characteristic and as a political distinction, "autonomy" may advance a negative

or a positive influence.

This thesis will be directed toward educators and their influence and interpretations of self and others within the educative frame. In anticipating the future, the author considers the personality attributes of autonomy to be equal or superior to political autonomy. In fact, the latter necessitates the former. Thus, the Design presented will focus primarily upon psychology rather than upon politics.

A further assumption is that an educator's political autonomy, although limited by law, implies power. Whether physically, politically or psychologically examined, when a principal, teacher or parent closes the door to her or his domain, it exhibits power over any "weaker" inhabitants. Although the power may not be evident, upon careful examination it may be found in either overt or hidden messages. Whether displayed intentionally or unintentionally, the power is present. Autonomy linked to authority play an important role in the educative context, and may exert a subtle influence upon the attitudes of those involved.

Within the history of education's humanistic intentions Haas, 1983, Wood, 1980), the authority of the political message often overrides consideration for the attitudes of the receivers. Thus, both children and adults suffer from impotency in the educational system. This "powerlessness" results in harmful personal stress for both parties (Deci, 1986).

The theory of Rational Autonomy rests upon the assumption that independent, autonomous learning or intrinsic motivation is natural for individuals. If allowed to germinate, it will increase further desire for autonomous learning. This in turn predisposes the individual to an increase in positive personality characteristics. In the young student, this cycle may accompany the child in future learning tasks. Intrinsic motivation is "the desire to be effective and to perform a behavior for its own sake (Myers, 1986, p.362). Deci (1986), maintains that intrinsic motivation for learning is natural, and that teachers

could easily acknowledge and provide for this phenomenon. The assumption underlying all of these concepts is an assumption taken by all of the humanistic psychologists (Myers, 1986) that the "self" is an organizer of one's thoughts, feelings and actions, and is a pivotal aspect of personality (Greenwald and Pratkanis, 1984). (Please refer to Figure 1.).

The theory also considers personal choice and decision making as forming the complexity of the personality trait of autonomy. These elements of autonomy rest upon the individual's ability to choose, or "rationality"; synonymous here with "sensible or sane reasoning" (Webster, 1984, p. 495). "Choice" originates from the Old French or Gothic connoting "to test" (Webster, 1984, p. 110). In order "to choose", "test", or select from "a variety" of "alternatives", (p. 110), one must have an "idea or perception"; partial definition of the word "cognition" (Webster, 1984, p. 12). Consequently, the personality characteristic of autonomy needs interaction with decision making, perception, and cognition and rationality. In the Design, the decision making interacts between the individual's personal interests, desires, plans and wishes and the rational value system for interpretation. "Autonomy" as a value characteristic varies from culture to culture (Lee, 1959); thus, how do values fit into the education of teachers?

John Goodlad (1988) in Studying the Education of Educators: Values-Driven Inquiry, maintains that the most "elaborate and complex" issue facing teacher education reform, is that "education is a normative enterprise".

> Educational systems must be driven by normative goals -- that is, by values. Thus the practice of teaching has a moral dimension, and those who teach in our educational systems are, wittingly or unwittingly, moral agents. To be a professional teacher is to be a witting moral agent, with moral obligations derived from moral imperatives (Goodlad, 1988, p. 109).

Goodlad (1988) decries the lack of "seminars in the history and philosophy of

education that are tied to the conduct of schooling" (p. 111). Hence, future teachers fail to analyze or evaluate the moral implications of "normative issues that pertain to organization, grouping and tracking -- students' right to learn, and more" (p. 111). Both education and psychology are disciplines which imply values and Myers (1986) points out that psychology cannot be value-free. "Values influence our choice of research topics -- whether to study worker productivity or worker morale, sex discrimination or sex differences, conformity or independence" (p. 17).

Therefore, in considering a theory of autonomy the educator will be defined as having a moral obligation and as functioning in a value-laden profession. Since "autonomy" implies values through its usage, the author will define autonomy through a value system.

The "rational" part of the Rational Autonomy theory draws its foundation from definitions by Hirst (1983) and Hayek (1973). Hirst refers to Hayek's position regarding the early evolution of understanding and reason.

> Man acted before he thought and did not understand before he acted. What we call understanding is in the last resort simply his capacity to respond to his environment with a pattern of actions that help him persist (Hayek, 1973, p.18).

Thus, the indefatigable component in understanding and reasoning is defining "mind" as one's adaptation to the environment. Hayek (1973) defines "mind", "reason" and "understanding" as a "product of the social environment in which it has grown up". Pointing out that humans adapt to their social surroundings, Hayek (1973) specifies that the individual interacts "with the social institutions which determine the structure of society" (p.17). Paradoxically, through this interaction, one's mind (reason), acts upon and alters these institutions. Public institutions, in turn, alter humans. "So each human being still employs reason as a weapon and recognizes it only as it helps him to reach the

goal for which he is aiming" (Driekers, 1953, p.111). How does reason effect teacher education institutions?

Dewey (1922) recognizes that there are two concepts of social action relating to institutional reform. They include "changing men's hearts", or "changing the institutions"; neither resting entirely upon either reason or independent views. A better concept would "recognize that all conduct is interaction between elements of human nature and the environment, natural and social" (Dewey, in Archambault 1964, p.67). Encouraging and permitting the interaction between social reason and personal autonomy to occur, could influence change. One must first assume, that the individual is capable of making decisions (Bigge, 1982, Montessori, 1912, 1949) and has free will.

Thus, the central assumption of the theory of Rational Autonomy rests upon the psychological perspective of free will and fostering that concept in others. It is common for educators to assume a position of "soft determinism". Defined by Corsini (1977, p.4): "A person does have freedom to make judgements and decisions, and he is responsible, but his thinking and his behaving are affected and limited by both heredity and environment." This "limited" view of free will is the ordinary starting point for most educators. If this perspective "limits" an educator's actions allowing only deterministic methods of instruction, then the autonomous personal model has been automatically rejected. However, if the educator may be persuaded through education and example to learn, among several attainments, the skills of observation and the characteristics of empathy, then the possibilities of the "free will" perspective may evolve.

The definition of an educator's role is to "lead out", as the Latin roots of the word "educate" connote. The educator becomes responsible then, to alter the student's institutional environment, and to attempt to activate possible latent abilities. The educator's aim becomes an attempt to "lead" the student "out of" the limited view of thinking and acting. The ultimate goal in the Design of Rational Autonomy is for the

individual, whether student or educator, to reach a higher conception of autonomy and free will. This conception is paramount to the theory, and is both specific and general. Free will and autonomy are acknowledged and defined by a specific conception generally assumed by law and by some religions (Corsini, 1977). This conception is defined as: regardless of one's heredity or environment, "each not-insane individual is fully responsible for her or his own behavior" (Corsini, 1977, p.4).

Finally, in this general conception of a free will, the ultimate personal aim in the employment of this theory, will be for the individual to reach a higher degree of autonomy during several phases in the life-span. As a stable and maturing personality characteristic, autonomy would include the characteristics of "authenticity" (Gendlin, 1973) and "generativity" (Erikson, 1986). Dewey (1922, in Archambault, 1964) defined the process and goals of education, as: "Aims ...are turning points in activity". Therefore, "autonomy" as an aim, may be expected to generate "turning points" in an individual's activity. Eventually, the change in its activity may in turn produce a change in the personality -- a "metamorphosis" of the individual. "Development is a series of re-births. There comes a time when one psychic personality ends and another begins" (Montessori, 1949, p.17).

Social Cognitive Theories

The Social Cognitive perspective in psychology applies principles of social learning and cognition to personality (Bandura, 1986). It proposes that our personalities are shaped by the interaction of our situations, thoughts, feelings, and behaviors (Meyers, 1987.)

Cognitive Field Theories

Cognitive field psychologies emphasize the perceptual view of the individual as a unitary process (Bigge, 1982). These theories form the basis for the definition of autonomy. The individual identifies with others or an object, only if it first contains meaning to the perceiving individuals, and is personally important to the perceiver (Bigge, 1982). Therefore, motivation is situational and phenomenological.

The following terms and definitions will also be used consistently throughout this study: Psychology, Growth, Maturation, Learning, Developmental Theorists and Learning Theorists, Human Development, Personality Theories, Psychiatry.

> PSYCHOLOGY is a general term referring to the science that studies the behavior of humans and lower organisms as well (Lefrancois, 1973, p.8).
>
> DEVELOPMENTAL PSYCHOLOGY is concerned with those aspects of human behavior that change from childhood to adulthood, and with the processes that account for these changes. To develop is to grow, to mature and to learn. Each of these terms is defined below (Lefrancois, 1973, p.8).
>
> GROWTH ordinarily refers to physical changes, which are primarily quantitative, since they involve addition rather than transformation (Lefrancois, 1973, p.8).
>
> MATURATION is a more nebulous term which is employed most often to describe changes that are relatively independent of the child's environment. These changes are frequently attributed to genetic predispositions. In virtually all aspects of human development, however, there is an interaction between maturation and learning (Lefrancois, 1973, p.8).
>
> LEARNING is defined as the result of experience rather than as a maturational process. All changes in behavior resulting from experience are examples of learning, provided these changes are not simply the temporary effects of drug or fatigue (Walker, 1968, In Lefrancois, 1973, p.8).
>
> DEVELOPMENT, then, is the total process whereby an individual adapts to the environment. Obviously, since growth, maturation, and learning are processes that account for adaptive changes, they are all aspects of development (Lefrancois, 1973, p.8).
>
> DEVELOPMENTAL THEORISTS have been largely preoccupied with child-adult differences in learning and behavior, and with how a child's learning processes develop as he matures. They undertake two essential tasks: 1) Observation of the child and the progress in adapting to the world; and 2) formulation of an explanation of that adaptation (Lefrancois, 1973, p.8).
>
> LEARNING THEORISTS have traditionally been concerned with discovering the underlying principles of learning. Seldom have they

been concerned particularly with describing differences between the learning processes of children and adults (Lefrancois, 1973, p.8).

HUMAN DEVELOPMENT (LIFE-SPAN) THEORISTS are interested in, "Human development over the life-span as a process of becoming something different (change) while remaining in some respects the same. (continuity)". The field has expended in a multi-disciplinary manner, so that it now encompasses not only psychology, but biology, sociology and anthropology. Most commonly the field is called "developmental psychology, or if focused primarily upon children, child development or child psychology (Vander Zanden, 1978, pp.7-8).

PERSONALITY THEORISTS are a group of psychologists who study how individuals are influenced by relatively enduring inner factors (Myers, 1986, p.21).

PERSONALITY refers to an individual who is relatively distinctive and consistent in patterns of thinking, feeling and acting (Myers, 1986, p.424).

THEORIES -- an integrated set of principles that organizes, predicts, and explains observations (Myers, 1986, p.21).

PSYCHIATRY is a branch of medicine which deals with mental illness. It is concerned with the study and treatment of mental disorders that disrupt an individual's daily functioning (Hahn and Lopater, 1977, pp. 184-185).

CLINICAL PSYCHOLOGY concerns the diagnosis and cure of mental illness, but the clinical psychologists training is in psychology, not in medicine (Hahn and Lopater, 1979, pp. 184-185).

PSYCHOANALYSIS -- two closely related meanings; the specific theory of personality developed by Sigmund Freud and theories derived from his work, and the method of treating mental and emotional disturbance by the application of psychoanalytic theories (Hahn and Lopater, 1977, pp.184-185).

Rationale for a Theoretical Study

Although most research is "public", "deductive", "systematic", and with "invariant terms", Mandler and Kessen (1964) view theoretical approaches to be an important contribution to the body of knowledge.

> ...we have also argued for the values of vagueness and surplus meaning in the vocabulary of newly opened fields of study. And where we have argued for the advantages of explicit deductive systems, we have also defended the less rigorous generalizations and insights of the creative theorist (Mandler and Kessen, 1964, p.278).

A qualitative research design is invoked as an important component of this thesis.

Interpretive methods provide the linkage between the past and the future. In the last two decades, there has been a surge of interest in qualitative social and educational research. Research using interpretive methods is likely to increase in the next few decades (Lareau, 1987), and the Design is one result of such an interpretation. Aiding the interpretive method is an ecological approach and an analysis of the derived Montessori psychology and method through a "site" and "case" study. The material is synthesized and acts as an exemplification for the Design of Rational Autonomy; bringing the Montessori theory into a contemporary framework for the reader.

> We use the word 'site' to mean the same thing as 'case'. Both refer to the same phenomenon: a bounded context in which one is studying events, processes and outcomes. Note that a 'case' could include a wide range of settings: as school, a program, a specific project, a network, a family, a community, and even the behavior of an individual over time in a specific environment. We prefer the word 'site' because it reminds us that a 'case' always occurs in a specified setting; we cannot study individual 'cases' devoid of their context in the way that a quantitative researcher often does (Miles and Huberman, 1984, in Wilson and Gudmundsdottir, 1987, p.43).

In Chapters IV and V, the thesis will examine a "site" including a program, and a school. The "case" included is a synthesis of "typical" families. Chapter V will investigate an educational program used with teachers within the site.

Robeck (1976, p.261) discusses Brofenbrenner's (1976) definition of research in education becoming ecologically valid by giving adequate consideration to the different settings in which subjects function. Brofenbrenner regards laboratory research as merely the first step in experimentation, a step taken to clarify the hypotheses. Brofenbrenner warns against the laboratory setting being over-applied to the real world of the school and applies the basic distinction between the "contrived experiment" and "the ecological experiment", by identifying two forces that operate in the world of education. These are relations between the characteristics of learners and their settings, and the relations that

exist between different environmental systems (Robeck, 1976, p.261). In Chapters IV and V of this thesis, the "ecological experiment" describes both of the characteristics delineated by Brofenbrenner (1976, In Robeck 1976).

A Design for Rational Autonomy

If the educator considers the question of the nature of the learning process, it will become obvious that the two psychological terms, "rational" and "autonomy" are diametrically opposed. (Please refer to Figure 1.). However, contemporary dilemmas are requiring educators and students to be "rational decision makers", and "creative independent, self-governing individuals". "Rational", or reason, represents the democratic group with equality for its members, consensus of ideas, and normative values. "Autonomy" represents the individual's unique differences emphasized, independence, and "rights" entitled to that person. Innovation and creativity are its distinguishing features. By gaining insights into the differences between the opposing ideas and the conflicts that naturally arise, there is better understanding between the educator and others.

Theoretical Foundations

Rational Autonomy is a learning-teaching theory. The definition of an educational theory defined by Paul Hirst (1983) is: "...a domain of practical theory, concerned with formulating and justifying principles of action for a range of practical activities" (p.3). The learning-teaching theory does not seek to understand or explain theoretical knowledge, but examines commonly used psychological principles. Therefore, the theory of Rational Autonomy is concerned primarily with assisting in determining practice. The Rational Autonomy theory is mainly concerned "with achieving rational action" and "with achieving

rational understanding" (Hirst, 1983, p.3). However, "rational action" as Hirst (p.14) views it, is only a partial characterization "of what is judged to be successful action before we understand, let alone formulate explicitly, the rules of principles that it embodies" (p.15).

This original Design provides a theoretical formation for the analysis of some of the commonly used psychological and educational rules which were derived from Montessori's psychology. Their purpose is to communicate an ideal of integrative, autonomous education for the individual across the life span, and to provide a perception of the educator's role in the implementation of these ideals.

Psychological Foundations

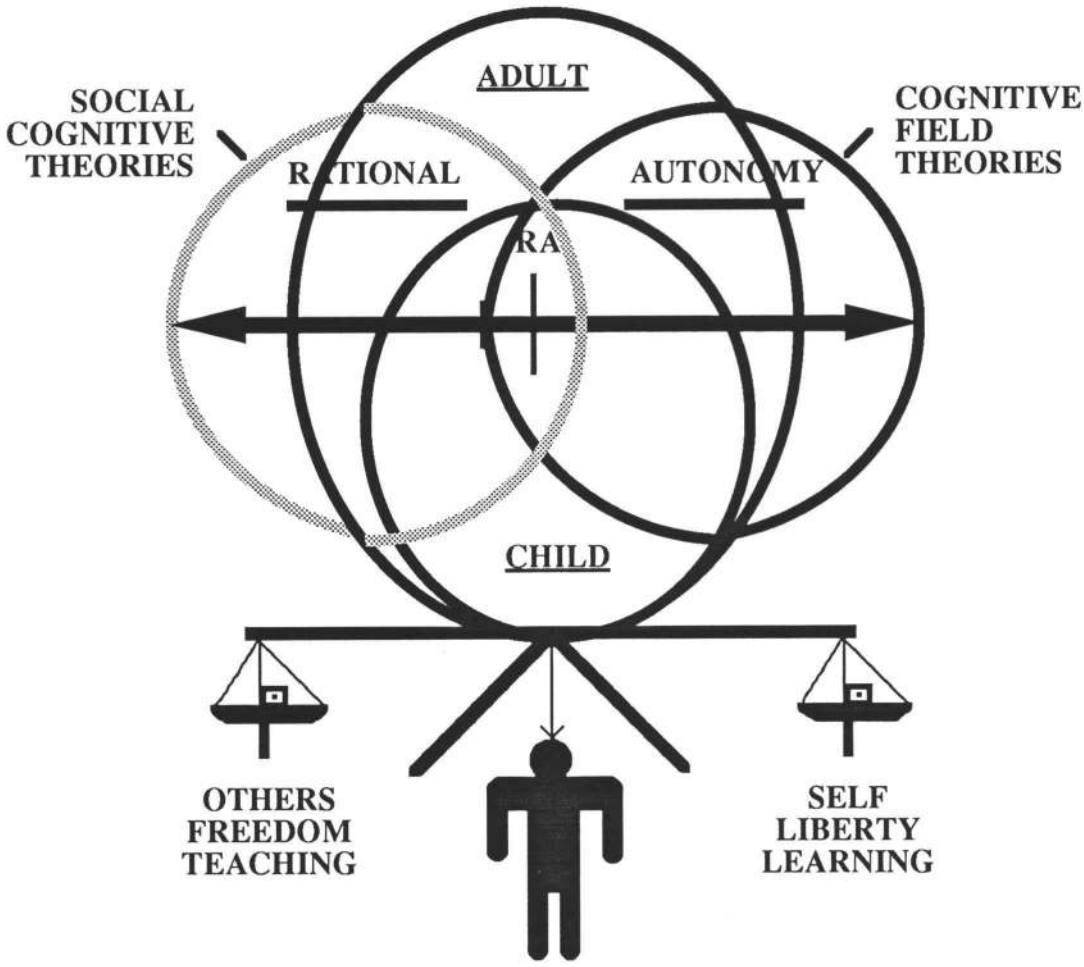
The Design for Rational Autonomy (RA) is an interpretive analysis, synthesis and emergent conception of several psychological theories: learning, developmental, personality and social. It requires the educator (see figure of individual in Figure 1.) to perceive and analyze the social cognitive and the cognitive field perspectives of learning. These two groups of theories are represented by the terms "Rational" and "Autonomy" as they are utilized within the classroom. The "Autonomy" perspective remains the dominant theme in the harmonizing of these two theoretical applications, and thus has the more pronounced format. Therefore, the cognitive field theories will dominate in the synthesis of theories which form the Rational Autonomy Design.

The history of autonomy as a psychological characteristic, and its recognition by Montessori will be reviewed in Chapter II. The Design of Rational Autonomy will be further defined in Chapter II, and exemplified in various human settings throughout the remaining chapters.

DESIGN OF RATIONAL AUTONOMY (RA)

PSYCHOLOGICAL FOUNDATIONS OF

A LEARNING-TEACHING THEORY



Human Development and Personality Theories

FIGURE 1

CHAPTER II

A BRIEF HISTORY OF AUTONOMY, MONTESSORI, AND EDUCATIONAL PSYCHOLOGY

Introduction

The psychological and social/educational foundations of autonomy are varied and diverse. In this chapter, the dilemmas of the characteristic of autonomy and the history of educational psychology will be reviewed. To interpret the characteristic of personal autonomy promotion to educators, the author must consider several threads of history as entering into the formulation and background of this model.

First, this chapter will review the dilemmas of "autonomy", as a social value, and as a psychological characteristic. Second, the history of educational psychology will be reviewed and the social cognitive and cognitive field psychology will be put into the perspective of psychologies' history. Third, the origin of Montessori's paradigm will be considered. Finally, the Design for Rational Autonomy will be presented.

Autonomy as a Psychological Characteristic

The Individual's Dilemma

> In our own time, contemporary man seems to find it more and more difficult to choose between individual freedom and the security of mass society. He easily becomes a self-defeating animal, victimized by his fears, his difficulties in making decisions about what is important and unimportant in his life, his reluctance to function autonomously, and his ability to develop a sense of personal identity. Thus, in his unquestioning acceptance of tribal rituals, he is seduced by illusions of technological advantages, material possessions, and external direction (Rubin, 1969, p.75).

Rubin's concern mirrors the history of the quest for both knowing oneself, and gaining mastery over the environment. Promoting an evolutionary view of education, Rubin (1969) views the aim of schooling to assist the child to both know oneself, and gain mastery. Within Rubin's luminary premonitions, the kernels for a theory of autonomy promotion may be found. But these kernels must first evolve from an individual's value premise that humankind is unique, free and able to make decisions.

The historian Raleigh (1962) notes that through his earliest writings, humans have expressed a view of the individual in two contradictory ways. A person may look at oneself as a unique and free individual, making choices and willing one's own individual destiny, or, the individual may see oneself as a mere statistic, an historical ant, an atom in the gigantic flow of history completely dominated by the historical situation (Raleigh, 1962).

Psychologist Allport (1955), defined the life-span dichotomy in his book Becoming, and identifies the primitive, negativistic behavior of an infant or toddler as expressed by the "first indications of assertion".

> All his life-long this being will be attempting to reconcile these two modes of becoming; the tribal and the personal: the one that makes him into a mirror, the other that lights the lamp of individuality from within (Allport, 1955, p. 87).

Thus, the individual faces several major oppositions throughout a life-span, most of them classified under two major dilemmas. The individual must live with the tension between self-expression or concern for others; and the uncertainty of whether one may be self-governing or only a victim of circumstance. But other polemic antonyms appear as the individual considers daily dilemmas. Shall one conform to standards of society or be creative; seek identity or community; the subjective or objective reality; autonomy or reason?

The history of psychology ingeniously reflects human's concern for each of these questions. The search for self in opposition to understanding others originated in philosophy, and eventually generated an outcrop discipline; psychology. Plato had maintained a dichotomy of personal belief and public truth or reason; and pointed out that in any matter of consequence, reason must be considered the most significant (Kaufmann, 1975). The contemporary psychologist Rudolph Dreikurs (1953), translator of Alfred Adler's psychology, raises another nuance. Dreikurs questions whether there actually can be objective knowledge:

> ...it is an extraordinarily complicated matter of epistemology. ...Apparently there is no such thing as an absolute truth. It seems that reason originated as a weapon which was employed by man in his struggle for existence...to overcome his natural weakness (Dreikurs, 1953, p. 111).

Dreikurs views the individual's endeavors in science and reason then, as an invention of man to protect oneself. The scientist J. Robert Oppenheimer would seem to agree with Dreikurs. A physicist and director of the Los Alamos Laboratory, fabrication site of the first atomic bomb, Oppenheimer (1977) praises the artist and asks that individual creativity be protected. Art is unlike science "which lives in a community, where common understanding combines with purpose and interest to bind men together both in freedom and cooperation" (Oppenheimer, 1977, p. 804). Oppenheimer sees creativity in art as a lonely endeavor, needing protection. The history of psychology is represented as both an art and a science; two oppositional originations. One group of psychologists are involved in the "search for self", and the other, in a search for the laws of science to quantify human actions. The first group searches for the unusual; the individual personality, with its idiosyncrasies; the personality theorists. The second group searches for a common knowledge, a common reason; the learning theorists.

William James represented the search for self, or an artist's work in introspection. He emphasized personal "consciousness" and "changing states of consciousness" (James, 1892, p. 152). His descriptions provided theoretical knowledge that could later be quantified by others. The originations of any science must come from the individual, and James represented one of those (Chaplin, 1975). Introspection, or personal reports of experience represent some of the first explorations in psychology. But when an individual's ideas are applied to a group; rationality, observation of others, and behaviorism comes into play. Thus, perspectives in psychology range from laboratory studies in basic science to philosophy practiced by the individual in the "armchair" (Myers, 1986).

Always difficult to define, psychology whether individual or group, has most recently been redefined simply as a science of behavior and mental processes (Myers, 1986, p.4). When applying psychology to educating others, the educator must consider a simple definition: The educator is one who leads both individual and group; and may influence both behavior and mental processes.

The Educator's Dilemma

But how might the educator consider both individuals and groups? Montessori (1912) viewed the definition of education as synonymous with the study and enhancement of the individual. Dewey (1922) viewed education as the promotion of democracy through the individual's interaction with the group. Skinner (1971) views the individual as only part of a group, a group which will be easily socialized by environmental contingencies. How may educators conceptualize this framework and assist the learner through these diverse psychologies into a twenty first century of change?

Today, scientific and technological change have abolished tradition; culture is in

constant change, and there is less common experience for the learner to grasp. Scientific progress creates such an eclectic world that individuals "live too variously to live as one" (Oppenheimer, 1962, p. 806). Thus the balance must be found between being infinitely open to both cultural meanings and the nurturing of the individual's personal meaning. Both the group and the individual remain significant. As Oppenheimer sees it:

> This cannot be an easy life. We shall have a rugged time of it to keep our minds open, and to keep them deep -- but this is the condition of man; and it is in this condition we can help, because we can love, one another (Oppenheimer, 1962, p. 808).

Psychology has been the foundation of twentieth century education, but education has not been able to focus on the interactions between the "one" and the "other". Although Dewey (1922, in Archambault, 1964) recognized the "interactions" as the most important force in overcoming the chaos of change, educators view interactions as a one way, one medium transaction. The educator sees himself or herself as center, not peripheral to the interaction which must take place both within and out of the individual.

Teaching viewed as leading, directing, conducting, orchestrating and facilitating takes a different view (Eisner, 1983, Rogers, 1969). Fostering an individual who is self-governing, self-motivated and with high self-esteem, and yet one who is responsible and caring for others, is complicated. To encourage the learner to be a creator as well as an appreciative audience, must come as a result of the interactions: between the learner and life, and the learner and oneself (Bigge, 1982). The individual's <u>self</u> becomes a very important ingredient in the learning-teaching process. At least in the early years of a child's education, the child's individuality, and the promotion of self-concept and self-esteem must evolve and parallel the development of skills and social responsibility (Erikson, 1968).

In "the condition of man, this condition we can help"; will educators foster

Oppenheimer's wish, that we can love one another? For when one considers an educational approach to autonomy and reason, the considerations are in a long continuum from personal to societal; from art to science, from individualization to community; from self-esteem to social responsibility. The interactions which touch each pole and reverberate between, could be love or hate. The educator is the intervener, the facilitator who may assist the student in realizing the positive results which may occur through interaction.

Autonomy in Educational Psychology

Whenever education takes place, deliberately or unintentionally, it is tied to psychology, since psychology is the study of human behavior, development and learning (Woolfolk, 1987). Psychology is approximately one hundred years old (Lefrancois, 1988) and educational psychology has existed about 80 years. Its specific function has been primarily to understand the processes of teaching and learning and to develop ways to improve these processes (Woolfolk, 1987). As a science, it involves the appreciation of scientific procedures and approaches in an attempt to understand human behavior. These include precision, rigor, consistency and replicability (Lefrancois, 1988). "Unfortunately for the psychologist as a scientist (although, perhaps, fortunately for us), humans possess neither the simplicity not the predictability of the physical world" (Lefrancois, 1988, p.5). However, this did not keep the behaviorists from designing a rigorous science; and defining and predicting a new world in which humans could live without fear of the environment (Skinner, 1971).

Skinner (1971) denies the importance of "autonomy" as a characteristic in the individual, because he claims that within this century the individual has already changed oneself as a person and is a product of the culture. One of the most influential and controversial contemporary psychologists, Skinner (1971) maintains that "physical and

biological technologies have alleviated pestilence and famine, and that the new environmental contingencies now take over functions once attributed to autonomous man" (p.21). "Man has greatly changed himself as a person in the same period of time by changing the world in which he lives" (Skinner, 1971).

Science, invented by human, has changed genetic endowment by breeding selectively and by changing survival contingencies. Education, psychotherapy, industrial practices and physical and biological technologies have all been changed by individuals. It is an environment "of his own making", and "he" is controlled by it (Skinner, 1971). The "cognitive revolution" has challenged Skinner's theories by putting humans in the center of the process.

The biological sciences have constituted the foundation for the current "cognitive revolution" which is flourishing in psychology. The cognitive revolution features "autonomous man" as an important ingredient through integrated studies in anthropology, sociology, economics and languages. Scholars are adopting a more horizontal and integrative view of science. (Gardner, 1985); i.e., they are not relying upon hierarchical behavioral sequences in science, with "behavior being consequent upon environmental promptings". Rather, a new acceptance is becoming common in science "that form precedes and determines specific behavior. Rather than being imposed from without, organization emanates from within the organism" (Gardner, 1985). This puts the individual within the center of the process. The term "autonomy", as applied to organisms and systems, is becoming popular through cognitive psychology. "Autonomy" is a word which has appeared and disappeared throughout social, psychological and educational literature. Used often in American political literature and sociology (Riesman, 1950, 1952), it makes its appearance in popular psychology, early in psychologies' history (Allport, 1937, Erikson, 1974).

But it was Rogers, during the late 1940s, who provided a new direction for

psychologists, social workers and counselors. A movement grew out of this perspective, and the resulting teaching-learning assumptions became known as "humanistic", "existential", "perceptual", or "phenomenological" psychology (Bigge, 1981). When applied to education, the new psychology attempts to understand behavior from the point of view of the student rather than from the view of the observer or teacher. Some of the individuals contributing significantly are Abraham Maslow with his hierarchy of human needs, listed as prerequisites to "self-actualization" (Maslow, 1970). Humanistic psychologists believe that the individual's basic motivational tendency is toward "self-actualization" or "self-fulfillment" (Fromm, 1983); and that the greatest dilemma within a life-span is freedom and responsibility (May 1976, 1981).

Autonomy as a psychological characteristic cannot be recognized by Skinner or most behaviorists, for the behaviorist views the individual as a passive organism governed by external stimuli (Hitt, 1969). In contrast to Carl Rogers (1983) who views autonomy as freedom, a natural "inner thing", the behaviorist view of humankind is deterministic, and without the acknowledgement of autonomy. The laws that govern humans are essentially the same laws that govern all natural phenomena of the world; hence, it is assumed that the scientific method used by the physical scientist is equally appropriate to the study of man (Hitt, 1969). Observable behavior and its relationships with other phenomena are the objects in this science (Spodek, 1973).

The phenomenologist views humans as active and free to choose in each situation. The essence of the individual is internal and controlled by his or her own consciousness. To study the individual, one studies the world of the individual's experience (Hitt, 1969). Concerned more with the meanings of behavior, rather than with the behavior itself, the phenomenologist investigates outside of the laboratory in field situations. "The model of the phenomenological investigator might more closely resemble that of an anthropologist, or an ecological biologist than a laboratory physicist". The model used by the behaviorist

psychologist (Spodek, 1973, p.65) limits the environment and controls and eliminates variables. The laws governing these relationships become the basis for psychological theory (Spodek, 1973).

But it was Carl Rogers in Freedom to Learn (1969), who linked the psychology specifically to teachers. Rogers described the way in which teachers could facilitate learning. "Facilitators of learning" became a new model for teachers.

> To my mind the best of education would produce a person very similar to the one produced by the best of therapy (Rogers, 1969).

1. This person would be open to one's experience. It is the polar opposite of defensiveness.
2. This person would live in an existential fashion. ...the self and personality would emerge from experience rather than experience being translated or twisted to fit a pre-conceived self-structure. ...Such living in the moment, then, means an absence of rigidity.
3. This person would find one's organism a trustworthy means of arriving at the most satisfying behavior in each existential situation (Rogers, 1969, p.64).

History of Educational Psychology

Educational psychology is a field of study that investigates problems of learning and teaching. Cognitive psychology and behaviorism are both a part of the discipline, but there is also an attempt in educational psychology to demonstrate practical applications of psychology (Lefrancois, 1988).

The precursors of 20th century psychology were the empirical philosophers

Thomas Hobbes and John Locke; and then in the eighteenth century, Jean Jacques Rousseau who identified childhood as a state of innocence and goodness. Johann Heinrich Pestalozzi refined and applied this child-centered psychology (Connell, 1980). His student was John Friedrich Herbart who proposed a five-step method of teaching. Friedrich Froebel, the founder of the Kindergarten was also a disciple of Pestalozzi, and had also been greatly influenced by Rousseau (Standing, 1962). An intellectual genealogical tree integrating the partial histories reflected in elementary and early childhood educational psychology is shown below:

Locke	1632-1704
Rousseau	1712-1778
Pestalozzi	1746-1827
Herbart	1776-1841
Froebel	1783-1852

(Standing,1962.p.59)

As a distinct discipline educational psychology emerged in the early 1900s, when James Cattell and Hermann Ebinghaus laid the foundation for educational measurement. The nature of intelligence was studied by Alfred Binet as he sought to discover a reason for children's failure in school, and the Stanford-Binet test became an important means of mental measurement (Connell, 1980).

Thorndike's detailed the three volume Educational Psychology in 1910, which became for decades the standard text in graduate departments of education (Connell, 1980). His approach was physiological, with focus on the nervous system. Thorndike evolved three basic laws of learning. They explained the individual's behavior on the bases of stimulus and response (Snyder, 1972). Usually Dewey's philosophy was taught paralleling the educational psychology of Thorndike. Both sought more effective ways in

learning, and both emphasized the importance of attitude --- Thorndike in his "readiness", and Dewey in his "felt need" (Snyder, 1972).

John Dewey (1859-1952) was most interested in how to make democracy work. To Dewey the creative life was the good life (Snyder, 1972). Dewey described the insights into development that psychology will provide for a teacher, following William James who had given lectures to teachers on applying psychological principles. The discipline of educational psychology in America was acknowledged with the founding of the Journal of Educational Psychology in 1910. This continues to serve as a major pedagogical periodical for the work of educational psychologists today.

The theory and practice of educational psychology has been derived from two means of investigation; deductive and inductive. The first method involves applying principles of psychology, and the second involves observation. Recent trends favor the inductive method because it deals with the processes of teaching and learning (Connell, 1980).

Four major approaches have evolved in educational psychology; the psychoanalytic, the behavioristic, the developmental, the humanistic and the cognitive. The psychoanalytic approach, emphasizes the role of emotion. Based on Freud's work, behavior is regarded as unconsciously motivated. Thus the educator attempts to satisfy the student's unconsciously motivated needs through exploring feelings and interests (Osborn, 1980).

The behavioristic approach, originating with Thorndike and Skinner focuses on the control of behavior through reinforcement. Positive reinforcement contingent upon the successful completion of small steps provides successful learning.

The developmental approach derived from Jean Piaget, recognizes four stages of intellectual development. The child constructs reality through encountering conflicts in experience. The educator assesses the child's level of mental development and provides

experiences to complement and stimulate that development (Elkind, 1976).

The humanistic approach emphasizes human attributes of thoughts and feelings providing children with an emotionally warm, accepting environment. Abraham Maslow (1968) and Carl Rogers (1983) are the major proponents of this system. Frequent opportunities for children to direct their own learning is promoted.(Lefrancois, 1988).

The newest approach is the cognitive perspective. Jerome Bruner (1983) is identified as the person who has most connected cognition studies to education. Perception theory is regarded as the major ingredient in learning. The way in which a stimulus is identified depends upon the identity of the perceiver. Perception is seen as a process of categorization, concept formation and attainment. Bruner (1983) and Piaget (1952), although both identified with cognition, approach leaning from different directions. Bruner is a functionalist who examines selectivity and the role of hypotheses (Bruner, 1983). He sees himself as studying "the manner in which function creates form" (Bruner, 1983, p. 139). Bruner is interested in heuristic hypotheses formation, particularly viewing the forms of experience which give special "lift to growth" (Bruner, 1983, p. 143).

Piaget is a structuralist who studies how structural requirements of the mind determine forms of action (Bruner, 1983). Bruner see this as an unimportant question. The question is not where or when mind begins, but is rather "...about the conditions that produce human minds that are richer, stronger, more confident" (Bruner, 1983, p. 152).

Montessori's Educational Psychology

An intellectual genealogical tree for Montessori would include Locke, Rousseau, Pestalozzi and Froebel; but it would also include, some early psychological physicians, scientists and educators. Some additional intellectuals then for Montessori's tree would

also include and these are denoted by the asterick below:

Locke	1632-1704
Rousseau	1712-1778
Pereira *	1715-1780
Pestalozzi	1746-1827
Itard *	1775-1838
Herbart	1776-1841
Froebel	1783-1852
Seguin *	1812-1880
Montessori *	1870-1952

Montessori's educational psychology was derived partially from the Froebelian sources, but also had entirely different precursors. Montessori, as a teacher educator for a decade at the College of Rome could not have been ignorant of the mainstream of educational thought which had occurred in Europe. She refers to Froebel and Pestalozzi in her books (1936, 1949) and attributes Froebel with the ideas for the first geometric shapes in her materials. Montessori could not have read all the student's theses on the various pedagogical authors while a teacher educator, without being aware of their writings (Standing, 1962). But her work and method were formulated before she was a teacher educator, and Montessori consistently credits Seguin and Itard (1912, 1914, 1916, 1948).

It was through Montessori's interest in exceptional children, that she came in contact with the works of Jean Itard and Edouard Seguin, the two French doctors, who had devoted their lives to the education of these children. Montessori explained that she copied into Italian:

> ...with my own hand the writings of these two men from beginning to end. ...I chose to do this by hand in order that I might have time to weigh the sense of each word and read it with the spirit of the authors (Montessori, 1962, p. 34).

She had just finished copying Seguin's French volume of 600 pages, when she received his second book from America, his new home, and continued her translations. Montessori attributes both the development of special materials, and the idea of forming educational methods based upon the observation of children as being derived from these two physicians.

Itard, who lived at the time of the French Revolution, made a study of deaf-mutes. He is best known for his education of an exceptional child who was found abandoned in the forest of Aveyron (Standing, 1962). It was an undertaking of incredible patience, which he recorded in a book, The Care and Education of the Wild Boy of Aveyron (Standing, 1962, p. 33). Seguin, who was a student under Itard, later founded a school for exceptional children in Paris. These two men had been highly influenced by Jacob Rodriguez Pereira, a leader in the area of education of deaf-mutes (Boyd, 1914). Louis XV recognized Pereira's work and was able to institute a free school in Bordeaux in 1750.

A century later, Seguin recovered the general principles of Periera's method which was based on a manual alphabet devised by a Spaniard named Bonet. But more than this, Pereira had earlier analyzed speech into vibrations, and discovered that his students could hear through vibrations, and utter exactly what they heard; a new "physiological discovery" (Boyd, 1914). Seguin gives Pereira credit for forwarding the studies of the senses (Boyd, 1914). The emphasis upon the sense of touch, and the fact that one sense may be substituted for another was a powerful discovery. And the fact that sensations are intellectual functions with one sense corroborating the action of another, influenced many educators for decades, including Rousseau.

Rousseau and Pereira were neighbors and good friends, and Rousseau was a

frequent visitor to Pereira's school (Boyd, 1914, p. 42). Rousseau worked out his own educational plans in the story of Emile a few years later. The influence of Pereira then showed itself plainly, as Rousseau described the education of normal children by giving to each and every sense, the kind of training which Pereira gave to touch (Boyd, 1914).

The history of Montessori's precursors indicate a wide variety of interests which would be misunderstood by both her critics and supporters, when Montessori translated them into educational psychology (Boyd, 1912; Elkind, 1976). With materials holding the seeds of self-discovery and self-mastery, her "method" seemed "structured" and "behavioristic" to some (Boyd, 1912).

But Montessori was an educational pragmatist, not an empiricist content to get results without comprehension of the meaning. Scientific pedagogy as Montessori knew it in 1909 was a psychology that Wundt postulated, a physiological psychology (Connell, 1980). "...one must be struck by the coincidence of these conceptions, and be led to suspect that the physiological method may have some connection with physiological psychology" (Montessori, 1948, p.27). Montessori described this psychology as she returned to school to study for her new profession as an educator. "The physiological or experimental psychology, which, from Weber and Fechner to Wundt and Binet, has come to be organized into a new science" (Montessori, from 1909 notes in early edition, 1948, p.1).

But Montessori was also guided by Pestalozzi's humanistic principles (Montessori, 1948, p. 33), and the principles of educating a teacher's sentiment through intellectual study. She quotes Pestalozzi and his references to education, as a "contact of souls"; that the teacher must feel "respect and sympathy" for the children.

As a student of philosophy at the university, Montessori enrolled in a program of experimental psychology which had just been founded in the Italian universities. At the same time, Montessori combined anthropological studies and teaching.

> At the same time I was carrying out in elementary schools research work in pedagogic anthropology, and used the opportunity to study the methods and theories in use for the education of normal children. These studies led me to the teaching of Pedagogic Anthropology in the University of Rome (Montessori, 1948, p. 34).

Montessori's education was both scientific and culturally related; philosophical and practical. In the introduction to her 1912 book, Montessori credits Rousseau and also compares his work to hers. But in her opinion "the observation of nature" is not enough in becoming a teacher (Montessori, 1912, p.11).

> I understood, as others did not, that scientific education cannot be based on studying and measuring the individual to be educated,...(Montessori, 1948, p. 34).
>
> ...scientific education ought to be capable of transforming normal children. How? Certainly by raising them above the normal level, making them better men. A science of education has not the purpose of merely observing, but that of transforming children (Montessori, 1948, p. 35).

These ideals were based on a "conception of liberty (Montessori, 1948, p. 35), not a "social liberty", but a personal autonomy (Montessori, 1912, p.15).

Montessori acquired these ideas while she was at the university involved in developing her new education profession. At first, Montessori hoped to use some of Seguin's ideas in the first years of elementary school, but she realized that it might be more logical to use these ideas with a normal, but much younger child. Perhaps it would aid the children in concentrating, or help in acquiring coordination, or prevent defects in language (Montessori, 1948, p. 37). Montessori admits that she had no plans for her psychology of education, but that "chance played its part" (Montessori, 1948, p. 37). For ten years she experimented practically with the methods of Seguin and Itard in the first school for exceptional children in Rome. Then turning to experiments in normal schools, Montessori

studied the many theories of educating children and the opportunity came to start the school, Casa dei Bambini in 1906.

> There had already been spent fifty years of active preparation, distributed over a century of time, representing the labours of three doctors who, from Itard to myself took the first steps in the paths of psychiatry (Montessori, 1936, p.41).

Montessori points out that it was not a matter of pure and simple application of Seguin's methods to schools for the normal, but that her evolving methods came about by a series of trials carried on for two years in The Children's House, and then throughout her career (Montessori, 1936, p.41).

Montessori: Cognitive Psychologist

In reviewing Montessori's role as an interventionist educator, she originated educational psychology planning for both handicapped and "disadvantaged" children. She also developed teaching strategies and practical materials. Through her repeated observations of children, and using the trial and error methods of scientific observation, she eventually developed a forerunner of cognitive psychology for normal children. She selected "stimulus information" and designed materials around the "stimulus" (as defined by Reynolds, and Flagg, 1977).

To consider Montessori a cognitive theorist, and to offer a comparison of her theories to others in the field today, a definition of cognitive psychology is needed. In cognitive psychology, these are central issues:

1) The importance of the selection of stimulus information. Most of the time more information impinges on us than our limited capacities can handle.
2) The importance of selecting appropriate processing strategies (largely under voluntary control) to meet the

demands of the task.

3) The development of cognitive structures. After repeated applications of processing strategies, stable cognitive structures emerge.
4) The interrelated functions of the parts of the human mind as a coherent system.
5) The constantly active nature of cognitive processes. The system is always active and at work (Reynolds, A., and Flagg, P., 1977, p. 12).

As she viewed the child working independently with specially designed materials, Montessori's "discovery" was that children of preschool age have capabilities of learning without being "taught" by adults (Montessori 1912, 1914, 1916). She saw them "explode into reading and writing" unaided by the teacher (Montessori, 1912). The children thus demonstrated, ..."voluntary control of cognitive processes" (Reynolds and Flagg, 1977). Her emphasis on the selection of materials that offer a stimulus, and "observing the child's processing strategies", puts Montessori into the role of a early cognitive psychologist.

Both before and after Montessori's lifetime, the role of the teacher has often been one of training and teaching passively seated children. Reynolds and Flagg (1977) report that children were assumed to be inactive, or passive:

> ..."storers of information"....The cognitive view assumes a constantly active organism that searches, filters, selectively acts on, reorganizes, and creates information. This view is totally new and sets the cognitive approach apart from all prior views of mind. A revolution has occurred" (Reynolds, A. and Flagg, P., 1977, p.14).

Montessori saw the child as an "active organism, selecting and acting upon the environment".

> The pedagogic methods employed, however, are of such sort as to constitute a gradual series of psychic stimuli perfectly adopted to the needs of childhood, the environment stimulates each pupil individually to his rightful psychic development according to his subjective potentiality. The children are free in all their manifestations and are treated with much cordial affection. I believe that this is the first time that this extremely interesting pedagogic experiment has ever been made: namely to sow the seed in the consciousness of the child, leaving free opportunity, in the

> most rigorous sense, for the spontaneous expansion of its personality, in an environment that is calm, and warm with a sentiment of affection and peace (Montessori, 1913, p.68).

Education, as Montessori perceived it, had as its aim the study of the "active nature of cognitive processes" within the child. As a psychiatrist and a teacher, she was not only interested in cognitive development, but also in personality development. As a cognitive psychologist, she recognized the parts of the human as a "coherent system".

> "Today the mind is thought of as a whole, not as separate mental faculties, and vitally connected with the whole personality; thus modern psychology forms a complement to our method of education" (Montessori, 1950, p.23).

It was this "wholeness" of learning that Montessori studied; personality enhancement through cognitive and physical mastery of the environment. She maintains that learning is part of living (Montessori, 1961). If the learning and the work are suitably matched to the individual's ability, yet challenging enough to create interest, the individual will not be fatigued (Montessori, 1961). These "interrelated functions of the parts of the human mind (are seen) as a coherent system" (Reynolds, A., and Flagg, P., 1977).

Montessori writes:

> "Fatigue is caused by work unsuitable to the individual. Suitable work reduces fatigue on account of the pleasure derived from the work itself. Thus the two causes of fatigue are unsuitable work and premature interruption of work" (Montessori, 1948, p.109).

The last statement surprises many educators, but is linked closely to the factor of self-choice of materials (Montessori, 1948). Montessori was one of the first psychologists to recognize personality changes that may "emerge in stable cognitive structures". Her view of what freedom and liberty could mean in the development of these structures establishes Montessori as a forerunner of humanist and existentialist psychologists.

> It has often been said to me that I am able to confer upon children the gift of joy, but I have not given joy to the children, I have allowed the child to work, that is what I have done. I allow him to work. Joy comes from the inner life, being free, so that the mental faculties are free to develop...
>
> In every stage of life, at every age, liberty is the realization of the loftier possibilities of one's energies, independence and perfection (Montessori, 1935, in A.M.I. ed. 1970, p. 41).

Certainly Reynolds and Flaggs (1977) last requirement of the issue of the "cognitive processes active and at work", matches Montessori's conception of work. But for Montessori, this must be in the framework of liberty and freedom.

Montessori's Study of the Conscious

Rationality

Montessori's rationality is based upon the origins of her theory and the subsequent practice of it. She considered it a "rational", "scientific" approach to education (1912, 1913, 1914). The mode of observation was "naturalistic" (Chaplin, 1975), in the tradition of the medical profession and anthropology. Montessori's interest in psychiatry and psychology embraced both the objective and subjective perspectives. Her original research in psychiatric disorders included the study of neural functions, or an objective approach (Montessori, 1948). But as her work progressed into the asylums, she took her objective observations of young patients and initiated a process of theory building which continued throughout her career. She slowly introduced materials individually to the disturbed child, and tested their effectiveness. This identical method was subsequently used in classrooms with normal children. However, motivation became a crucial point with normal children (1912, 1914).

Originality

Other European psychiatrists and laymen were following Freud's archetype. But Montessori did not follow the psychiatric innovations of her era by confining her studies to the examination of the patient's unconscious (Kramer, 1977, M. Montessori, 1959c). Rather, she initiated a scientific method of observing concrete action in the classroom. The children in the experiment were "treated" with "respect" and "kindness", and given "liberty to work" (Montessori, 1912, 1914). Consequently, they were not manipulated or forced to change, only encouraged. The environment under the control of the educator was altered; or the directress looked inward and attempted to change her or his actions and personality.

The Absorbent Mind

Montessori mainly concentrated upon studying the conscious experience and activities of the child, or "concentration" (Montessori, 1917, 1936, 1949, 1962) within "spontaneous activity" (Montessori, 1912, 1917, 1948, 1949). She attributed the "unconscious" with a new meaning she named the "absorbent mind" (Montessori, 1949), and spent the later years in her profession writing about the unconscious (Montessori, 1949, 1950).

Occasionally, Montessori refers to the "unconscious", but it is not used in the psychoanalytical tradition of Freud. Before Freud and his disciples concentrated upon the subjective search of motives, the word "unconscious" simply meant unremembered, or out of immediate awareness (Ellis, 1977). This is the meaning which Montessori attaches to it.

In Montessori's psychology, the educator's task was described as an appreciation and understanding of the power of the child's unconscious mind from birth forward. This unconscious mind could construct all of the characteristics of the human personality as derived from the culture surrounding the child. Thus, language, and attitudes promoted by the culture are easily ingrained in the individual before the age of three. The child creates his/her personality from this unconscious absorption of the culture; the absorbent mind (Montessori, 1949) at work. The various "powers" of the personality develop separately and include language, movement and sensory powers (Montessori, 1949, p.164). At about three years of age the child leaves the absorbent unconscious period, and enters a period of more conscious development. This is when the personality begins to unify the language, perceptions, and movement. The child wishes to consciously master his/her environment with the powers he has been developing up to this time. "Such experience is not just play, or a series of random activities, but it is work that he has to do in order to grow up. His hand guided by his intelligence begins to do jobs of definitely human type (Montessori, 1949, p.166). Montessori (1949) recognizes that the child's "self" guides his conscious "I" at this time. Two tendencies come forth in the phase of three to six. Consciousness is extended by activities performed upon the environment, and the child seeks to perfect and enrich the powers already formed through the unconscious absorbent mind.

Potentiality and Consciousness

Montessori considers emotional difficulties to be common in children, particularly if their school environment does not promote healthy personality change (Montessori, 1949). Montessori refused to be hampered by either the child's past or immediate life (1912, 1914). School is a sanctuary for the confused, discouraged, maligned,

hyperactive, bored, abused child (Montessori, 1913, 1914, 1949). It is a refuge for the hungry, the neglected and the ill; both physically and mentally (Montessori, 1912, 1948). School is not reserved for the "normal" child. The purpose of education is to experience normality (Montessori, 1936, 1948). "Normality" for Montessori is a higher personality level than identified by most educators as "normal".

The purpose of education then, is the development of "man's true potential" (Montessori, 1950). It requires the educator's comprehension of the individual's inborn motive to freely choose cognitive stimulation and through experience develop this personality potential.

Origins of Montessori's Paradigm

Kuhn (1970) has proposed that, "A paradigm is a schematic model for representing phenomena and the relations among them. It provides terms and categories into which complex real world phenomena are translated in order to make them easier to grasp and study" (Kuhn, 1970, In Achenbach, 1978, p. 21).

Paradigms, as examples or models, may include several theories of their own, and may also allow other theorists to include any one of these theories as a base for more theory building. The way in which Montessori's paradigm has allowed for this to occur has been through the research efforts in theories of independent learning and autonomy by Jean Piaget (1952, 1970), and autonomy characteristics theory of Erik Erikson (1950, 1986), both psychologists who spent their early years studying with Montessori (1970).

> (A paradigm) is typically a more general conceptual system than a theory, in that a theory is designed to provide specific explanations, whereas a paradigm consists of terms and concepts shared by workers who do not necessarily agree on particular theoretical explanation (Kuhn, in Achenbach, 1978, p. 20).

Montessori's psychology has constantly been reinterpreted and translated into the formation of "Montessori" materials, toys and strategies. As these materials and ideas have been assimilated, the "concepts shared by workers" may not necessarily exemplify Montessori's theory, but their similarity of interest and direction of research may continue to build upon the paradigm (Berger, 1968). But Montessori's psychology has resisted classification.

Montessori's theories are probably most similar to Gestalt psychology (Standing, 1962). Montessori's learning theories sometimes are equated with the maturational "unfoldment" theories, but Montessori's theories are not either purely maturational or "sheer expressions of inner urges"; as with maturational and Freudian (descriptions provided by Bigge, 1982). They do not rely wholely upon a "conditioning process, which comes from the environment impinging upon a biological organism from without", as the behavioral perspective promotes (Bigge, 1982). Current psychologists recognize Montessori as part of the humanistic tradition, but Montessori's paradigm needs further definition, for it appears to be more than a humanistic or "Gestalt" theory.

> Maria Montessori's psychological theories were derived from the Humanist traditions. There is no question that Montessori's radical ideas have had a profound influence on pedagogical theory and on humanistic psychology. She is the ancestor, for example, of all the radical educational and psychological theories that proliferated in the 1960s, in the United States. Yet, Montessori is never mentioned in an history of psychology textbook, although she sometimes is cited in books on educational reform (Stevens and Gardner, 1982, p.114).

As the "ancestor" of " the radical educational and psychological theories", what was Montessori proposing as an educational theory? The necessity of characterizing Montessori's theories, becomes evident as Montessori's psychological theories were developed in the early part of this century, and there were no adequate descriptive

frameworks of learning theories in which to place them.

> Women who have made contributions to psychology do appear in the history books, but their work is accorded specialized, limited, and often trivializing treatment (Stevens and Gardner, 1982, p.44).

Reasons cited, for the lack of information about the recorded contributions to psychology made by women, is that the bias of historians is not so much due to their devaluing of women, per se, as to their devaluing the areas within psychology to which women tend to be interested such as: child psychology, education, etc. (Stevens and Gardner, 1982). These authors hypothesize that within the realm of academicians, experimental psychology has always had more status than clinical psychology. Historians have always placed higher value on basic versus applied psychology (Hall and Lindsey, 1976, in Stevens and Gardner, 1982).

Not only was Montessori a woman psychologist specializing in a sub-field of early childhood education, but she also seemed to enjoy fame and publicity (Kramer, 1977). She may have used this and her attendant publicity to further professional and political ends; perhaps even manipulating popular opinion (Stevens and Gardner, 1982). This may have developed some animosity toward her from the American educational establishment. But Stevens and Gardner (1982) explore the "peculiarly consistent pattern in the way women psychologists gain and lose the "limelight", often through the publishing of a highly influential book, which Montessori did in 1912 (Fisher, 1912).

One recent cognitive psychologist, who has identified Montessori's ideas as prophetic, is Jerome S. Bruner. In the 1960s, Bruner promoted his own highly original ideas, by developing a theory of instruction from what he had observed in selected classrooms; not unlike Montessori's naturalistic observations. Bruner (1966) recognized that special environments need to be created for students. These require appropriate

materials, and teaching methods and which could then easily accelerate perceptual and cognitive development. In looking at the future of perceptual training, particularly in visualization, Bruner wrote in his 1966 book, Toward A Theory on Instruction:

> I do not think that we have begun to scratch the surface of training in visualization, whether related to the arts, to science or simply to the pleasure of viewing our environments more richly. Let me note in passing, by the way, that Maria Montessori, that strange blend of the mystic and the pragmatist, was groping toward some such conception (Bruner, 1966, in Montessori, 1970, p. 66).

Montessori recognized that the public had many questions regarding the use of her specifically designed classroom materials and their implications for such young children. Montessori was a master of environmental planning and material construction, and this constituted the bases for autonomy development within the child and educator.

> ...but it is logical that if there are in this period of three to six natural aptitudes for easy acquisition of culture, we should take advantage of them, and surround the child with things to handle which in themselves convey steps in culture (Montessori, 1959, p. 12).

The materials and the classrooms which exemplify Montessori's "method" are the symbols by which she is most known. As she explained later in her book, The Montessori Method (1912), her first ideas for "The Method" became clear to her after working with retarded children.

> From the very beginning of my work with deficient children (1898 to 1900) I felt that the methods which I used had in them nothing peculiarly limited to the instruction of idiots. I believed that they contained educational principles more rational than those in use, so much more so, indeed, that through their means an inferior mentality would be able to grow and develop. This feeling, so deep as to be in the nature of an intuition, became my controlling idea after I had left the school for deficients, and, little by little, I became convinced that similar methods applied to normal children would develop or set free their personality in a

marvellous and surprising way (Montessori, 1912, p.33).

These "rational" educational principles are exemplified through the connection of personality growth within the fostering of autonomy, and are exemplified in the Social Cognitive Field Paradigm.

Even in Montessori's first experiment (1912), her school at the Institute for the exceptional child, provided ideas for observing children's learning methods and how their personality would develop. The full testing of these theories was to come later in the first Children's House, Casa dei Bambini in January, 1907.

This experiment has been repeated in countless cities around the world and often described by parents or visitors (Kramer, 1977, Lindauer, 1987). Bertrand Russell describes his visit to his child's school in 1926.

> I had always understood that Madame Montessori dispensed with discipline and I wondered how she managed a room full of children...On sending my little boy of three to spend his mornings in a Montessori School, I found that he quickly became a more disciplined human being...The pedagogical discoveries involved have required genius, but the teachers who are to apply them do not require genius. They require only the right sort of training, together with a degree of sympathy and patience, which is by no means unusual. The fundamental idea is simple: that the right discipline consists not in external compulsion, but in habits of mind, which leads spontaneously to desirable rather than undesirable activities. What is astonishing is the great success in finding technical methods of embodying this idea in education. For this, Madame Montessori deserves the highest praise. (Russell, 1926, in Montessori, 1970, p.37).

Defining "habits of mind" is partially what a cognitive psychologist investigates, just as the personality psychologist might examine the psychological term, "autonomy". How do students acquire "habits of mind, which leads spontaneously to desirable rather than undesirable activities"? What escaped Russell in a different time and place is yet a mystery today; but one that is becoming solved through the new cognitive psychology

(Baars, 1986).

Part of Montessori's theory aligns her with the developmental theorists and part with the humanistic theories. But her total psychology is more clearly defined by the motivation theories of cognitive field and social learning theorists.

> ...what has usually been called motivational theory may be a general theory of behavior and yet distinct from personality theory. ...What are usually referred to as a theory of motivation as also theories of personality... Thus, if the theory deals only with motivation it is a single-domain theory; if it is more embracive, it is simply a type of personality theory (Hall and Lindzey, 1978, p.18).

The question remains as to whether Montessori's theories are a personality theory? Do they deal with any behavioral event that can be shown to be of significance in the adjustment of the human organism"? Or are her theories "specifically limited to behavior as it occurs under certain carefully prepared conditions?" (Hall and Lindzey, 1978). As these authors point out, there is one possibility remaining for a theory; and that is a theory which incorporates several definitions, becoming a paradigm.

Paradigm Premise

It is the premise of this author that in the early part of this century, Dr. Maria Montessori was one of those who foreshadowed the present cognitive psychology, or science, "search for mind" which has dominated psychology during the last three decades. During this unparalleled period in psychology, there has been a revolt against behaviorism by the constituent cognitive sciences--psychology, philosophy, linguistics, artificial intelligence, neuroscience, and anthropology (Baars, 1986, Bruner, 1983, Gardner, 1985).

Cognitive science is an interdisciplinary effort seeking through the most recent

conceptual tools, to solve the classic problems of Western thought: the nature of knowledge and how it is represented in the mind (Gardner, 1985). Montessori's approach to science and education was interdisciplinary and creative for her time, and should place her as one of the early precursors and practitioners in cognitive psychology. As a young girl, Montessori first studied engineering and mathematics, leaving this to complete a decade of studies in medicine. Becoming the first woman physician in Rome, she specialized in pediatrics and child psychiatry (Kramer, 1976, Standing, 1966). Then serving as a clinical psychiatrist for the Orthophrenic school, or a mental institution for all ages, she initiated experiments and studies in psychology, and formulated her own psychological model. She furthered her studies in anthropology, receiving a Ph.D., and chaired the department at the University of Rome, where she lectured to physicians, medical students, and teachers. She viewed anthropology as a means of measuring and examining differences in individuals.

Montessori had the ability to extrapolate clinical impressions from her work with children and apply them to the classroom (Kramer, 1977). She then experimented in the classroom and was able to formulate instructional and learning theory after her experimentations with children. The following serendipitous development occurring at the Casa dei Bambini illustrates the manner in which she developed theory; described in her book Pedagogical Anthropology (1913):

> The small boys and girls in our 'Childrens' Houses' are of their own accord distrustful of rewards; they despise the little medals, intended to be pinned upon the breast as marks of distinction, and instead they actively search for objects of study through which, without any guidance from the teacher, they may model and judge and correct, themselves, and thus work toward perfection (Montessori, 1913, p.144).

The reason for the children's "search for objects of study" seems clear to the

reader where it is considered that these children were from homes of poverty and neglect. But it is this author's premise that a stronger force was at work than the "innate need" (Osborn, 1978) described by the the maturationist perspective. Montessori expresses it herself,..."they may model, and judge and correct themselves, and thus work toward perfection" (Montessori, 1949, 249). Montessori's psychology thus indicates a similarity toward the motivational and perceptual theories of the social cognitive and cognitive field psychologists (Bandura, 1977, Bigge, 1982). Bandura (1977) describes this phenomenon as "self-efficacy"; the cognitive psychologists view it as "achievement motivation" (Myers, 1987). Both theories may be represented in the Design for Rational Autonomy.

A Design for Rational Autonomy

Psychological Foundations

Please refer to Figure 2. The Design for Rational Autonomy (RA) is an interpretive analysis, synthesis and emergent conception of several psychological theories: learning, developmental, personality and social. It requires the educator (see figure of individual) to perceive and analyze the social cognitive and the cognitive field perspectives of learning. These two groups of theories are represented by the terms "Rational" and "Autonomy" as they are utilized within the classroom. The "Autonomy" perspective remains the dominant theme in the harmonizing of these two theoretical applications, and has the more pronounced format. Therefore, the cognitive field theories will dominate in the synthesis.

Thus, "Rational" is the modifier for the noun "Autonomy". The adjective, "Rational", plays a lesser role in the development of the psychological theory Rational Autonomy. The autonomous individual enters decision making through an interaction

between other's rules and his or her own desires. One does this with a desire to enhance self esteem and preserve self concept, or the opinion of self within the group. Which perspective will prevail, depends upon the attributes or motivations derived from each perspective -- the self attributes or the social attributes. Thus, the promotion of autonomy rests primarily upon enhancement of the personal attributes of each individual. It also relies upon the conception of free will, and the individual's actional nature to make decisions. As defined by Bigge (1982), these traits provide the partial conception and source for the description of the cognitive field theories.

Constructs

Please refer to Figure 2. The circles represent the Adult personality and the Child personality, both singularly and within the Adult. There are no hierarchical stages intended. R and A form a domain of "Rational Autonomy". RA should be regarded as an open structure of indeterminate size. The domain would be enlarged or diminished through the number of experiences in decision making the individual has. RA, therefore, reflects the individual's decision making and becomes a part of both the Adult and Child personality.

The educator (see figure of individual) is considering the options between employing the social cognitive or the cognitive field theories. His/her thought processes travel across the larger arrow in order to consider the individuals in the classroom. By constant observation of each individual, and the group as a whole, the educator decides which techniques to use. These considerations influence the general format for larger curriculums and strategy decisions.

The educator also considers in minute-to-minute decisions made through constant interactions with individuals and group, which perspective of psychology is best

employed. The aim is to elicit autonomy harmonized with reason. This condition is represented by the balance beam, which is the "continuum of interaction" between the values represented on either side of the scale.

The educator's feet are resting upon the foundational knowledge of Human Development and Personality Theories. The Human Development Theories give the general knowledge and direction for the description and explanation of age changes and continuity in behavior. The personality theories provide various interpretations of personality traits which describe and provide an account of the unique quality of the individual's personality (Chaplin, 1975).

Human Development and Personality Theories form the basic foundation for autonomy. "Autonomy" as a characteristic has been defined and studied by personality psychologists and sociologists since the early 1900s. Human and child development psychologists have more specifically described its origins. However, human development theories are not theories of practice. They help define "autonomy", but do not prescribe for its development in the classroom setting. Therefore, the educator must turn to the cognitive learning theories to find a theory of practice.

The Educator's Interaction

The RA Design combines the two psychological perspectives into an original perspective which views the learning-teaching process as an interaction between the two concepts along a continuum of comparisons. These psychologies are represented by the learner's desire for both social identity and individual expression; group cooperation and emulation as opposed to independent thought and action. Adults and children alike expand their cognitive and emotional strengths with choice, decision making, and interaction

between the two frames. The educator will consider that effective classroom and school environments provide for both systems of learning through the utilization of the concepts in each of the psychological perspectives.

Social Cognitive Frame

The Social Cognitive perspective in psychology applies principles of social learning and cognition to personality (Bandura, 1986). It proposes that our personalities are shaped by the interaction of our situations, thoughts, feelings, and behaviors (Meyers, 1987). Montessori's "social cognitive" paradigm is prerequisite to understanding her view of human development and educational psychology. It approximates the current "social-cognitive" perspective proposed by Albert Bandura (1977). With Montessori, it originated in her initial investigations into human learning, personality and motivation. The implementation of the social cognitive psychology was furthered by theories of social development, through including the modeling and observation occurring in classrooms, and the interaction occurring between individuals and environment (Bandura, 1977; Montessori, 1912).

Neglecting one of the most powerful sources of individual motivation, peer and adult modeling, educators often emphasize conformity to group structures. Social cognitive learning theories provide a technique for educators to implement the cognitive field approach to learning. Mixed age groups, non-graded classes, group cooperation and a democratic social group are themes which complement the adult and peer modeling process. Other techniques employ the structuring of curriculum and materials allowing for free choice, auto-education, mastery learning and increasing self-efficacy in the individual (Block, 1981). "Rational" is defined as a utilization of social cognitive theories as teaching

strategies and curriculum improvisations to forward the cognitive field approach.

At the core of both of these theories is perception. This is defined in social cognitive theories as sensing and deriving meaning from others, their actions, and their utilization of objects within the environment. This is especially enhanced in children within a mixed age groups, or non-graded classes, as recommended by educators (Berger, 1968, Crary, 1969, Goodlad and Anderson, 1987).

Cognitive Field Frame

Cognitive field psychologies emphasize the perceptual view of the individual as a unitary process (Bigge, 1982). These theories form the basis for the definition of autonomy. The individual identifies with others or an object, only if it first contains meaning to the perceiving individual, and is personally important to the perceiver (Bigge, 1982). Therefore, motivation is situational and phenomenological (Rogers, 1977).

In the Design, the educator, vacillating between these two theories, suspends all views to realize the importance of both perspectives in evaluating and creating new classroom concepts and contexts. The educator must also consider self, and others in a life-span understanding of education with both rational and autonomous forms in various combinations.

Summary

This chapter has been devoted to providing the reader with a review of autonomy and the dilemmas which this psychological characteristic creates. The central historical issue suggested by Raleigh (1962) and which extends into psychological issues today, is whether the individual may consider free will for self and others. Determinism counters

any conception of autonomy for the individual. Allport (1955) describes the search for finding autonomy, or "becoming" as originating in the early years, and extending throughout life. This focus on self-fulfillment is in opposition to looking toward others and consideration for the common good. Reason is societies' answer to the unanswerable, a ruling force. The educator needs to consider the interactions between autonomy and rationality as the most valuable portion of an autonomy theory.

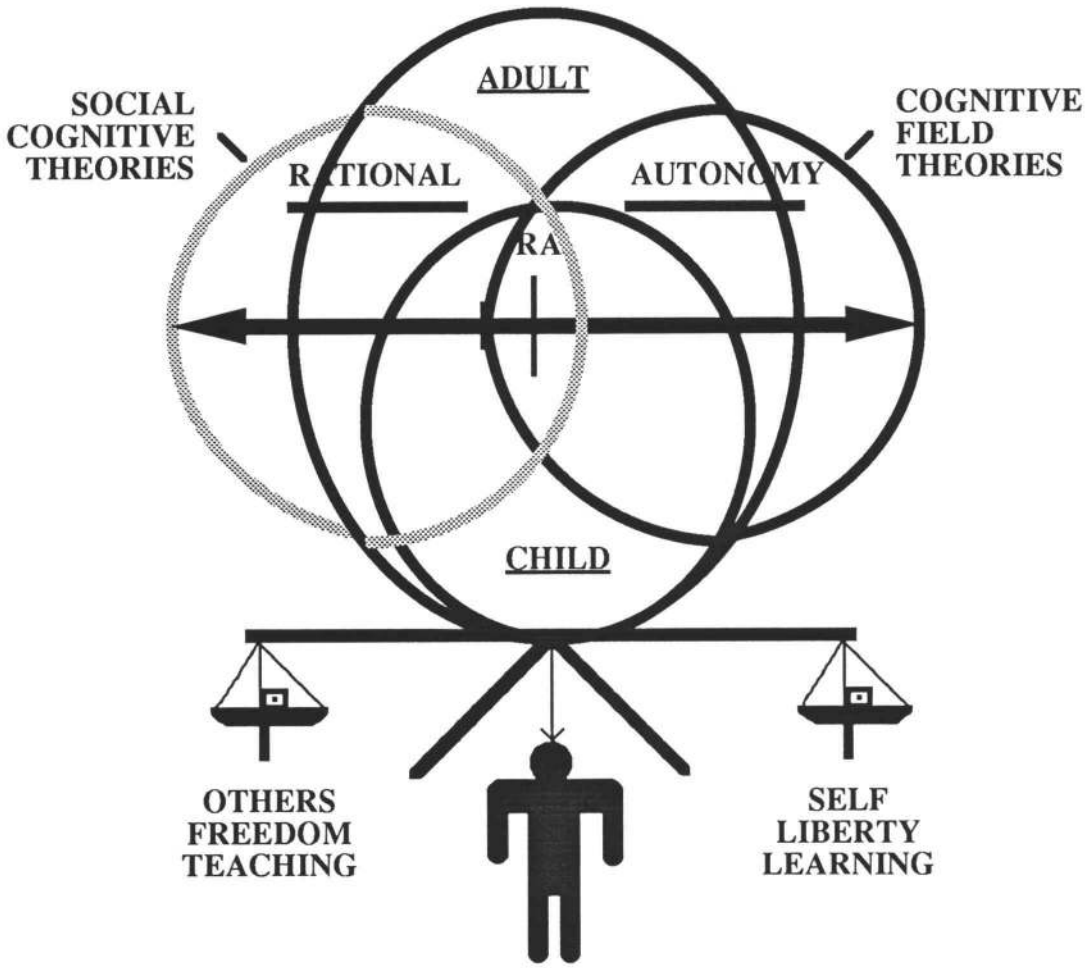
Education reflects the history of psychology in the development of its own discipline, educational psychology and the early psychologies of Seguin, Itard, and Pereira were one distinct line of influences upon Montessori's educational psychology. The origins of her paradigm are examined through her early professional career and her examination of the child's conscious mind and cognition.

The constructs of the Rational Autonomy Learning-Teaching Theory are explained with the psychological foundations defined.

DESIGN OF RATIONAL AUTONOMY (RA)

PSYCHOLOGICAL FOUNDATIONS OF

A LEARNING-TEACHING THEORY



Human Development and Personality Theories

FIGURE 2

CHAPTER III

MARIA MONTESSORI: HER LIFE AND EMERGING PSYCHOLOGY

Introduction

Chapter III will review Dr. Maria Montessori's life, the emergence of her cognitive psychology theory and its relationship to her paradigm of autonomy development. The relationship of her cognitive psychology to the two contemporary learning theories: the social cognitive and the cognitive field theories will be exemplified.

Montessori's Life and Psychology

Politics

To understand Montessori's emergent psychology and the direction of her life (1870-1952), one must understand Italy and its politics and economics during the first half of the twentieth century. Born before the turn-of-the-century at the height of the Victorian period, Montessori lived within a fertile time period to champion many humanistic causes. These causes ranged from women's "rights" in careers and child care to tolerance of other religions and cultures. However, Montessori lived the last five decades of her life through the devastation of humanity's two World Wars, and this removed her from her Italian homeland. This had a monumental influence upon her views of the educator, politics, and personal liberty.

> Not in the service of any political or social creed should the teacher work, but in the service of the complete human being, able to exercise in freedom, a self-disciplined will and judgement, unperverted by prejudice and undistorted by fear (Montessori, 1950, p.122).

Montessori herself, when asked about her native-land replied that she was a "citizen of the world,... not of one country" (Montessori, 1970).

Montessori was displaced several times, making her home in Spain during World War I. Returning to Italy, Montessori schools and her training courses flourished in England, Spain, France, Austria and Holland. With Mussolini's rise to power, Montessori did not realize the significance of the political affiliation of the Pope and Mussolini, and naively remained in Italy (Kramer, 1977). When asked to change procedures and philosophy and to include the new doctrine, Montessori refused and fled Italy once more with her adult son, Mario. After spending time developing new schools and teachers in Holland, Montessori and her son moved on to India just prior to World War II. But as the political realities of WW II took over, Mario was interred in India separating him from his mother, who was allowed to continue her work. Eventually Mario was released and returned to continue his support of his aging mother.

World events during that time-span coupled with technological advances, created within Montessori a growing mysticism in her writing. The published books and papers of that time frame, also reveal a woman sickened with war, and viewing education as the only hope for a new order in the world.

> Human teachers can only help the great work that is being done, as servants help the master. Doing so, they will be witnesses to the unfolding of the human soul and to the rising of a new Man who will not be the victim of events, but will have the clarity of vision to direct and shape the future of human society (Montessori, 1950, p.42).

Politics and Existential Themes

Never forgetting the devastation of war, she also distrusted political leaders and governments as a whole. Her existential themes of "peace", "the child within Man",

"adaptation", "power within man", "becoming" and "overcoming the environment man has produced" are reflected in her later books following the wars. But, the theme of "power within man" was a theme which she consciously held in early years, too.

> I believe that the work of the educators consists primarily in protective powers and directing them without disturbing them in their expansion and in the bringing of man into contact with the spirit which is within him and which should operate through him (Montessori, 1916, p.28).

When Montessori wasn't traveling, she spent a great deal of her time after WW II in the sanctuary of Holland and her son's family. There in the country where she was buried, the "original" Montessori materials have continued to be manufactured and the Association Montessori Internationale (A.M.I.) headquarters have remained.

Three years before her death, she warned higher education that politics must become an important issue with teacher educators and their students. She was concerned that educator's would fail to examine their institutions.

> In most state controlled systems, what matters is that the program shall be fulfilled. If the spirit of an undergraduate reacts to social injustice, or to political questions concerning deeply felt truths, the order of authority goes out that young people must avoid politics and concentrate on their studies. What happens then is that young people leave the university with their minds so shackled and sacrificed that they have lost all power of individuality and can no longer judge the problems of the age in which they live (Montessori, 1949, p.72).

Thus, from early childhood to the university, Montessori reflects an existential philosophical base which forms a foundation for the cognitive field psychology perspective.

Anthropology, Human Development and Psychiatry

Dr. Montessori graduated in 1896 as the first woman physician in Italy. She also won awards for her laboratory research on the brain and later took a scientific education into teaching by developing her educational methods of naturalistic observation and inductive theorizing. Although this was not considered a scientific method until the past few decades, early childhood researchers in particular have recently returned to naturalistic observation as a viable means of understanding children, parents and the kinship structure (Brofenbrenner, 1979). The field of anthropology has provided part of the basis for these efforts, as anthropologists around the world attempted to understand humans by observing them within their own culture. Individuals before and since Montessori have observed their own children, but few scientists of her time had been prepared to observe a classroom with such a scientifically trained eye (Kramer, 1977). This was to become her ally whenever others challenged her. In fact, observations of the child was one of the first important tenets in her teacher education program.

Montessori's interest in field anthropology and psychology developed as she visited the mental asylums of Italy and was appalled by the squalor and lack of reform. At the time, she was a young resident physician at the Psychiatric Clinic in the University of Rome. She returned there to initiate some of the first anthropological and educational field notes in Rome. From this setting, she observed children who were so craving for stimulation that they played with anything they could find on the floor. She noticed that they seemed to have a desire for stimulus of any kind.

Basing her ideas on the work of Jean Itard and Edouard Seguin, two French doctors who had worked successfully with retarded children, she started her own experiment (Standing, 1962, p.28). She was convinced that a different set of educational principles and psychology lay in this area of thought, and that similar methods to what she had used with the retarded child when applied to normal children "would develop and set

free their personality in a marvelous and surprising way" (Montessori, 1949, p.3). This was the key thought that formed the basis for the experiment of the Casa dei Bambini, but first was put to use in this psychiatric clinic. She was greatly influenced in the development of her classroom materials by Pestalozzi and Froebel, great names in education from the previous century. Before this time, the child had been regarded and treated as a miniature adult, and required to behave and act like one. The child's freedom had been very limited and children were to be regarded as ornaments of their parents; as "butterflies affixed with a pin" (Montessori, 1961, p.14). Unfortunately, even at the turn of the twentieth century, childhood as a distinct legal and emotional period had not yet been accepted as a special time in the span of life(Osborn, 1980). Montessori was to focus upon it as the most important phase in the human life-span.

In 1904, Dr. Montessori was appointed full Professor at the University of Rome, where for four years she occupied the Chair of Anthropology and culminated this period by publishing, Pedagogical Anthropology. In addition, she continued in private medical practice with a reputation for having a warm and personal interest in each patient. On one occasion, a family noted that she was so concerned for their child, that she remained in their home as, servant, cook, nurse, and doctor (Kramer, 1977).

She lectured at the Pedagogic School of the University of Rome where she concentrated in instructing educators in assisting the "exceptional" child.

> Her lectures dealt with the history of anthropology, and its application to education, aspects of general biology, and those characteristics of the individual to be studied by the anthropologist as educator: stature and weight; the head, brain and face; the thorax, pelvis, limbs, and skin; types of malformations; techniques of anthropometric measurement and statistical methodology and -- the culmination of all this data -- the biographical chart of the pupil (Kramer, 1977, p.96).

Through her anthropological observations, she was eventually able to show a connection between the child's behavior and his environment. This was a precocious

discovery in turn-of-the-century Italy, as she showed that the abnormal child should not be treated as a criminal, but as a person with an illness (Kramer, 1977). Although she eventually abandoned all of her anthropological measurements of the child, she used these physical signs as ways to indicate that children were becoming ill from consumption of the chest; or that they had better physical growth through good nutrition. But to her, unlike Gesell (1937) searching for normative measures, Montessori researched individual differences.

Her interest in physical development led Montessori to develop special materials. It is noted that she may have been the first to develop the "jungle gym", climbing apparatus, and balance beams to aid in the child's walk and coordination (Kramer, 1977). Of course, the small moveable chairs and tables were one of her first considerations in the classroom, as well as small rugs to rest on in class, or on which to do the work. Montessori early identified a link between anthropology and research in child development, and eventually reform of the classroom. She wrote in 1913:

> The reform which has begun with the introduction of an anthropological movement into the school and the establishment of biographic charts, is nothing less than a reform of science as a whole. Medicine, jurisprudence, and sociology, as well as pedagogy, are laying new foundations upon it (Kramer, 1977, p.100).

A humanitarian and a multi-disciplinary researcher, Montessori anticipated a new coordinated approach for viewing children. But she would never realize this in her own life (Montessori, 1948).

Montessori's work, from the very beginning, was scientifically and anthropologically based. Her background in physical medicine, and her social reformer's outlook had led her eventually to the problem of the normal child and the lack of learning. Montessori recognized that immobility in public school, enforced silence, and rewards or

physical punishments only hindered children (Montessori, 1913, 1914).

Montessori, A Parent

During this time, she met and fell in love with another young doctor who was working with her in these schools. His name was Guiseppe Montesano, a man who was pledged to her when she was at the Orthophrenic School. Due to family strife and perhaps Maria's own ideas about getting married, they agreed to remain single, and she bore a child, "Mario", on March 31, 1898. (There is some debate about this date.) Guiseppe married someone else, and Maria left the work at the Orthophrenic School and started a new career with the study of normal children. Convinced by her mother to place Mario with family friends, he attended private schools for most of his childhood. With the strict moralist attitude of the day, Maria's mother did not want her daughter to be dishonored by publicity of his birth. She and Maria were emotionally close and supportive. Kramer (1977) reports that it was Maria's maternal family who originally provided the relationship and political connections to the Pope. They also contributed financial means, which permitted the young Maria to enter medical school in the first place.

Thus, Maria followed her mother's wishes. Between her increasing travels and lectures and duties at the University, Montessori continued to visit Mario in the Roman countryside maintaining their close relationship (Kramer, 1977). Eventually, when he was twelve years old he joined her in these travels (Kramer, 1977, p.97). The relationship between Maria Montessori and Mario remained a strong one. After her death in 1952, he continued her work as the head of Association Montessori Internationale (A.M.I.).

Casa dei Bambini

In 1906, Montessori was asked to help a private charitable organization to

experiment with normal children in the slum quarter of Rome known as San Lorenzo. Most of these children had nothing to do while the adults were working and were destroying their own apartment buildings. She was asked simply to gather the children together and to pay someone to look after them (Montessori, 1912, 1948).

Dr. Montessori's first biographer, an English psychologist, engineer, and Montessori-trained teacher, who translated for many of her training sessions wrote:

> In the history of education, from the time of Plato to the present day, there is no episode more remarkable than the series of happenings which came tumbling into being, one after the other, during the next six months. With sixty tearful, frightened and shy children ages 2-6, she enlisted the help of a few untrained young women and started making materials and preparing a dynamic environment which which would be changed as she observed the children in her experiment. In the beginning, many of the familiar toys of the wealthy were included in her classroom. One by one, these were discarded by the children as they eagerly ran to her 'real life activities' and the small didactic materials she prepared for them. Montessori claimed that it was the first time, within a school classroom, that small child size moveable chairs and tables were constructed for a school classroom. Until then, children's seats were fixed in long rows making the children immobile. The children were given lessons on how to move and carry this new furniture that was made for them. Montessori also showed them how to wash and polish their furniture; in addition to sweeping and scrubbing the room. (Standing, 1962, p.39).

Reared in a traditional upper class Italian family, Montessori, the only daughter of Renilde Stoppani and Alessandro Montessori had probably not had to perform many housekeeping duties. But she thoroughly enjoyed these activities (Standing, 1962, p.21). She observed that these daily routines of "real life activities" were among the favorite occupations for the children, too.

The Psychology Develops

Montessori said later, that by a new approach, in which freedom in meaningful

work was exercised within her prepared environment, she succeeded in "liberating" the higher forms of personality that had previously "been concealed" in the children under a mask of what she termed, "deviations" (Standing, 1962, p.44).

Montessori named this process of, ... "the unfolding of the true nature of the child", -- "normalization" --, a term which represented what she held to be the normal child was meant to be. This discovery formed the basis for all of Montessori's future observations. The young student was seen as absorbed in intelligent activity and following an inner urge to repeat an activity several times. Montessori (1912) noted several mutually occurring signs. The little student demonstrated a love for order, the ability to work independently, and to exercise free choice. One of the most amazing results in this experiment in Rome, was that out of freedom to choose work, and to repeat an activity as long and as often as the child desired, Montessori observed a "spontaneous inner discipline" demonstrated by the child (Standing, 1962, pp.41-42, Montessori, 1917, 1965).

In this "prepared environment" of the classroom, several materials were introduced. The child practiced the education of the senses, reading, grammar, music, "manual training" as modeling, and "gymnastics". The child also learned about cleanliness, order, and patience in preparing the luncheon meal, and handled real kitchen objects. The pleasure the children took in silently concentrating on the materials was remarkable. Montessori (1912) had the ability to learn from observing the children at work on the apparatus and constantly made constructive changes in the work situation.

Montessori made certain generalizations on the basis of her inductive observations. These included the ideas that children go through a series of "sensitive periods" or sensitive phases of development when they show creative and spontaneous interest in learning and have the maximal ability to do so (Kramer, 1977). This occurred primarily in the very early years of life, before age six or seven. She observed that

children prefer "work" with creative materials, to "play" with objects defined as toys, particularly within the social setting of the classroom. However, her first classrooms were always adjacent to gardens and areas for outside non-structured play or rest. These gardens were used for the children to carry their tables or materials outside to play and work with their friends in the warm Italian sunshine. Children were given the liberty to select activities, and the freedom of self-instructional time. Montessori found that children have an extraordinary capacity for mental concentration, a desire to repeat activities several times, and a love for order. Montessori observed that children develop a concern that materials be returned to their proper place, that work seemed satisfying, and that there is little use for external rewards. Spontaneous self-discipline is created by the liberty and independence created in this school situation. Within a climate of freedom, where children are individually and equally respected by the teacher, there appeared to be little need for coercion or punishment. The children behaved well, and enjoyed their work (Montessori, 1912).

Small children have often been regarded by adults as making constant demands for diversion, incapable of concentration, easily tiring of their toys and flying off into fantasies at every whim (Montessori, 1948) However, in her very first experiment at Casa dei Bambini, children demonstrated that they enjoyed purposeful "work" as much as unstructured play (Montessori, 1912). As Montessori continued to experiment with children, she noted that they would continue at their work with indifference towards rewards or punishments from their teachers (Montessori 1912, 1948). Montessori (1912, 1914) reported that over a period of time, a tranquil, calm and loving nature often revealed itself in almost every child, arising from the deep concentration of the work which had been freely chosen.

Within the social setting of his classroom, the child was allowed and even encouraged to create interests and develop abilities, prior to helping or sharing with others.

Montessori saw in these slum children, a great sense of personal dignity, and a desire to do things for themselves as well as for others (Kramer, 1977). But she also comprehended that the child's "person", or personality expanded through learning while practicing altruism.

The youngest two or three-year-old wanted to learn how to wash his or her own face and hands, and comb his or own hair. Some of the four year-olds wanted to learn to write their names, some began to read, and the five and six-year-olds were interested in the mathematical materials, which they used with order and precision. Social life of the children began to improve as they first worked on their own activities and then demonstrated an inclination to share and help each other (Montessori, 1912, 1914, 1948). The altruism toward one another and their school environment began to influence their attitudes and actions in the care of their apartment building. Before this time, the graffiti and poor care of the common areas was accepted by all. According to Montessori (1948), a new pride and careful attitude was apparent in both children and adults.

The typical day began with the children cleaning the classroom, caring for the pets and animals, and with the older ones preparing food and serving the little ones. This followed with a short group time, and then individual free choice of activities.

The Family and Teachers

In this first slum school, one of her most important realizations was that the family must be an important part of the child's development. In order for a child to remain in the school, the parents were required to attend a weekly meeting with Montessori in the classroom (1912). Parents were asked to learn about their child's sensitivity to order and his desire to help himself, and were encouraged to view their child in a new way (1912). In working with these first parents, Montessori slowly evolved a theory of parent "rules"

that would encourage the adult to set an example for the child. She demonstrated respect to both the assistant teachers and the parents, with the hope they would emulate her and respect the children. She named the female teacher, "directress" to represent one who would direct and demonstrate the activities (1912). The adult would direct children in such a way that they realized they were individuals, each possessing dignity, and deserving a respect for their own unique capabilities (Standing, 1962).

> What Dr. Montessori had succeeded in doing, quite accidently, was to discover a 'new' child, with a nature and capacity never attributed at that time to children. People came from all over the world to observe the San Lorenzo school as well as many more schools which she began to establish, and were amazed not only with the children's accomplishments, but also with the way they could respond to deep feeling with each other and with the visitors. Their own little culture within the classroom revealed respect for themselves as well as a loving, helpful attitude toward others. Little quarreling or fighting was ever seen, and the directress herself, even though a nonscholarly individual, began to take on the role of an observer and scientist of human nature as she observed what the children needed and wanted. If they asked for her help, he went to them as their servant, not only as their teacher. Yet independence was a rule in the class, as well as the home, and Montessori asked that adults never do anything for a child he could do for himself (Standing, 1962, p.53).

Whether in Italy, or in traveling to America and to other European countries, she was constantly lecturing and training teachers. However, she found the rule of fostering independence in the child, was more difficult to establish in classrooms for those families who were from the upper economic group (Fisher, 1912). Montessori predicted that it was more difficult to bring this group of children into "normalization" as these children may have been spoiled by too many diversions, and had less liberty to learn within the family. Many of these children were kept from helping themselves or others, and did not have an example of seeing their parents working in and around the home.

Materials

As she further developed materials from which the children could learn, she

developed several major areas of learning, borrowing ideas from other talented educators, but creating her own unique materials (Orem, 1965). She saw a need for materials to be manufactured and crafted from natural materials. The "cottage industry" was a traditional form of manufacturing then. Montessori had the materials hand-crafted from natural woods, fabrics and glass. The glass beads were developed for counting the decimal system. Long polished rods of bright colors and large prisms were designed with some of the first geometric forms adapted from Froebel's blocks (Montessori, 1912). But the accurate wooden geography puzzle maps of every continent, sandpaper letters, and all of the additional cultural materials were Montessori's inventions which evolved over time. The primary source for the sensory materials were from Seguin, the French physician and teacher. But these too were modified and reproduced after her many experiments with the children. The wooden sound boxes, baric tablets, geometric shapes, smelling bottles, and various objects that the child could touch and utilize the five senses were developed and tried out as part of the experiment. Through many years, others added to her ideas, and the classroom materials increased in quantity and age range applicability.

Eventually realizing that children showed an amazing capacity to "absorb their own culture", from birth forward, she increased the materials for the elementary school. Beginning with the lower age level of students, she added simple lessons in geometry, history, botany, zoology and science (Montessori 1917a, 1917b). From these materials, the basis for her "cosmic view" of instruction evolved, and more materials were designed by her and others (Montessori, 1950, 1962). The materials she developed for these areas came through a lifetime of traveling, observing and experimenting with children around the world (Montessori, 1948). Many of these same materials are used in Montessori schools today, but not entirely without invention. Whether in this country or abroad, the "Method" lends itself to creativity and change. The set of additional primary materials were eventually designed by Montessori and her followers (Orem, 1965). Although many of

the materials in the preschool room would challenge elementary age children, these were extended for the 6 through 9-year-olds, and eventually, for the 9-12 year old group.

Methods

In a Montessori classroom, ages of the children were always arranged in a 3 year age span with the various age groupings; 3-6, 6-9, 9-12. This system accommodates the child who is ready for more advanced material, and at the same time allows a child to repeat familiar activities. Montessori considered the repetition of a familiar material favorable and normal for individuals (Montessori, 1912, 1914, 1949). For some children, it was a time of learning. For others repetition allowed reviewing, and perfecting. While for others, it was a time to just relax or keep the hands busy as the child conversed with a neighbor. Montessori (1936) emphasized that the child knew what he needed to do to "perfect himself", and that the teacher should observe and only interfere if the repetition became obsessive. What the directress would know through constant observing was when the child was ready to have more challenge. It was the teacher's responsibility to anticipate this, and always provide models for the child of others working on the next level of material.

Final Years and Honors

Montessori's lecturing and training courses took her around the world. At the age of sixty-nine she left her home, then in Amsterdam, to travel to India. With Mario at her side, they established training courses in many nations. The course in India was organized by the Theosophical Society in Madras, at an estate in Adyar. During the first visit, Mario was known as her "nephew". She stayed for almost seven years, and returned there again in 1947; after being offered a chair at the University of Berlin, but refusing to return to

academia. It was during this trip that Mario was finally known as her "adopted son".

At age seventy-eight, excited that India had gained independence, Montessori returned to give another training course. There was a greater need and desire for education there than ever before.

> When she was asked in the fall of 1947, during her course at Adyar whether she was a Theosophist, Montessori quickly replied, 'I am a Montessorian'. She also said she had no thoughts of retiring: 'Work is necessary; it can be nothing less than a passion; a person is happy in accomplishment' and spoke of the years before the age of six as the child's 'age of formation' and the years from seven to twelve as the time for 'cosmic education', grasping the interdependence of everything in nature (Kramer, 1977, p.355).

Schools and training centers were set up throughout India at Montessori's direction. These included Colombo, Bombay and Ahmedabad. She also went to Pakistan at the invitation of the new government in 1949, where she instituted schools in Karachi (Kramer, 1977).

In the winter of 1949, Montessori received the cross of the Legion of Honor in the name of the French Republic for the significance to humanity of her work. She was also acknowledged for her efforts for world peace through education, by being nominated for the Nobel Peace Prize in 1949, 1950, and 1951 (Kramer, 1977, p.360).

Since her death in 1952, there has been a "rebirth" of Montessori schools in the U.S.A. Montessori's, Froebel's and Seguin's original ideas for games, toys and puzzles in a classroom have encouraged modern development of these objects. In addition, the teaching machines and small scaled furniture in schools could trace their beginnings to these innovators. Particularly the open classroom of the British Infant and Primary School and perhaps some preschool, Kindergarten and first grade materials in America, may move some of their roots to Montessori's ideas(Stevens and Gardner, 1982a).

Thus, the content of the modern child's life has been increasingly filled with

material objects. However, the "context" in which these materials are presented often lack the innovators' intentions. But the primary idea of individualized education, and liberty for the child in a context of freedom, is often emulated if not duplicated.

Montessori's Social Cognitive Theories

How does Montessori psychology regard school learning? Montessori regards a child's learning as experience, the work done to create oneself (Montessori, 1948).

Holistic Education

Montessori was very concerned with the body as well as the mind. She examined the child's body length and his growth size, and proposed that children tire easily if they are not allowed to stand upright or rest supine because of the expanding brain and head size. Thus, the expenditure of needless energy during school work would be less if the child were allowed to choose the comfortable position. Small colorful carpets and mats are provided for the children to carry to an individually chosen area of the classroom. Unrolling the small carpeting, the child then carries the chosen task to the rug, sitting, lying or standing with the work (Montessori, 1948).

Liberty

There is a psychological island of safety provided, as others are instructed to walk around the rugs in the classroom (Rambusch, 1962). The expenditure of energy is maximized because the child has few distractions if she or he wishes to concentrate. If the child leaves the work to go to the bathroom, to secure refreshments, to assist a friend, or even to look out the window; the task remains unharmed and protected until the child

returns. This represents both the freedom promoted for every child, and the liberty the child personally realizes concerning the activity (Montessori, 1948).

Social Learning

The rug also promotes cognitive assistance for the children. One of the most important is in the area of social learning. As children walk around the classroom and circumvent the small rugs, the materials are on display. Materials which are easier and more advanced, may be observed by the walker. The child is introduced to many more activities than one might choose on his or her own volition. There is also the observation of many other students concentrating on their own tasks, or inviting one to help, or to visit for a moment. The observer is motivated to choose new activities, and occasionally learns from pure observation "vicarious learning" (Bandura, 1977, p. 65), a complete task executing perfectly the first time it is attempted it (Montessori, 1948).

Symbolic Learning

School enculturation includes many new "symbolic" concepts for a child to learn (Bandura, 1977, p.63). Mores, manners and attitudes of concentration; solo and group participation; how to observe another or enter a discussion; or reflection and resting, may all be observed by the "walkers", and "wanderers".

Reflection

Reflection is probably the one part of cognitive activity which is recognized and respected as legitimate in a Montessori classroom (Montessori, 1914). The child is not

hurried with the work. The task may include time for thinking, dawdling and day dreaming. All are considered permissible, and manipulating or playing with the work is allowed by the watchful, yet permissive teachers. However, the child may not mistreat the material. A teacher may approach and actively encourage, by example, a new way of playing with the material (Montessori, 1948). Whether this is done on a small carpet, or seated in one of the miniature chairs or tables; child size materials, equipment and furniture all provide a view for the child and the adult alike to observe (Montessori, 1948).

Modeling

How important are models in a child's life? Should educational theories endeavor to create models of behavior for educators? The question seems to be rhetorical, for regardless of what behavior a teacher or parent exhibits it will be internalized by the child (Myers, 1986). Perhaps that is one reasons why it is so difficult to change an adult's perceptions of what a teacher should model for children. The teacher has had many previous teachers who have influenced then perceptions.

Bandura

The noted experiment devised by Albert Bandura, the pioneering researcher of observational learning (Bandura, et al., 1961) took place in a nursery school. When they became angry, children exhibited similar aggressive actions which had been previously enacted by a modeling adult. Surprisingly, the language and the very acts that had been observed were imitated in great detail. Such studies indicate that antisocial models, whether in one's family, neighborhood or on television may have antisocial influences (Bandura, 1973). Studies of battered children and spouses indicate that these tendencies are often acted out in successive generations (Roy, 1977).

But to develop prosocial, or positive helpful models, individuals who exemplify nonviolent, helpful behavior can elicit that in others. The behavior may also reduce prejudicial actions. Maruyama, et al., (1984) have indicated that those who work or play together in interracial projects are more likely to feel friendly toward those of another race. Cooperative learning activities within the classroom involving interracial groups in which each member is able to make a valuable contribution have been so successful, that more than 14,000 teachers have already introduced interracial cooperative learning (Cook, 1984). Thus, Montessori in her early arrangement of interracial and varied age groupings, with models of pro-social lessons preceded social learning techniques.

Freedom

Classroom groups may encourage prosocial attitudes, and represent the equality or "freedom" side of the Rational Autonomy theory. Montessori viewed social groups as a desirable, natural and eventual occurrence for children as they individually desired association. Group learning directed by adults, was to be considered a process which would be introduced to the children on a daily basis for very short periods of time (Montessori, 1912, 1916). Peer groups would form naturally as the children were older, and were particularly prevalent in the elementary class.

Montessori was most interested in the individual, since ultimately every individual represented the beginning of education (1948). Does this emphasis on the individual foster and create an individualistic and antisocial individual?

Mixed Age Group

One of the most important features of the Montessori psychology is the insistence upon a mixed age group of 2-4 years age span. By having ten or more children of each

age group, the group may range in size from 25 to 40 children. Montessori advocated classes of 50-60 children (Montessori, 1912). If the environment is prepared carefully, and if the children are brought into the classroom setting with many "lessons" from the teacher, a larger group may actually facilitate the social learning.

Social Interaction Study

In a comparative study of social interaction in a Montessori preschool, a parent cooperative preschool and a university laboratory school, Reuter (1974) compared the children for social interaction. The Montessori environment had a mixed age group, a more structured program and fewer adults than the other programs. The question was to see if the Montessori children differed in their social interactions, and, if they did, was the difference positive or negative? The study indicated that the children in the Montessori program spent significantly more social interaction time with peers and less with adults, and the length of the interactions were longer (Reuter, 1973). Whether these interactions were positive or negative is not as easily discriminated. One assumption was made, and that was that "older" children have more advanced and therefore more desirable behavior than younger children. This was then used as a test for whether the behavior differences of the Montessori children were desirable. The Montessori 4 year olds spent significantly more time in social interaction, and with peers; and the 5 year olds continued the trends, and differed significantly from the other schools in a positive direction.

Higher Teacher-Student Ratio

However, the author is quick to point out that the social interaction scores may not be due to the Montessori method, but to the mixed ages or to the teacher ratio. A high child-adult ratio is an indicator to Montessori evaluators that the learning environment and

the school director are functioning optimally; a truly effective director can work easily with 30 children (Reuter, 1973, p.324).

Peer Influence

But, are all models in the environment of equal influence? Bandura considers perception an important part of the modeling process. Both Bandura (1977), and Montessori (1912) incorporate several learning approaches in their psychologies. The inner perceptions of the individual toward himself and the "life-space" (Bigge, 1982) are considered important by both Bandura and Montessori. To influence this, Montessori sets up behavioral objectives within the presentation of materials by pantomiming the order, uniqueness and self-correction of each part of the material. The successful mastery of observed experiences by the educator encourages modeling by the children. The educator's task is the structuring of many of these situations by encouraging influential older peers to work with the materials. This provides socialization processes within the artificial classroom setting and promotes successful viewing of subjects admired by others. The mixed class ages assist in this, as children often admire the older peer (Biehler, 1974).

> Information, whether generated by direct or vicarious forms of experience, is not absorbed automatically. Preconceptions partly determine which aspect of experience are extracted and how they are perceived (Bandura, 1977, p. 184-185).

Thus, the educator must realize that the preconception of the child toward another child, or toward the teacher or school may influence the success of the modeling. Also the mixed age group offers a strong assistance to the educator in the process of using social cognitive theories.

Montessori's Cognitive Field Psychology

> My vision of the future is no longer of people taking exams and proceeding on that certificate from the secondary school to the university, but of individuals passing from one stage of independence to a higher, by means of their own activity, through their own effort of will, which constitutes the inner evolution of the individual (A.M.I., 1970; Conclusion to text from Montessori's address at the International Congress in Oxford, England, 1936).

Growth of Autonomy

Reflecting a cognitive field existential position, Montessori's life-long interest in personal freedom permeated her emotional credo. The foundation for the development of independence in the individual rested upon an environment that promoted autonomy. But it was the individual's activity, which moved this independence to a higher level (Montessori, 1948). It was not reflected in outward societal marks, but in an expanding and "higher" growth of the personality (Montessori, 1949). This rested not only on the liberty to choose, and to act, but to have developed the "effort of will". Thus, the personality was ever tempered by responsibility to others, as well as to one's self. Self-discipline, or "will" as Montessori describes it, begins with the toddler's first moments of concentration as the child works toward a personally chosen aim. Whether the individual is learning to walk, or to unlace shoes, the child may freely choose to act.

The Will Develops

In her book, The Absorbent Mind (1949), Montessori clearly defines the development of an individual's will. She defines free choice as "one of the highest of all the mental processes" (Montessori, 1949, p.271). Montessori's definition of "free choice", is based upon conscious decision making, which comes about from a "building

up of the will". It does not come about by suppression of the child's will or the substitution of the adult's will. It is "something which has to be developed individually, and occurs naturally if fostered". Nature imposes on the child the task of growing up, and the will leads the child to make progress and develop the powers of choice (Montessori, 1949, p.252).

First, there is a requirement that the child be aware of the need for practicing with an activity, and for the need to develop the inner self through this practice. Montessori does not equate "free choice" with the situation that occurs when a child is attracted by "external stimuli" to choose various activities. This is not a sign of internal will or power of choice within the child. Rather, the child having no will power passes "restlessly from one thing to another" (Montessori, 1949, p.272). At this point, the young student is "still a slave to superficial sensations which leave the child at the mercy of the environment" (Montessori, 1949, p.272).

This is a crucial point in Montessori's psychology. She concedes that the environment may influence one's actions. However, not interested in perfecting the environment to control humans, Montessori recognizes the power to choose and decide as residing in every individual. As she describes it,

> ...there are theories which suggest that man's will proceeds from a great universal power *horme*, and that this universal force is not physical, but is the force of life itself in the process of evolution (Montessori, 1949, p. 252).

To cultivate the three levels of self-discipline and will within the child, the adult must plan an environment which will allow safe and productive choice. The three levels include the child: 1) playing or choosing an activity impulsively. 2) making a deliberate choice of activities which will aid the child's development (self-awareness). 3) obeying an outside authority through the child's personal decision -- not out of fear or blind

obedience. "Our children choose their work spontaneously, and by repeating the work they have chosen, they develop an awareness of their action" (Montessori, 1949, p.253).

Impulse to Awareness

At the first level of self-discipline, Montessori defines the child as acting from the "vital impulse, *horme*". Then, the child's act moves from the instinctive toward voluntary acting. This second level produces the "awakening of his spirit", or self-awareness (Montessori, 1949, p.253). This is evident through the child's actions and occasionally in one's language. Montessori claims that the child "feels" the difference as the individual becomes aware of the self and begins to act consciously and voluntarily. In emphasizing this point, Montessori describes a classroom incident in which a child expressed "feelings toward" this self-awareness, and decision making.

> A lady of high rank once paid the school a visit and, being old fashioned in her views, she said to a little boy, 'So this is the school where you do as you like?' 'No, ma'am', said the child. 'It is not that we do as we like, but we like what we do'.
>
> (Montessori concluded):
>
> The child had grasped the subtle difference between doing a thing because it gives pleasure, and enjoying a piece of work that one has decided to do (Montessori, 1949, p.253-254).

Individual Choice and Perception

The inner discipline of will begins when the child "concentrates his attention on some object that attracts him and provides him not only with a useful exercise, but with a control of error" (Montessori, 1949, p.264). Montessori describes the effect which takes place as an "integration" of the child's personality. Thus, the school and educator must

give the child's personality, space and opportunity for expansion. Montessori identifies this need as especially occurring at age three, when the child is:

> ...a fighter on the verge of being vanquished; he has already developed a defensive attitude which masks his deeper nature, ...All that remains active is a superficial personality which exhausts itself in clumsy movements, vague ideas, and the effort to resist or avoid adult constraint (Montessori, 1949, p.258).

But if the educator does not come into contact with the student until after age three, more defenses will be built up around the true personality and the innate self-discipline; the child's natural ability to make "free choices" as defined.

From ages one through six, the child's consciousness and self-control develops, but certain kinds of progress comes from interior formations of several phases. "Conscious will is a power which develops with use and activity (Montessori, 1949, p.254).

Montessori warns the educator that the child's will or self-discipline, develops through the child's personal action and practice, and not through the adult's talking. Holding up oneself as a model, and telling stories to elicit the child's imagination cannot have as much effect during these years, as an opportunity for active free choice, within a democratic community (Montessori, 1948, 1949, 1950). The modeling by the adult must primarily be in action and gesture and not in words. The words must be carefully chosen and coincide with the adult's precise purpose and the child's personality and activity.

"Conquering" the Will

In "ordinary schools", Montessori claims that the child's self-discipline is obstructed and inhibited. "...the children are reduced to watching what the teacher does and listening to her words" (Montessori, 1949, p.255). She claims that this could be a

misinterpreted Biblical concept in which the adult is putting himself in God's place.

> ...To educate, I must be good and perfect...if the children imitate me, and obey me, all will be well. ...The person before me is empty and distorted. I will straighten him and change him into one like myself (Montessori, 1949, p.255).

Montessori reminds the adult that if "he is putting himself in God's place... he is ignoring those other Biblical words", which inform the interpreter how, ..."the devil became the devil, ...that is to say, because in his pride he wanted to take God's place" (Montessori, 1949, p.255).

Freedom and Democracy

From spiritual ideals to political philosophy, Montessori warns educators that this type of education, "...still in vogue, condemns the teacher to be a dictator". Feelings about the principles of freedom and democratic theories, thus have little meaning to the young student. What is needed in the child's education is experience. Living in a democratic classroom culture, which emphasizes the promotion of liberty, or the child's personality will become autonomous.

Montessori holds these precepts to be valid educationally, whether the student is five or twenty-five (Montessori, 1939). However, Montessori's psychology examines obedience from the unique view of the cognitive field psychologist. "...obedience is a natural phenomenon of human life; it is a normal human characteristic...(or)...social life would be impossible" (Montessori, 1949, p.257).

Choice or Obedience

From Montessori's existential viewpoint, the "human soul acquired this quality by

some form of evolutionary process; a capacity for obedience" (Montessori, 1949, p.257). There is no lack of obedience in the individual then, but there is an absence of the control of this obedience within individuals. Otherwise, Montessori discerns, "The most casual glance at what is happening in the world is enough to show (us) how obedient people are" (Montessori, 1949). Montessori points out that "vast masses of human beings can be hurled so easily to destruction ...by an uncontrolled form of obedience" (Montessori, 1949, p.257). Montessori therefore, distinguishes between thoughtful choice and blind obedience. "But when people have fully developed their own powers of volition and then freely chosen to follow another person's orders, we have something very different" (Montessori, 1949, p.256).

Montessori interchanges the words "soul", "psyche", and "personality", and connects the word "power" with the individuals "will" and "personality" (Montessori, 1912, 1914, 1916, 1939, 1948, 1949). She views the personality as "powerful" in its ability to change and adapt. "The *hormic* impulse is only present initially, then it rises to a level of consciousness" (Montessori, 1949, p.257). Thereafter, self-discipline, will and obedience respond to that inner impulse and become a "decision" or in Montessori's terminology, an act that is "freely chosen" (Montessori, 1949, p.256).

Existential Psychology

Montessori's psychology is not unlike Frankl's existential perspective in Will to Meaning (1969). Frankl (1969) defines humankind's "will to meaning" as a basic striving within the life-span to find and fulfill meaning and purpose. "The status drive or the will to power, ...and the will to pleasure ...are derivatives of man's primary concern, his will to meaning" (Frankl, 1969, p.35). Frankl examines the differences between Freudian "drives" and humankind's obedience to their own free decision making (Frankl, 1969).

> Conceiving of man's primary concern in terms of a drive would be an inaccurate description...man is pushed by drives, but pulled by meaning, and this implies that it is always up to him to decide whether or not to fulfill the latter. Thus, meaning fulfillment always implies decision making (Frankl, 1969, p.43).

Rollo May (1961) in Will, Decision and Responsibility, initially defined the psychological existential approach, and defines its perspective and concern as, "The problems of will and decision" (May, 1961, p.249). Frankl (1969) warns, "...will cannot be demanded, commanded or ordered. One cannot will to will" (Frankl, 1969, p.44).

Thus, Montessori's view of the nature of "will", even within children, is similar in its approach to that of the existentialists.

Montessori (1949) proposes the growth of will distinguishing between blind obedience and freely chosen decision, or freely chosen will. Montessori considers that the child's will to choose freely, to decide, and then to act cannot be taught; either by example or exhortation, but primarily must be encouraged through purposeful experience in education. The child's will to choose freely, to decide, and to act accordingly is the highest mental act. Will is not inborn,

> ...but (as) something which has to be developed and because it is a part of nature, this development can only occur in obedience to natural laws (Montessori, 1949, p.252).

But how must the educator encourage the will to develop? What are the "natural laws" which will flourish within the individual?

Liberty to Learn

The answer lies within the environment which the educator must propare for the student. Not agreeing with the attitudes of educators who impose maturational limitations

upon children according to their age or "tested" abilities (1949), Montessori devised hundreds of her own materials for the child's private self-testing. These aesthetically pleasing, self-correcting materials were designed as the result of daily observation of children and seen by her to be appropriate to the child's development (Montessori, 1912). The test of any material's validity, then and now, is through the concentration it arouses within the child, and the positive attributes it produces, cognitively and affectively. However, the primary characteristic to elicit positive attributes is to be found in the "liberty" the child is accorded; to choose what's desired, from the prepared environment.

Montessori had environmental expectations to encourage personal liberty and consideration for others, and if the environment did not yield these results, the responsibility for improving the environment lay within the educator. Having the liberty, or person freedom of time and of choice to work, without interference or discrimination from peers or adult, encouraged eventual personality development in the child. Therefore, liberty becomes the prime ingredient in the development of the child's learning potential.

Literacy and Learning

Montessori's psychology (1936) included a value of "love of work", or "learning how to learn" (Rambusch, 1962). This is language which is most misunderstood by her fellow humanists (Montessori, 1936). But Montessori viewed mastery of the cultural environment as "work"; and the primary basis for the expansion of the individual's personality. The fact that basic literacy skills and cognitive development evolved concurrently with personality development, was important because it reflected a child's interest in the culture and the desire for mastery over it. The child viewed adults using certain tools, customs and language, and wished to emulate.

Interaction

Personality expansion and cognitive development were a result of the interaction provided between individual and environment; between "possibility and facticity" (Kobasa and Maddi, 1977, p.272). "Education should no longer be mostly imparting knowledge, but must take a new path, seeking the release of human potentialities" (Montessori, 1946, p.122). This new path, is one where "work" is not put in opposition with play, but in interaction with one another. The interaction between the individual and the environment may take on either the "play" or "work" meaning, depending upon the perspective. Montessori demonstrates in her psychology, that a child must have encouragement through a prepared environment to use the cognitive abilities, for it provides growth for an inner life that is then set free --- free to develop mentally and cognitively through the peer association in an environment.

Freedom and Free Will

Montessori examines the opposite pole of liberty which is the theme of authonomy, by partially defining freedom, which is the central motif of rationality. Discipline is related to freedom in this way:

> The question of freedom and discipline are connected with work. Given the necessary freedom, suitable materials and environment, what the child longs for is work (Montessori, 1948, p.136).

This freedom within the classroom to speak to friends, to move, to have time, to select one's activity is based upon a belief in the nature of humans. Montessori respects human nature and anticipates that humans are is capable of choosing, both wisely and poorly; but given a planned classroom environment, the positive traits are encouraged.

> The love of activity, the yearning for freedom, the instinct of obedience, the impulse to conform to laws which are in the heart of all creation -- these qualities make man the unparalleled work in nature (Montessori, 1948, p.138).

Responsibility

But Montessori does not avoid the responsibility which living in this social environment carries, recognizing whether it is the classroom or the world.

> Social life demands more discipline. Society decreases the bounds of the individual freedom. Freedom is necessary; so is discipline. Both are wanted for the advancement of the individual and society (Montessori, 1961, p.134).

Possibilities

Liberty within the individual, works in tension with the responsibility assumed by having freedom to enjoy social life. In defining liberty, as "the inner life", Montessori points out that the step to the increase of this inner life is through the realization of individual potentials.

> It has often been said to me that I am able to confer upon children the gift of joy, but I have not given joy to the children, I have allowed the child to work, that is what I have done. I allow him to work. Joy comes from the inner life, being free, so that the mental faculties are developed...
>
> In every stage of life, at every age, liberty is the realization of the loftier possibilities of one's energies, independence and perfection (Montessori, 1935, in Centenary Anthology, 1970).

Decision making and choice for the "loftier possibilities of one's energies" is difficult for the adult, but extremely difficult for a child. The child has no ability to control the environment, or the choices placed within it. Montessori observed the child, and then provided hundreds of possibilities for choice. These decisions rested partially upon the

"motives of interest" within the content of material. But the context of the classroom also encouraged autonomy. The adult provided liberty to choose, and protection within the context of freedom. By doing this, Montessori guarantees individualization, but allows the values of society to enter in. Rogers (1983) too, did not deny there were some "determined events" in the life of individuals. No one could live entirely without limitations. But the aim of education was to create the inner free person, who through opportunities to have choice promoted development of the will; and then became one who was experienced in making decisions.

> The free person moves out voluntarily, freely, responsibly, to play her significant part in a world whose determined events move through her and through her spontaneous choice and will (Rogers, 1983, p.281).

Montessori: Nurturing Nature Yesterday to Today

How important is experience to perception? Does experience, as well as biological maturation help develop the neural connections? At birth, the neural networks that enable the infant to walk, talk and remember are only beginning to form. Researchers are now becoming convinced that the brain's neural connections are dynamic; from birth onward, neural tissue is changing (Myers, 1986). Experience may be helping to nurture nature (Myers, 1986).

Brain Growth Studies

Annual studies in 1972 through 1984, by Rosenweig, et al., indicate that brain tissue of rats living in a communal playground developed a heavier cortex with larger nerve cell bodies and more glial cells that support and nourish the brain's neurons, than those rats living in a deprived environment. These findings have led to improvements in the

environments for laboratory and farm animals and for institutionalized children (Myers, 1987, p. 67).

Nurture

Montessori recognized the importance of the educator and parent as nurturers of nature (Montessori, 1912). She saw certain patterns of extreme ability erupting in children at specific ages. Naming these "sensitive periods" (Montessori, 1936), the child seemed to reflect heightened ability to absorb verbal information, to have attention focused on small objects, or to maintain order within the environment. Montessori (1912, 1948) saw a need to increase the opportunity for encouraging these cognitive sensitive periods. These periods were linked by Montessori to important phases for expansion in personality development as well as for cognitive or "critical periods" of development(Hunt, 1961). They marked a time of easy acquisition of literacy and cultural skills (Montessori, 1912, 1916, 1936, 1949).

If the environment is neglected, Montessori saw possible harm occurring. Human affection for the child was a necessary ingredient. Experiencing mother's visits to the market or to social activities was seen as important attributes for cognitive and emotional development. But as a child continues maturing, school becomes an important part of the enculturation. The "school" was to be an extension of the parents and the home. The first school was in the home of the parents (Montessori, 1912, 1948). The Casa dei Bambini was located physically in the tenement complex with gardens adjacent for the children (Montessori, 1912). Montessori was available for the parents' medical and educational consultations, and the parents were to be available to the school for weekly conferences and meetings.

Montessori notes (1912) that physical maturation may not be accelerated, but

optimal conditions may aid in its development. Today, studies indicate that acceleration in maturation skills such as physical skills in walking cannot be accelerated (Dennis, 1940, Ridenour, 1982); and most physical skills require certain muscular and neural maturation. But it is possible to retard development with restriction (Super, 1981). Montessori recognized this and devoted the final stages of her career to cataloging this neural and muscular growth for parents in her book, The Absorbent Mind (1949). But as the title indicates the infant was regarded much more than a maturing physical organism. The absorbent mind starts at conception, and Montessori was not content with waiting until school age at three for its stimulation. Parents should understand the education of children and employ techniques in the home. These revolved around liberty to explore, and freedom to have the home operate with love and responsibility (Montessori, 1961, 1979). Critical stages of cognitive development were recognized and charted throughout her book. Social/emotional and cognitive/physical development were seen as a responsibility of both parents and school; all adults acting as protectors, mediators and stimulators of the child's environment.

Montessori's cognitive paradigm, encouraging a child in an environment that included both liberty and freedom, acted as a stimulus for many others in the field of psychology. As Montessori schools took a resurgence in the 1950s in the form of Head Start, programs, and in public models and private preschool models; psychologists including J. McVicker Hunt, (1961), Benjamin Bloom, (1964), Lawrence Kohlberg, (1971) and Urie Brofenbrenner (1974) confirmed what Montessori had derived in her evolving psychology from 1909 to 1952. Stimulation of the child's latent abilities may promote and influence future development, if this is done in an environment which includes both individual liberty and social equality and freedom (Montessori, 1912). Montessori (1913) early indicated that this might even influence the child's eventual mental and physical maturation. Studies today, seem to corroborate this.

What are current studies indicating regarding attitudinal and cognitive gains from the Montessori programs? As noted by researchers, one of the most important research findings was in studying the effects of Montessori education in a longitudinal study. Head Start children were randomly assigned to one of four programs. DARCEE, Bereiter-Englemann, Traditional or Montessori. (a control group was used, but the children were not assigned at random). Children attended their assigned program and were tested throughout that year and up to the children's ninth grade year. At the end of the pre-Kindergarten year, there was no evidence that the Montessori children benefited more as measured by achievement (Preschool Inventory or IQ, Stanford-Binet) than children in the other three programs. By the second grade, the Montessori children had the highest IQs, were highest in math and reading achievement and had the highest ambition ratings and excelled in curiosity (Miller and Dyer, 1975). These differences, which emerged at the second grade, were still present at the sixth grade level and were particularly striking for males (Lindauer, 1988).

In the same longitudinal type study, Karnes, Shwedel, and Williams (1983) studied previous Montessori students at the high school level. Children who had experienced the Montessori programs exhibited higher school retention rates and the highest percentage of high school graduation (not significant), and higher composite school success rates (Karnes, Shwedel and Williams, 1983). Again, these authors found that the specific program superiority was evident primarily for males. They hypothesized that although there were not striking gains in language areas, the Montessori emphasis on independence and persistence at tasks aided them in success at school (Karnes, Schwedel and Williams, 1983).

Montessori programs are not the same standardized programs which one might find in certain programs. The freedom of the American entrepreneural system to change and modify programs, as well as the proliferation of Montessori teacher education

programs has changed the programs through the years. Montessori psychology and implementation has been questioned and modified, and yet in many schools, may appear to be the same.

> Implementation ranges from the ultra-orthodox to much more moderate practices. In fact the hybrid systems that integrate Montessori's notions with more traditional practices have become quite common (Lindauer, 1987, p. 124).

And the cross fertilization of Montessori's ideas to preschools and elementary classes has also occurred. From child-sized furniture, to balance beams, climbing apparatus or self-correcting materials Montessori's contributions have been great (Kramer 1977). The "hybrid" Montessori school may be an excellent opportunity to view Montessori translated into contemporary terms, and the next two chapters will translate that theory into modern practice.

Summary

This chapter has been devoted to providing the reader with an outline of Montessori's life which was influenced by the politics and social time in which she lived. Representing the cognitive field-existential position through her own life, Montessori was able to pursue her goals even amid several life crises.

Montessori's psychology is both pragmatic and phenomenological. The behavioral tradition and the social cognitive psychology gives emphasis to the classroom environment, the self-correcting materials and the peer modeling. But it is the interactions between individuals and between individuals and their environment, which are seen as most important. The cognitive field perspective lends the individualized approach, with

conception of a student who sees oneself and one's actions, others, and the environment, in ways which the educator may not understand. Thus, the educator's task becomes one of considering the child's total psychological "field" (Bigge, 1982). Mixed age groups in classrooms provide more opportunities for the social cognitive paradigm to operate. This is one of the techniques which teachers may employ to realize the cognitive field psychology, which focuses on the individual and the development of self-discipline, "the will" and eventually "the will to meaning".

Recent research in stimulation of the brain's neural connections resulting in positive growth, demonstrates Montessori's theories were early foundations for what would be studied several decades later. Consideration for appropriate stimulation of children's cognitive development in the early years of a child's life formed Montessori's basis for the evolution of her unique bifurcated educational psychology. Both liberty and freedom were distinct attributes in a psychology which recognizes the individual's innate capabilities to evolve from the unconscious to the conscious, from an "absorbent mind" to an active decision maker.

Montessori views the starting point in education to be the educator's ability to recognize the difference between a student's spontaneous activities of impulse, or those decisions which bring to life conditions which build the individual's indentity.

CHAPTER IV

KINSHIP AND THE CULTURE OF THE CHILD

Introduction

The initial development of autonomy in the young child is the focus of Chapter IV. The influence of the family and school upon the young child is considered through the examination of a school site and case study. The "Montessori" school setting will emphasize some of the modern adaptations and interpretations that have evolved as the prototype has been replicated, particularly as referenced in the American culture. Autonomy constructs for children and parents will be delineated.

> A society and culture with an affective base of solidarity leaning toward eros will not only produce more individuals ready for active and zealous involvement in projects and movements begun by others, but will produce even more individuals who will initiate with determination such projects and movements themselves (Hsu, 1971, p. 473).

The Anthropological Viewpoint

The concept of being an observer and an actor in a "Montessori classroom" and then later to analyze the process may present several difficulties. Geertz (1983) approaches this problem in his discussions of forming an anthropological methodology:

> The formulations have been various: inside versus outside, or first person versus third person descriptions; phenomenological versus objectivist, or cognitive versus behavioral theories...or by what the psychoanalyst Heinz Kohut calls, experience-near and experience-distant concepts (Geertz, 1983, pp.56-57).

As Geertz delineates, either point of view has its draw backs. An

"experience-distant" observer is one that specialists in experimentation or ethnography might take to employ their scientific, practical or philosophical aims (Geertz, 1983). An experience near concept is taken to define:

> What he or his fellows see, feel, think, imagine, and so on, and which he would readily understand when similarly applied by others...Clearly the matter is one of degree, not polar opposition (Geertz, 1983, p.57).

Shulman (1981) helps clarify the process by stating,

> To claim that one is conducting a case study requires that an answer be provided to the questions, 'What is this a case of?' Not every description is a case study. It may be a singular individual or event. To claim that something is a case study is to assert that it is a member of a family of individuals or events of which it is in some sense representative (Shulman, 1981 in Wilson and Gudmundsdottir, 1987).

To answer this question, the author asserts that the site and case studies are representative of several students, educators and families who attended the School. It's setting and participants are very unlike Montessori's Italian schools, yet there may be some similarities in classroom materials, etc. This case "is a member of a family of individuals or events of which it is in some sense representative" of many private American Montessori Schools. Its inclusion in Chapter IV, translates the Montessori Theory into practice, and sets a base for the Design of Rational Autonomy.

Description of School Site

Educators

The site's educators represented primarily public school certified educators or liberal arts college graduates who entered the private Montessori setting to be re-educated.

The children and their families enrolled in the school program voluntarily, and over a period of several years. Those in the narrative and case study were conversely related to Montessori's original model. They differ in culture, socio-economics, and their experiences took place 70 years after her first experiment.

Shulman's question, "What is this a case of?" is thus answered. The disciplinary orientation of a researcher will influence the ways in which this question is answered (Wilson and Gudmundsdottir, 1987).

> In a broad sense, scholarly work in the study of education consists of describing or explaining educational phenomena systematically in the context, or with the concepts of some intellectual discipline. History provides one such context; others are provided by psychology, sociology, anthropology, economics, political science, philosophy, and physiology. Indeed, it is difficult to find a discipline that is not relevant to some aspect of education (Broudy, Ennis and Kimerman, 1973).

The disciplinary orientation of this researcher is interdisciplinary, particularly from psychology and anthropology, within a life-span view of human development.

Site Reflects Autonomy Promotion

Autonomy as a personality characteristic utilizes reason only through continual opportunity for practice. In the child's primary years, the environment must be one which encourages autonomy, rather than destroys it. The school must help the child build up an inner fortress of autonomy, in order that the child may adequately adapt to a changing society with its challenges for decision making.

Description of Program

This model selects specific areas from a typical day and year in the School. The

School represents only isolated events in place and time, and may or may not be a generalization of the Montessori method as practiced in any other time or place.

The School was accredited by the American Montessori Society (A.M.S.) in the early 1960's. A.M.S. examines and affiliates only those schools who have membership qualified by their training courses. Their examiners visit and view the staff and children's activities. This is done bi-annually for a full week at a time. The School pays a fee to affiliate with this national organization, and an additional amount to have the examiner visit the School and write a full report. This process entitles the School to be approved by A.M.S. as a teacher mentor center. Consequently, the "head" teachers are constantly challenged by the new teachers and their questions, as "interns" train for permanent staff positions. There is no tenure for the teachers. Teachers are invited to return to their position each year, based on their abilities and performance with the children as evaluated by the principal, board and parents.

Students in the School comprise three age groupings. There is a primary level of 6 to 9-year-olds, and a pre-primary level for 3 to 6-year-olds. There is an introductory parent/toddler class for 18 to 33 month old children. Each class has 20 to 30 children and one to three adults.

Children may enroll or leave the School at any age, however, preference is given to new students who are between 2.9 to 3.9 years or younger. About one third of the children continue in the primary/elementary program. Tuition at the elementary level almost doubles in cost because of the longer school day. The parent/toddler (P.T.) group meets only an hour and a half, 3 times a week, for the purpose of instructing the parents as well as providing observation and socialization time for them and their young children. A Saturday "Alumni" class is scheduled periodically during the year, welcoming back the older children and their families for studies in French, Suzuki violin concerts, art lessons, science, museum trips, etc.

As this is a private school, in an upper-middle socio-economic, suburban community, Maslow would classify the families as being secure with the majority of their basic needs being met, and thus they had time and interest to pursue higher goals for themselves and their families (Maslow, 1968).

This current A.M.S. model will include one brief case study of a typical family who might have participated School. Their family life will be examined to view the way in which parent/child attachment was encouraged, and in which the growth of autonomy in their children might have developed. This "affective" part of autonomy will provide a base for the Design of Rational Autonomy later. This family is not necessarily representative of all of the families who were enrolled, but will represent some of the inclinations of families who socialize their young according to techniques congruent to Montessori's principles.

A narrative by a newspaper reporter introduces classroom observations of a typical day at the School. The synopsis reflects not only the learning materials and the environment, but also some insights into the children's interactions with each other and their teachers.

Narrative by the Principal: A Typical Year of Family Education

The central theme of the School philosophy is to relate to each child and his family as unique individuals and family groupings. This is communicated to parents as they are first counseled as prospective applicants on the telephone. Often when parents call about School enrollment, they actually are seeking personal advice or ideas regarding parenting skill.

Interviewing Parents

Parents of young children in this community appear to be extremely concerned about child rearing and family life. They call the school to receive answers to questions, before they have enrolled in the School. They may have a difficult spouse or an unusual child. They will ask questions about toilet training, separation from their child, tantrums, or sibling domination. Problems mentioned may involve school adjustment, or marital difficulties. The inquiry regarding the School may act as a parent "hot line". The person who is speaking is anonymous and worried about their child or their life. Occasionally, the parent is not concerned with their child, as much as expressing frustration for the lack of anyone to talk with about their problems. Problems can include concern for their own parents, or about a spouse who is absent from the home due to extended travel time with work. Either a father or mother may initiate the first contact with the School, and occasionally a marital separation has occurred, and the parent is seeking assistance in child rearing. Occasionally, a parent calls long distance to report that the parents wishes to have the child continue the "Montessori" school experience in a school environment similar to the one in their present community.

Expectations for Parents

Comments are quickly noted on a note card, as well as the pertinent information of the child's name, age, and sex. Usually the parent who is inquiring, wants to know what the School offers, and the cost.

Parents are encouraged to visit the School while in session. They are told of the monthly parent meetings, and also informed about the expectation of the School board for parents to attend these meetings. The program is presented as a family enrollment, as the philosophy will include helping prepare a similar home/school environment, and to consider at least a 3 to 4 year enrollment in the School. It takes more than one year to get

to know a family well, and the School philosophy attempts to breed parent responsibility and attachment to their child and his school life.

When a child's application is received, it is dated and the family's name put on an interview list. As openings occur, the parents and prospective students will be invited for a personal interview. The purpose is for the principal to observe the child, and in the case of the preschool child note whether the child is ready for school. The meeting also provides a forum to answer the parents' questions.

The Interview

The interview takes at least an hour, and both parents are required to attend, as well as the prospective student. If other siblings need to come with the parents to attend the interview, they are encouraged to play unobtrusively close to the parents. The teacher will work with the entering child, and the principal will talk with the family. The teacher and principal may change interviewing roles during the course of the interview process.

The interview is held for two major reasons. The family must anticipate the respect and seriousness which the School staff has for the child's education. The parent should acquire trust in the School and its staff. The staff needs to get acquainted with the family, to allow the parents to tell about themselves, and the various reasons for wanting to have their child attend the School. Second, the child is introduced to his school environment while the parents are there, which demonstrates to the child an interest in the school. In some cases, the child does not appear to be ready to attend the School. Usually, a child's limitations could be overcome by the child's desire to learn, and the parent's desire to help. Even though this meeting with the child is of prime importance, the main concern is finding out the attitudes of the parents toward their child and his education.

The principal gathers information regarding the family history. This is accomplished through conversation and examining the roles of the parents through noting parental occupation or business; how it has involved the family; or the impact of moving the family from city to city (a common occurrence for suburban families). Other items such as the amount of time work has allowed the parent to have time with the family, may be reflected in whether the adult travels for a week or month at a time. If one parent remains at home, that individual may speak of a different role in the family too; telling whether they had been working before the marriage, or if the parent who is currently working part time is hoping to work again outside the home.

The affective side of the home environment usually begins to come out after about thirty minutes of conversation. Such questions as, "What have you read or heard about the Montessori method? How did you learn of this School? Will you be able to attend the monthly parents' meetings and activities? This information helps to bring out some personal desires and attitudes of the family.

Many parents are extremely reluctant to come to these initial interviews, but unless they attend, the School does not enroll the child. The only exception to this is the single parent family. If the non-custodial parent is living in the area, an attempt is made to meet with the parents separately. They are encouraged to continue their interest in their child, and the child's school work, by attempting to participate with the child at the School activities, and by attending the parents' meetings.

Central Theme of the School

The central theme of the School is to regard the individual parent and the child as unique and fully accepted. This School philosophy allows a relationship of affect to be attached to learning. The result seems to be a growing independence and self-esteem as a

parent senses that parental concerns will be considered confidential and important. The enrollment of a family is not only for the child and parents, but also for grandparents or other relatives or caretakers close to the child. Each "family or extended family" adult is encouraged to attend the monthly evening parent meetings throughout the school year. About 90% of the parents are full participants in the School's activities.

Parent Meetings

The year begins with a parent meeting and at all meetings, the teachers demonstrate materials and explain programs, encouraging the parents to play and experience them in the way their child would. Adult book discussions, in small groups led by teachers and other parents, give all an opportunity to share their small concerns about child rearing with other parents.

The meetings feature a written report relating the child's activities. This is a coffee time when parents may share conversation with the child's teachers and other parents during the first half hour. The conclusion of the meeting is usually a concentrated effort by the principal to summarize the questions and concerns of parents, and to inspire them with confidence and ideas to help their children in the succeeding weeks. These meetings are extremely successful, with about 80% of the school's families represented each time.

There is a special orientation for parent/caretaker and children each fall. During these times, a bridge between school and home is made by a brief class day; with the family member absent only a short period. If both parents work, the child's care-giver may attend. At conference times, lasting an hour or two per family, a child's case study is reported to the parents. It includes paragraphs of anecdotal happenings to allow parents to

know what their child enjoys at School, and how the child responds to the School environment, teachers and other children. These cumulative notes are from the daily records and staff discussions, which is an everyday part of the teachers' work. The actual activities selected by individual children each day is also noted; as teachers attempt to look at each child as an individual, in planning his special emotional and cognitive needs.

Annual Dads' Days and Mothers' Days for special trips and visits for parents of one sex, (or substitutes) are a special occasion for the children. Parents are welcome to visit any time they request, as well as special visiting days allotted for them, with planned study group discussions following most observations. One Dads' Days, usually a Saturday in January, fathers come to the School with their child and share activities with him. Another "Dads' Day" in the month of May, takes the form of an all day outing on school buses, with each Dad and his child spending the day visiting Lincoln Park Zoo, a dairy farm, or riding the cruise boat out into Lake Michigan. The fathers seem to influence each other as they observe one another with their children. Comments from fathers and their spouses often reveal they have never been with other fathers and their child to have fun together. Many fathers are reluctant to be alone for a whole day with one or two of their young children, and even some of the mothers are afraid that their spouses "can't handle it"! But surprisingly, the family is pleased to find that fathers are quite capable of managing their young for a day without mother. With some parents, this is a common occurrence, but other parents seem to need assistance in assuming a child care role.

Holiday parties are observed throughout the year, with special cooking activities and costumes, highlighting the day for children. Parents often bring their hobbies or personal possessions to School, to demonstrate to the children, anything from candle dipping to a French horn demonstration. The year is climaxed with an all-family picnic, usually featuring songs, costumes, and food from around the world.

Child Psychology and Social Cognitive Field Frame

Montessori's basic psychology of the adult having basic respect for the child is visible throughout the School's program. However, respect for the child, almost as a "servant" would show toward his "master", seems easier said than done. Many parents have difficulty in being too much of a servant for the young child. This may occur because they are forced into this role at the moment of the child's birth, and fail to recognize the child's need for independence.

Often, parents prepare for the arrival of a new child by filling the infants room with toys, and equipment including mobiles, rattles, stuffed animals and even gadgets such as exercisers and inquariums, (a plastic pouch holding live goldfish to stimulate the infant's mind). However, very few parents have much example, guidance, or help in preparing themselves for the arrival of the new human being. Prenatal classes usually only include how to care physically for the child and fail to help parents prepare for their part in helping the child's total development.

Parents rely on their pediatrician as the central guide for their child. But pediatricians often refer the new parents to books, when they have unanswered questions. From birth forward, parents could benefit from having an opportunity to make friends with other parents, to learn about the child's development, perhaps developing an attitude of respect for the child. The School model indicated that many couples welcome advice from teachers and other parents, and often work hard in learning about their child in the beginning stage of a child's life.

Child-Parents-Teacher Interaction

Initial interviews, observations of classes, field trips and demonstrations of

learning materials are all means of communication. These help the parent have more interest and respect for their child and the educative process which the child constantly encounters.

For a parent to visit their child's classroom and share work with the child, requires several basic changes in their work place. Most parents do not have the option of taking time away from their work, and this would not be regarded with favor by most employers.

In the beginning of establishing a parent program, teachers and schools might be flexible in exchanging school-hour-time for a Saturday or an evening, so working parents could visit. In a private setting, it is easier for the teacher to share a "special" day with fathers and children. The private school teachers are not limited by bargaining units who define how and when a teacher may work. However, if there were a greater understanding of the value of such communication between parents and their child's school, perhaps contract compromises could be found between the teachers and the school boards. Such changes would allow the school to function in a manner which maintains the child's best interest. Parents who show an interest in the child's school environment, model respect for the school as an important institution. Therefore, learning may take on more importance for the child. It would seem best to start these programs when the child is young, and when the child's natural excitement of having parents' attention, encourages the adult to participate.

Parents are often aware of the importance of participating in school activities with their children, when the child is young. By their participation, they often demonstrate that the affective side of their family-life is equal to, or more important to them, than their working roles. Parents who ask for support in their struggle to be caring parents, are often viewed as rare, but schools could foster conditions for more parental interest.

Schools may take a pro-active part in demonstrating the importance of being a parent to a child, by establishing times and conditions for parents' participation at school

on a regular basis. As the anthropologists look at cultures, life in America shows the principle dyad to be the adult relationship (Hsu, 1973). Children are often excluded from this dyad, and ignored and delegated to a whole system of institutions from Little League to working in fast food restaurants. Numerous outside activities for parents or children discourages the growth of the nuclear family (Elkind, 1981) With the emphasis on the adult dyad, the nuclear family is dissolving and society is entering a stage of "extended families"; which over a child's lifetime, include two or three marital units, "his" children, "her" children and "their" children.

Early involvement of the parent in the child's cognitive and affective development seems to be a positive answer for relieving some of the stress involved in changing family structure. Who might be better at encouraging this than the educator? Parent involvement in a preschool and elementary school could invite both generations to grow in the capacity to give love and to model it for others.

The child has an opportunity to work and play with others in a situation that fosters self-identity and encourages self-worth while learning to learn. Gradually, within a year in school, a child often demonstrates affection and empathy and turns toward others. Socialization, a willingness to share and give to others, may occur with little prompting from teacher or parent. This pattern in turn is exhibited at home, within the family, and a mutual reciprocity is felt. These observations were reported in several accounts by parents who had one younger child in school, and older siblings at home.

The "affect" of the parent-child relationship is first regarded by psychologists as "attachment", and later as the "quality" of the parent-child relationship. A study by a group of educators and psychologists at Harvard asked the question, "What really counts in child rearing?" The best predictor for good mental health in adult maturity was not to be found in specific parenting techniques, but in the quality of the parent-child relationship (Sears, Maccoby and Levin, 1957).

The study indicates that in the home environment, one area was directly related to the Montessori concepts. This is the area of parental attitudes toward family life and occurs when parents are concerned with using their power to maintain an adult centered home, the child then was not as likely to become a mature adult (Sears, 1975). For instance, when "parents tolerated no noise or roughhousing in the home, or when they would allow no mess" (Sears, 1975, p.45). Montessori often comments regarding children interacting and solving their peer social difficulties in a group:

> Such problems abound at every step, and they (the children) feel irritated if we intervene, and find a way, if left to themselves. This is all social experience and it provides constant practice in dealing suitably with situations no teacher would be able to invent. Apart from exceptional cases, we ought to leave such problems to the children. We can study their behavior objectively, and of this very little is known (Montessori, 1967, p.224).

Montessori is referring to small problems occurring in the classroom, or in the home; not serious problems which require an adult's intervention for safety. As reported to teachers, if this child management technique is carried over to the families, there is much less bickering, fighting and competition for the parents' attention. Parents need help in learning to tolerate small "messes" as their children learn to help around the house. They also need encouragement to allow some noise and solving of problems between the family members for social life to have its practice.

Montessori writes about affection, and that its source may be readily observed in a child. She writes:

> If we study the child better than we have done hitherto, we discover love in all its aspects. Love has not been analyzed by the poets and by the prophets, but it is analyzed by the realities which every child discloses himself (Montessori,1967, p.293).

Expecting favorable actions, and trusting and respecting the individual, is a basic premise in Montessori child psychology. However, this is dependent upon the environment having been carefully prepared by the adult. In the next section, the "prepared environment" of the classroom will be described. The interactions of children with their peers, and the environment will be described. The issues of personal liberty, and the freedom of physical movement and group socialization will be narrated.

Newspaper Reporter's Narrative of a 3 to 6 Year Old Class

Tossing the blonde curls out of her eyes, a serious four year-old stared intently at a wooden map of the world, placing each country carefully in the correct position, each with its own little peg. In another corner of the classroom, a child chatted with the parakeet. Meanwhile, back in the 'real life room', spongers swabbed out the mini-sinks, which were set down close to the floor, to accommodate short scrubbers.

The children work either on their own or with their friends. Even the teachers prefer the title 'directors' or 'directresses', acting more as observers and guides. Each child chooses his own game, while teachers move from child to child assisting and giving individual, or small group lessons. One child matches flags to a map of Europe, while others boost their vocabulary through a word game.

The School is the third Montessori School in the Chicagoland area and is host to nearly 150 youngsters at different times of the week. It occupies an 1890's, Victorian house in the center of this suburban community. Many of the teachers and the principal were former public school teachers. The school board has completely converted the huge house to meet city fire codes and Illinois private school legal standards. It is a non-denominational private elementary and preschool. Students attend from ten surrounding suburbs and there is a staff of a dozen qualified A.M.S. or A.M.I. teachers.

The ancient red barn at the rear of the property marks the school entrance. It is a former carriage house. The barn now is filled with tricycles, sleds and wagons. There's a vegetable garden alongside for young farmers; 'horse' swings, and a sandpile.

During the warmer weather, the children shift indoors and out, with their activities and teachers. The Montessori ideal of freedom and 'individualized education ' as we know it today is emphasized. 'Liberty within limits' is the premise, and teachers are active, observing, taking notes and presenting materials to children.

The School practices all the 'classic' Montessori methods, providing a lively, open atmosphere for learning. Children work alone or in small groups on everything from math to music; geography to

lemonade making. They explore spelling and the social graces, dancing and multiplication with an enthusiasm and spirit of fun; talking, tasting, and touching. The curriculum reflects the teachers interest in the preparing of the school environment and their sensitivity toward children with interest in the world about them. All Montessori materials are designed to be touched and manipulated. Children seem to learn enjoyably and easily in this school. Occasionally there are group lessons, listening to a teacher, singing together, or reading a book. However, the curriculum stresses active, rather than passive learning. The total group does not come together for more than 15-20 minutes at a time.

The children prove this point every day, sprawled on the floor sliding large picture cards around to match tiny animal figures of giraffes and kangaroos, sticking tiny flags into a world map, or sorting colored number rods. There are dozens of unique educational games and puzzles to try, bells to clang, even fish to feed.

The School seems very informal at first, with children milling from room to room, but if you look closely the program is actually very structured. The children are not left alone to do whatever they want. That's a common misconception in Montessori. They actually are in a very 'prepared environment' where they learn that they can act on their own and that their Mommy doesn't have to be there all the time.

The program in both the preschool classes and the elementary group stresses five areas: Practical Life (care of self and environment), Sensorial Development, (Montessori stressed sense training), Language and Related Subjects (speaking, reading, writing, spelling), and Math (basic number concepts, computation), and introduction to culture (geography, science, history, music and art.)

All of the children are taught in an atmosphere of play. 'I play with my work', one child said. And they do seem to work. There is little noise, the children are amazingly neat and attentive, and very engrossed in their various projects.

One little boy told his mother he couldn't get sick and stay home, because he was learning to read. And many children get upset when they realize they can't come to school on the weekend. They're very eager to learn at this age and to be with their peers, and they like the routine of having a place where they can play undisturbed.

There are only two fast rules at the school; not to damage the learning materials or hurt another child. 'They respect each other and we respect them in return,' another Montessori tenet; respect for the child as an independent person.

Most children start at the school at age three, with about one-third continuing through third grade. The School has materials that accommodates even older children. There are sliding doors in one area to partition off the oldest children for 30 minutes to an hour each day for their special group lessons which are part of the transition to elementary school the following year. The elementary age group of 6 to 9 years of age, uses the small group method more frequently than the younger children, but the emphasis in learning, and the responsibility is clearly with the individual.

The ratio of teachers is one to eight, at the lower ages, so everybody gets plenty of attention. Teachers act only as guides, introducing youngsters to material, encouraging them to try different

things, observing and evaluating their development. They occasionally take notes during class, and after class, will sit down and discuss every child and his activities.

On an average day, a younger child may spend some time in the 'real life' room, scrubbing or squeezing lemons, then moving on to vocabulary games, or adding sums on rows of beads. At "group time", he may be found marching along a line on the floor (to develop coordination) or singing or playing outside. A 'group time', with music, stories and lessons, is encouraged if the child is unoccupied with individual work.

One of the teachers reported, 'It's also important to let the children just enjoy each other and learn to share. And communicate, which they do, all day long.' Another one said: 'There is no pressure on them, though most of them do learn to read and write, and do simple math, by the time they enter first grade. But this is not the most important thing, as we want them to develop a love for learning that will stay with them all their lives.'

To this end, parents play a vital role at the school. They are invited and eagerly attend parent meetings once a month. They are encouraged to link home and school, encouraging their children in everything they do. They are welcome to visit at any time, or telephone their teacher with any questions. 'The parent, is a child's best teacher'. The informal, homey atmosphere of the school adds to this, and the goal of the school's curriculum is to encourage the children to continue to learn how to learn with enjoyment (Glen Ellyn News, 1969).

Composite Study of a Montessori Family

The Burns family is composed of Dr. David Burns, an orthopedic surgeon at the local medical clinic, and Mrs. Diane Burns, a former legal secretary and graduate of a local state university.

Their children include Tom, 17; Sally, 15; Ryan, 12; Amy, 8; and Jane, 7. All five of the children attended the School starting between 2.9 to 3.6 years of age. Each child attended for 5 years through the third grade. They have continued their education at a local Catholic elementary school, and the two oldest children are now in attendance at public high school.

A widow grandmother, who lives in a nearby suburb plays an active part in their

family, often spending a weekend with them. About once a month, she "trades homes" with the two parents, who go for an overnight at her apartment, while she manages their family. During this time, the parents attend a symphony concert or visit the art museum, as a couple without children might do.

In interviewing the mother over a period of fourteen years, she appears to be calm, self-fulfilled, and enjoying her family life. She thoroughly enjoys and anticipates the weekend vacations away with her husband. Yet, she enjoys leading a busy schedule in participating with each child at various activities, such as: basketball games, track events, swimming and music lessons. She seldom speaks of returning to a career, but enjoys her personal hobbies, gardening and reading.

A typical day in their home finds the children participating as a family in both household chores and their personal hobbies. Each child has kitchen duties and yard work, as well as care of their own room and belongings. When the children were younger, the mother or dad would always make time after supper to read and talk with the preschoolers, while the older children cleaned up the kitchen. Then the parents would talk and work with each of the older children, during study times and later.

Although their income would probably have permitted it, their life has been relatively simple in comparison with many other suburban families. Television was less important than books, music lessons or sports.

A regular routine characterizes their lives, and it is the mother for the most part, who manages the busy family schedule. A quiet calmness and interest in every family member is modeled by the parents and by the children's affection and interest in one another. Activities are limited to one per child, and, due to the large size of their family, vacations are mainly one day outings to a relative's farm, a museum or zoo. When a long vacation to Colorado or Washington, D.C. is taken, Grandmother is always included in the plans; eight in their van.

As these children attended the School, the Dad always scheduled his appointments so that he was available to attend "Dad's Day" on Saturdays twice a year. Both of the parents attended the evening meetings together for almost ten years, and when David had an emergency call, Diane would attend alone. By their report, they modified and changed their home environment by limiting and ordering the toys and games in an organized fashion on shelves David had constructed in the basement. Most of these environmental ideas were noted by Diane and David at the parents' meetings, and they commented that the accommodation to the child's needs, and encouraging each to have responsibility, made their home life easy-to-manage and satisfying for the children. Their home is a 3 bedroom ranch style, so their children shared bedrooms; the teenage girl and boy each sharing with a younger child or two, of their own sex. They added an extra room for eating and games, off their kitchen, which the parents deemed more important than a bedroom for each child.

If success is judged by accomplishment and role, each of these family members could be termed "successful", from the oldest child who is Valedictorian of his high school and center on the basketball team, to the youngest 2nd grade girl, who plays piano well and reads at a 9th grade level.

In judging "success" by affection and family loyalty, as well as interest in giving to others outside the family, we can see the older son and daughter acting as volunteers in the hospital and a nursery school. The middle son often is seen playing and instructing his younger siblings in games and yard work. Even the two youngest children cooperate by helping with dishes each evening.

As toddlers, they were given full reign of the house; with only certain stairways and rooms blocked off with folding gates, rather than the need for Diane to be constantly scolding. Helping their mother sort laundry, putting away the silverware, and setting the table were all easy day-to-day occurrences for the little ones. A planned, but flexible, daily schedule was a stabilizing factor for this large family.

Family: Role and Affect

This family is a composite of hundreds which were enrolled in the School. Most of the parents were very conscientious in their role as parents, and at the same time learned ways to further encourage responsible independence in their children. Later reports and observation of these children showed them to be scholastically average to excellent students; demonstrating self-esteem and responsible independence in action and choice. They were considered "high achievers", "good teenagers" and were reported by their high school teachers as good citizens, with values, etc.

The young people, whose parents were involved with them in interest and affection at a young age, have continued to be loving and affectionate to their families as they've grown older. The author prefers to think that the family's exposure to the School encouraged this interest, but then of course, perhaps the parents who chose the School were already highly motivated to be interested in their children. The role achievements seem to be the item which the parents mention most when talking about their child; and the School, of course, may have helped in this area, too (Hsu, 1971).

It is the growth of the family or Kinship Unit, and its affect, which is most interesting to many anthropologists (Hsu, 1971, Montagu, 1970). A hypothesis from several case studies might lead one to believe that the school could act as a powerful social agent in encouraging affect in the family, particularly if done at an early age in the child's life, when the parents seem to be particularly appreciative of the support and influence they can receive from professionals. Preschools and elementary schools might encourage parents to create good mental health through focusing on the child's contributions or role coupled with affection. Cognitive opportunities in school enriched environments and home remain essential, but it is the family domain which provides the firm foundation for

the child's affective and emotional strengths. Independence and responsibility become an outgrowth of the initial parent child affection.

Parents verify that children continue in love and affection for their families and others, when they are aware of their role in the family and recognized for it. This allows the child to fully develop cognitive and social/emotional abilities, when there is something organized, direct and definite within the home or school environment, in which they can be involved. Independence and responsibility are reinforced at a school which emphasizes these concepts: a program emphasizing decision making; an environment which includes definite developmental materials; materials structured to promote self-teaching and success. This is only the content of the program; but it is always the context of affect and concomitantly, trust and respect, which allow the social cognitive field framework to flourish.

When Montessori (1948) speaks of order in the environment, she means freedom and liberty can only occur when simple rules are established within the home or school, within a context of affection and respect for individuals. Within this framework, the child is allowed freedom of choice in activities and friends. Only then may full expansion of cognitive and personality inclinations may be anticipated.

Design for Child-Parent-Teacher Interaction Triad

The interaction triangle in the Rational Autonomy Design (Please refer to Figure 3) takes its premise from educational theory (Dewey, 1922, and Montessori, 1912, 1948).

This model views the educator as third, in the influential relationship between the child's individual actions and the child's family. Each vertex represents individuals, and their continuous interactions in promoting simultaneous cognitive development as an impetus to positive personality development is recognized by the literature (Bandura, 1963,

Dreikurs, 1968, Maier, 1978). The interaction triangle includes the child, the educator, and the parents as unique individuals who are striving to be all that each can be. Thus, the model is based upon an experiential and existential psychology (Gendlin, 1973, p.324).

> What one feels at any moment is always interactional; it is a living in an infinite universe and in situations; a context of other people, of words, of signs, of physical surroundings, of events past, present and future (Gendlin, 1973, p.324).

Gendlin argues that all experiences are interactional, "not inside", but "inside -- outside" (Gendlin, 1973, p.324). Experiencing is not as if an occurrence happened on the outside, and then "one gets a feeling about it". Rather, it is a happening for a person because it has already altered that person (Gendlin, 1973). The educator must view both the child and the parent from this perspective; the individual in process of change.

Interrupted Interaction

The educator also must be accepting the parents' point of view, even if it does not coincide with the personal view of the educator (Please refer to Figure 4.). If one's values and personality is made up of the totality of interactions of "past, present and (imagined) future", then the educator may not presume to judge the parent; for the educator could not know another's totality of experience and interactions. However, the educator has a greater responsibility to set an example or representing the best of the democratic values in their society, and to be empathic, flexible and representative of social concern than the general society (Boyer, 1986, Goodlad, 1988). Thus, the educator's major concern becomes one of communication between the child and the parent.

Social Cognitive Perspective

If a teacher is to model a viewpoint that encourages democratic values including autonomy, with responsibility, the teacher must come from the existential position. The "experiential - existential" theory of personality (Gendlin, 1973) holds that an individual's life span is a cultural process and will atrophy if there is no sense of social responsibility and social action (Gendlin, 1973, p.330). Social cognitive modeling (Bandura, 1977) indicates that if the educator wishes to elicit concern for others, or empathy, then the educator must exemplify empathy. Thus, one of the educator's prime responsibilities is to demonstrate concern and respect for the child's family, the school "family" and the world "family" in the process of education (Montessori, 1962). The aim of social consciousness is initiated in the young child and encouraged in the emerging family only if the aim is modeled through the social cognitive learning process.

Personal Experience and Social Consciousness

Ronald Laing (1967) views experience as social, and the eliciting of social consciousness as the most valuable tool against neuroses resulting from the conformity of present social activity. Laing (1967) sees the absence of social consciousness a result of cultural forces pressuring individuals to ignore their individual experience. In this case, the individual's innate social nature may work against him. Socially created pressure or conformity may work against a person who has already developed concern for others. Educators must be aware of the changes of social conformity within the institutional educational process, and within the culture. They must check themselves and their students for authenticity, the opposite of conformity. Both conditions are necessary; but the repression of authenticity eradicates affection, and empathy.

Laing (1967) views social and cultural pressure as originating within the family system. Family members may place each other within a system of roles, which are unattainable by the individuals. This is one additional sign of social repression of inward experience and empathy. Educators hold the keys to assist parents and children in greater understanding of the generational and personal differences.

Childhood: A Critical Phase

Helping the parent to view childhood as a distinct and primary phase in the child's life may influence the family positively for its life-span, whether the family structure remains permanent or changes members. The educator may also assist in the view of parent and sibling roles, assisting both parent and child to have realistic expectations of themselves and others (Dreikurs, 1968). The class curriculum and context may also facilitate this.

For several decades, educators have been receiving additional responsibility in nurturing children. Dreikurs (1968) notes that educators are not pleased with the additional responsibility. Dreikurs quotes one administrator as saying:

> "Schools are not supposed to be a residual agency, a dumping ground for emotionally disturbed children. ...Schools should not expect to be clinics, nursery schools, and character building enterprises" (Dreikurs, 1968, p.276).

Social Cognitive: Educators

However, Dreikurs states that these views are the opposite of what must actually be accomplished in the schools. Teachers must take on the responsibility when parents are failing, even though the teacher is facing the consequences of the parents' inability to help the child.

> For this, teachers can be trained. They need not be therapists; but they must become skilled in the use of psychology in the classroom. ...We must go ahead and devise means by which we can stimulate cooperation, responsibility and growth (Dreikurs, 1968, p.277).

It is primarily by example and modeling, that the school program and the educator will assist the student and parents. In classroom and school study groups, and at individual conferencing, the educator may keep the arrows of interaction moving all directions. Children must be included in conferences which involve their difficulties.

Cognitive Field: Educators

This is where the cognitive field perspective is employed. Helping participants take another point of view is an important aspect of healthy and meaningful communications. Children do not understand their role in the home, the school or the future. "The inability for young people to see a role for themselves in the world, like any other psychological aspect, is not just psychological but also social" (Gendlin, 1973, p.331). In the early years, children must realize the importance of their work and their voice in family life (Dreikurs, 1968).

Parents, through parent education, might come to see that it is not beneficial for the child to withdraw into excess fantasy through media. Parents may begin to see that "escape" into excess recreation or outside activities, is often an avoidance of the family, and a time to share with one another. Parents also might realize that time to have discussions about everyday pleasures and disappointments enable the child to view life realistically. The early years are the most important in preparing the child for adolescence, when it may be natural for the young person to withdraw and avoid the family and world which they find intolerable (Erikson, 1968). Parents may be helped to prepare for this

natural phase of adolescence withdrawal.

> An existential view would not term this loss of a world and the ensuing anxiety of isolation as in itself negative. The existential view would distinguish whether the adolescent could 'live forward', and then take this isolation into new possibilities for changing how the person lives, and ultimately for changing the world (Gendlin, 1973 p.331).

This is the central dictum of the experiential existential psychology. The anxiety of choice and the isolation which accompanies decision making are necessary aspects of living (May, 1981).

In the early years of a child's life, gaining "courage" through simple decision making and responsibilities within a planned school and home environment, allows the child to gain in the fortitude needed for adolescence and maturity. Therefore, the early childhood and elementary educator must be prepared to help the parent plan the physical and emotional environment.

Communication forms the arrows of interaction and the basis for this ideal child - parent - teacher relationship. Communication may only occur when time is permitted, and when all parties are actively participating. Montessori's original school (1906), and private schools today may more easily encourage this type of communication. But communication between child, parent and educator, must also ensue in the public sector, if education is to have an effect on children and aid in their autonomy and rationality.

Summary

The anthropological viewpoint is employed as a school model is described. A site study and classroom curriculum, and a family composite description, translate Montessori's "Method" into a contemporary school program. This may be examined for theory building translated into practice, which allows a transfer into teacher education.

The family and their transactions with the school are considered in the Child-Parent-Teacher Interaction Triad (Please refer to Figure 3.). Interaction pervades virtually every form of human activity. The interactions between the adults at school and those at the child's home help all involved partners in the child's enculturation process. If the interaction is broken, the child becomes the recipient of mixed messages, and enculturation becomes dissevered.

Kinship, or close family relationships, may initiate affection which will be transmitted to the child, and eventually to the society. However, as Hsu (1971) further defines "eros", or love and affect, it becomes clear that both the anthropologists' definition, and the existential psychologists' (Erikson, 1964, Gendlin, 1974, Laing, 1967), see affect also dependent upon the promulgation of it within the society.

The educator often becomes the first official transmitter of the message of eros, outside of the family. With children leaving the family unit at earlier ages, it becomes increasingly important for teacher education to stress the importance of values which reflect affect (Goodlad, 1988). Affect becomes the interactive flow between the child's ability to develop in individuality, autonomy and cooperation (rationality).

The purpose of this chapter is twofold. First, the examination of a model transfers the Social Cognitive Field Theory into practice for teacher educators. Although the situation described is idiosyncratic and theoretical, it provides a conceptual framework for the mentor teacher relationship to evolve. Second, educators who teach one another, need to conceptualize the techniques which are inherent in cognitive field learning, and perceptual psychology. Educators begin to assume a cognitive field perspective, one that is based upon a perceptual point of view (Bigge, 1982). This perspective is value laden, as it presupposes a humanitarian attitude, based upon an understanding of life-span human development.

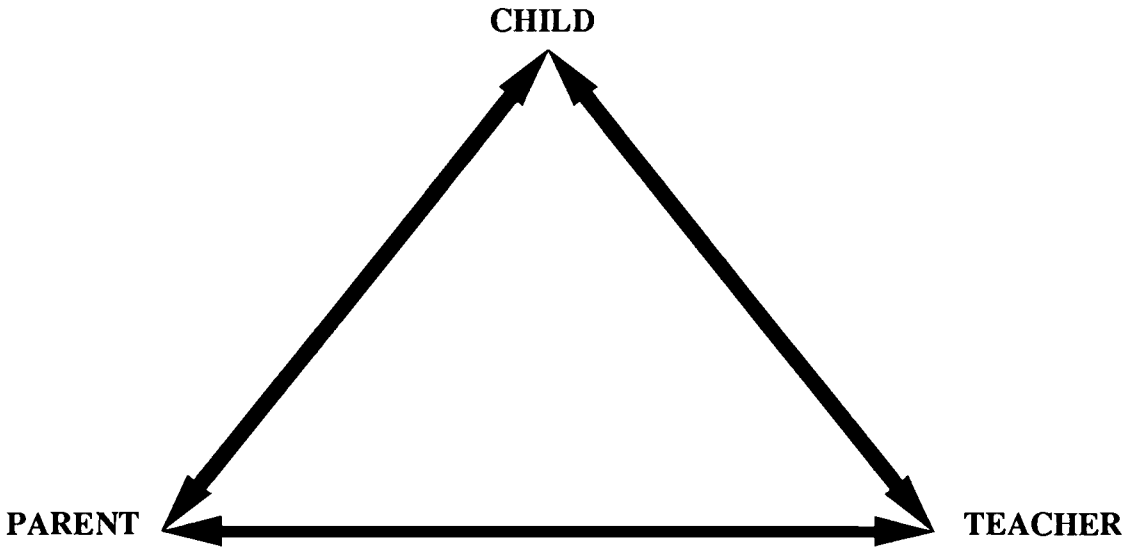
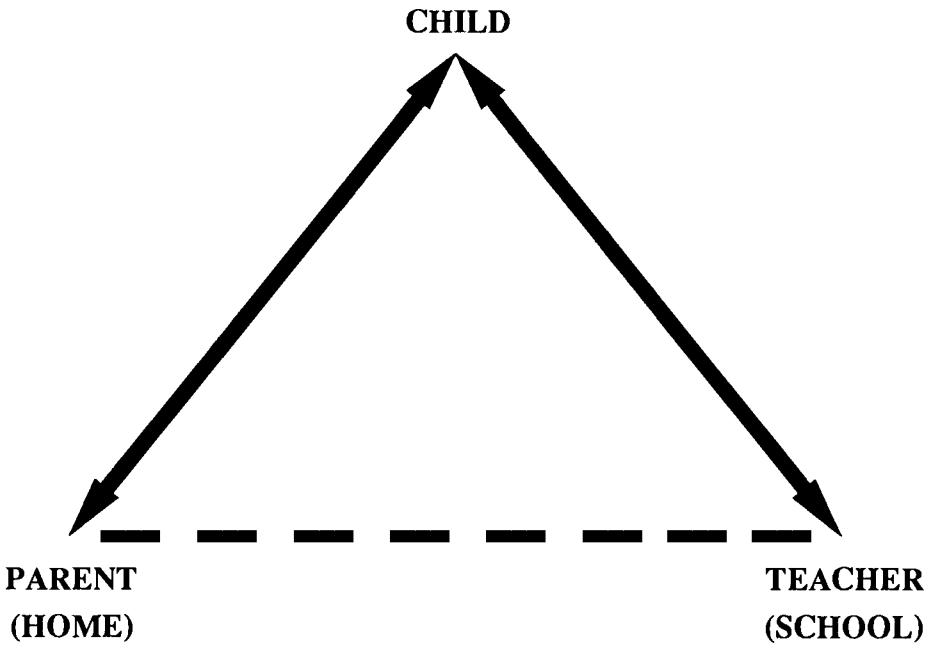


FIGURE OF CONTINUING INTERACTION TRIAD

Figure 3



INTERRUPTED INTERACTION

Figure 4

CHAPTER V

MENTORING AND TEACHING: ENGENDERING ADULTS AND CHILDREN

Introduction

Chapter V will advance a concept for promoting personality development linked to cognitive development in a phase of a teacher education program. It is the intent of this thesis to demonstrate that theory and practice may serve each other in the personality characteristic of autonomy as it develops through education. Thus, the chapter will describe the practice of mentor educators as they learn from each other, and from their students.

The word "theory" refers to a set of beliefs for which there is some, but not completely supporting, evidence (Morris and Pai, 1976). The word "practice" refers to the teacher's ability to "employ" what has been learned in through education.

> ...There seems to be some drive in us to explain why things happen the way they do; we are theory prone.
> The connection between theory and practice, however, is a lot more complicated. Not only do we want to know why things happen, but more important, we want to know how to make things happen to our own advantage (Morris and Pai, 1976).

Chapter V will explain "how to make things happen" with the conceptionalization of a theory of Rational Autonomy and an example of its practice. Teacher education has one role of promoting an on-site curriculum for the education of autonomous novice teachers. Personal development of autonomy within the novice teacher will be considered, as well as implications for autonomy promotion in teaching strategies and curriculum.

By examining of the mentor teacher process within the site of the School, a continuing life-span framework will be developed for the Design of Rational Autonomy. First a spectrum of theories will be analyzed. The knowledge of personality, learning and human development theories will be seen as an important ingredient in understanding the mentor process. Later, the social cognitive and cognitive field theories will be applied to the practice of teaching children, and to teacher education. Implications for a curriculum which is intended to promote autonomy will be considered, and an ideogram of the creative autonomous adult personality will be presented.

Educational Psychology:
Assumptions of American Montessori Method

There are certain basic educational and psychological tenets that provide the framework for the origin and expansion of the theoretical Design and the model used in examining the mentor process in the school. They rest upon the contemporary American interpretation of the Montessori Method (Rambusch, 1962), particularly as exemplified in a school accredited by the American Montessori Society.

Barbara Berger, (A.M.S. 1968), research psychologist, University of Chicago, summarizes current American assumptions regarding what is known as the current American "Montessori Method". Within this work are included: the teacher's approach to the child, the learning process and the classroom environment.

1. The young child is capable of and interested in learning.
2. Actualization of learning potential, however, is crucially dependent upon a suitable learning environment - which for Montessori implies:
   - a carefully prepared and highly structured environment in contrast to an incidental, or random type, of stimulation.
   - sufficient scope for individual differences in interests and

abilities, and consequently, a highly individualized teaching-learning approach.

- an orderly, predictable atmosphere and a minimum of distraction.
- learning activities that are genuinely meaningful to the young child and commensurate with his developmental level.
- learning materials capable of sustaining a high level of interest, and thereby concentration, which are consistent with the young child's style of learning through manipulatory exploration and information processing.
- methods of instruction that provide repetitive practice and clear-cut standards of accomplishment, and encourage precision of performance.

3. The child learns best under conditions that maximize the opportunity for autoeducation and self-direction; this precept motivates didactic techniques that are largely self-instructional and minimize dependence on the teacher.
   - less rather than more teacher intervention.
4. The educational process implies a progression from lower to higher levels of mastery, and therefore demands: a graduated and tightly programmed sequence of instruction, designed to facilitate the development of progressively more advanced stages of proficiency in dealing with the environment.
5. Sensorial education in early childhood is particularly important for subsequent intellectual development, thus the need for: a curriculum that must provide extensive multisensory stimulation and training aimed at strengthening observation, discrimination, and classification skills.
6. The child must be trusted to provide the most sensible cues with respect to the amount and quality of guidance desirable, accordingly: skillful observation of the child becomes extremely important.
   - teachers must learn to rely on the child's spontaneous interests and capacities as the most intelligent guide.
7. Finally, and very importantly, the educational process, if it is to be effective, must look to the child for its basic directions and design.

Items numbered 1, 6, and 7 are instructions intended particularly for changing or facilitating the attitude of the educator. The remaining items indicate the strong reliance the Montessori method places upon attention to the preparation of the environment.

It is within this area, that many educators find a niche for their creativity. Making

materials, rather than purchasing them becomes a project for sharing with other teachers and parents and a direction for the individual's creativity to expand.

Social Cognitive Learning for Adults

The usefulness of the social learning approach for viewing adult behavior changes is evident in this chapter. Flavell, (1970) points out that systematic age-related behavior changes do occur in the adult years as a function of programmed or unprogrammed experiences (Flavell, in Ahammer, 1970, p.254). The study of these changes has been neglected because of unduly restricted conceptual frameworks (Ahammer, 1973). However, the private school setting lends itself to intense examination, and with the conceptual framework of autonomy, the behavioral changes may be more easily observed. "Controlled environments, therefore, such as institutional settings, schools for children, ... with a consistent program may produce the greatest amount of behavior change" (Ahammer, 1973).

The educators in this program changed in many ways which are described in the principal's narrative. Not all change is a result of the role requirements for the teaching position. But in observing a mentor and their peers, new loyalties and new models outside of their former life space are chosen. But most significantly, their individual perception changes, as new views and new psychological perspectives are understood.

Social learning theory seems particularly suited in analyzing behavioral changes in the adult, in contrast to most personality theories, since it is very sensitive to detecting behavior changes as a function of changing environments (Ahammer, 1973).

Social Cognitive Model

What is the teacher education in a Montessori school? Even as a novice intern, working under a mentor teacher for a year, Montessori teachers seem to develop a sense of "self-efficacy" (Bandura, 1977). This is promoted by their understanding of the very specific nature of the classroom in which they work. Because they are grounded through lectures and theory in a sense of trust and respect of the child and his "innate potentialities" (Montessori, 1948), they enter the classroom with high expectations, and high regard for both the child, and themselves. This writer assumes that this "self-efficacy" is reinforced as they have success with presenting very specific sequential materials to children.

The children usually show a very high level of interest in the objects they are presented, as they choose what they wish to do. Furthermore, since the novice teacher has been relieved of the responsibility of coaching the pupil through each step of an activity, once it has been briefly modeled by the educator, either individually or in a small group, the teacher is free to leave and "test" by observing the learned results later. When the child fails to grasp the significance of a piece of material, or fails to be motivated to do the work, there is no blame attached to the student's or the teacher's actions. There is the confidence that the child does not have to "do" the work in order to "learn" the work. The child may observe others and learn equally well (Bandura, 1977).

When people enter new relationships, they may bring behavior from previous environments. They also have a tendency to seek environments which support those behaviors (Ahammer, 1973). In the Montessori environment, some of these behaviors are not permissible. The mentors need to demonstrate new behaviors, both specifically and incidentally. Social learning, is usually employed. This view is sympathetic to a dynamic developmental view of adult personality and includes basic behavior change for adults as well as an application of social learning perspectives for instruction (Ahammer, 1973).

The Montessori educator uses a model of demonstration and "play acting" when

presenting the materials, similar to the social cognitive view of social learning. The value-laden tradition of the Montessori approach encourages a cognitive awareness of modeling and acting, as materials are demonstrated first by the lead "mentor" teacher, and then practiced by the interns. This activity could be replicated, even if one did not fully comprehend or identify with the Montessori principles. The Montessori method includes the social learning principles in its mentor-intern process; probably due to the reliance of the "method" upon preparation of the classroom, and the large quantity of learning materials.

Although year to year, the social matrix of the School changed with new teachers arriving and others departing, the mentor/leaders retained the ability to model the Montessori values of demonstration and modeling both attitudes and procedures. Ahammer (1973) views the social cognitive model one which supports the life-span view of human development, and this will be examined in the next section.

Design for Mentor-Teacher Rational Autonomy

Becoming a Mentor

Having been a public school principal or teacher, is minimal preparation for the leadership role demanded in becoming a mentor for novice teachers. "Mentor" in Greek mythology, was a friend of Odysseus; "a wise adviser". Today's educational mentor requires more activity than advising. The role requires becoming an instructional leader with exemplary characteristics. One of the most important requirements is found in the description of the word, "empowerment" (Bennis and Nanus, 1985). Empowerment presumes that the leader is able to assume the role and position, of the mentor/leader, because the mentor has been educated in self-awareness, awareness of others and

commitment to a "vision".

First, the mentor must have "positive self-regard" (Rogers, Bennis and Nanus, 1985), which includes recognizing strengths of self, and compensating for weaknesses. The most difficult requirement may be in self-discipline of emotions and actions. The next requirement is having respect and regard for others. The word "iatrogenic", refers to illnesses caused by doctors and hospitals as side effects of medical intervention. The mentor must avoid causing an "iatrogenic" illness in the novice teachers by insisting upon rigid conformity. Awareness of others, and their unique perspective of the situation requires empathy and patience. The third requirement, is to establish a "mission" or a "vision" within the novice teachers education. A mentor must be aware that the enthusiasm for being a leader and having a "vision", may take away the empowerment of others for they may feel unable to attain a level of achievement equal to the mentor. The purpose of empowerment is to pass on the understanding of the mission of educating. Thus, a person must respect oneself enough to realize that being a leader is an on-going friendship with "becoming" or understanding oneself (Allport, 1955). From the existential point of view, the "process" of mentoring is more exciting than the product, when the novice is a fully developed teacher (May, 1976). Thus, the mentor must be willing to transfer the mission of educating without jealousy or fear.

The nurturing of adult cognitive educational skills will become a life long commitment, and not one that is finished when the weekend, in-service conference is completed. A comprehension of a multitude and spectrum of personality and human development theories will aid the mentor. Mentors must internally change their perceptions and attitudes toward adult learning to include the characteristics of a "helper".

Where will leaders derive the inspiration to lead, teach, coach and counsel other adults? Montessori's social cognitive field paradigm contains an abbreviated model for this

task. As interpreted individually by American entrepreneurs and tested in public Head Start and community action, the early childhood model instigated by Montessori's method of mentoring programs may offer encouragement to the prospective teacher and the prospective mentor. It involves a creation of an adult family model within the workplace, where adults of all ages and phases nurture and care for one another through the educative process.

The "School" Mentor

In the School setting analyzed in Chapter IV, the majority of the teachers who came to the School for employment were women. Men were always welcome to apply, but the only successful candidate, was an active retired businessman who wanted a new profession. He became an extremely successful teacher. Some of the novice teachers were foreign born, and had studied the Montessori Method in another country; others had little Montessori training and had only heard of Montessori and were curious regarding the method. They represented many races, religions and age groups. For some, this position represented their first employment after staying home to rear a family. About one half were single; others were mothers, or grandmothers. A few wanted to work in order to provide tuition money for their own children at the School. Some of the married women had husbands who were opposed to their working. For others, it was a necessity. Some wanted half-day work; some desired full-time employment. For over a decade, several dozen were employed for several years at a time, so that the School reflected stability without required tenure.

Mentor Capabilities

The candidates were all idiosyncratic adults, with individual aspirations and concerns. This requires that the mentor comprehends a variety of psychological theories and has practice in "people skills" enabling a mentor to more professionally address the new employee's individual potential. Thus, this case study will address the spectrum of psychological theories which a mentor might want to know. It will also view adult development as a life-span process.

Adult development is a topic that typical school administrators seldom encounter. Even so, the mentor administrator needs to prepare for working with diverse adult personalities who may each be in different stages of development. The adult developmentalist, Sheehy (1976) views the transitions between stages in an individual's life as "passages", or the "passages out of the crisis". These periods are regarded as a very dangerous time. At the private setting, teachers were not tenured, and although pay was similar to the public schools, many came to the School with the expectation of fulfilling a "passage" time with work. This psychologically "dangerous" time might have represented a shift in their family composition or status (Sheehy, 1976, p.35). One teacher might be newly divorced. Another, might have three active preschoolers, with a "need to get out of the house"; while at the same time provide a private school education for the children.

Teachers Changing Perspectives

One qualification to become a Montessori "lead teacher" and an eventual mentor, was for the individual to have a college degree, with liberal arts and sciences the preferred background. The prospective teachers who wished to study Montessori for certification, would be entering graduate level college work, full-time during the summer. Upon satisfactory completion of the three months of summer studies, the teacher would work as

an "intern" for the following year. Four, three-day conferences would conclude the training occurring throughout the school year. These would be attended by the mentor and intern together. The American Montessori Society certification was issued at the end of the year after the candidate had successfully passed a certification exam, and had written several theoretical papers. Creating notebooks containing both standard and creative presentations of the materials, required creativity in subject areas and the fine arts -- music, art, movement, and drama are included in the program.

The candidates who had been educated as elementary teachers, generally had a more difficult adjustment in learning how to work with the children as observers, facilitators, and directors. They were accustomed to having many rules, and "managing" children. As in Rogers' (1965) advice to new counselors, the inexperienced are often the finest professionals for there are no preconceived notions or expectations. However, these former public school teachers were excellent in meeting the requirements for certification and fulfilling written assignments.

Most of the teacher candidates as children, had attended elementary public or private schools, where learning was equivalent to conditioning. Behavioral objectives and discipline methods were part of their life-long education. The elementary school trained teachers were especially accustomed to an excess of talking and verbally praising children. One teacher also reported that physical punishment of the children, although not promoted at the "other" school, was often the only way to manage. If one taught in the public/parochial school, the educators reported that they had to "shake a child", or squeezing the child on the neck or shoulders, "where it immobilizes the student, but no one else knows". But punishment in the Montessori class is not common and certainly in total opposition to the Montessori ideals (Montessori, 1912, 1949). The children, although occasionally rambunctious, usually were accustomed to quietly entertaining and educating

themselves, and each other. This new perspective required an adjustment in the way many adults defined learning and the educative process.

Behavioral Techniques

Although the imported Holland materials in the School were beautiful replications of Montessori materials, every piece needed written and printed materials to accompany it. This would give an order to the material and prepare it for the self-educative process of reading and writing. The "order", and the "scope and sequence" of all of the material needed careful planning. Teachers who enjoyed structurally planning all the steps in the various materials, and then creatively planning the structuring of the classroom environment found their knowledge of behavioral psychology coming into good use.

For the exceptional child, the behavioral methods were very successful. Taking Skinner's (1971) point of view, that situations and environments are the primary causes of behavior, the information which materials and environment provide, give impetus to setting up an optimal school environment. Behaviorally inclined teachers were usually excellent at conducting total group activities with children. They were more aware of safety measures, and more punctual as a whole, with group dismissal, etc.

Child Development Theories

The teachers who had been parents or previously employed as preschool teachers, were usually knowledgeable in child development theories. They were more attentive in observing young children in many play and work situations. Many of these teachers had

read books by Drs. Benjamin Spock and/or Arnold Gesell. They were often very receptive to learning new information, because they had already encountered coping with the activities involved in acting as a full-time parent or preschool teacher. The observational and awareness level of these teachers had been raised, so they could often recognize typical development patterns of children and interpret individual differences, as well as compare these to the norms (Gesell, 1943). These teachers often were very interested in keeping personal notes on each child in the classroom and developing case studies. They knew what to observe, ie., the alternating feet of a 3-year-old as the child climbs the stairs. Incorporating the style of Gesell who was a master of description and development; was an area which they could share with others. They pointed out that Gesell (1943) was appreciated for his positive outlook toward children. Through the descriptive language Gesell used, he was able to make the parent or teacher see the humor in misbehavior. His attitude toward behavior ... and development was, "just wait six months ... it will change" (Gesell, 1943).

> At four a child asks endless questions, sees analogies, tries to generalize from his experiences. He tends to be bossy and dogmatic. With little assistance he can dress and undress himself, lace his shoes (but not tie them), and brush his teeth.
>
> By five his motor control is good, he hops and skips. He speaks plainly and lengthily. He prefers playmates to playing alone. Socially he is sensitive, taking pride in clothes and his appearance. He is self-assured and conforming (Gesell, 1943, p.232).

Gesell (1943) describes motor development norms, as well as norms for behavior and personality. For beginning teachers, these references may assist in learning how to observe and recognize development and the differences in growth and maturity.

As teachers, their personal development as professionals grew. Weekly staff meetings of 2-3 hours, and attendance at several early childhood weekend conferences were mandatory. Some teachers took their skills into Head Start during the summer

months, while others earned Master's Degrees.

Humanistic Perspective

The humanist or Self-theory of Carl Rogers (1969) looks at learning as the child's responsibility. He indicates children should have time to pursue their interests. In this person-centered theory, throughout an individual's growth, the core idea of trust in the individual's capacity is paramount. Rogers promotes that this trust carries through for each person; and that each individual has an inherent tendency to actualize his or her own potential. However, Rogers would stress that "significant" others are important in helping individuals experience fully. These "others" can help a child focus attention on, and symbolize, his own "organismic sensings" to define learning. Rogers further comments:

> It (organismic learning) has a quality of personal involvement for the whole person, in both his feeling and cognitive aspects: being is the learning event. It is self-initiated. Even when the impetus or stimulus comes from the outside, the sense of discovery, of reaching out, of grasping and comprehending, comes from within. It is pervasive. It makes a difference in the behavior, the attitudes, perhaps even the personality of the learner, It is evaluated by the learner. He knows whether it is meeting his need, whether it leads to what he wants to know, whether it illuminates the dark area of ignorance he is experiencing. Its essence is meaning. When such learning takes place, the element of meaning to the learner is built into the whole experience (Rogers, 1969).

Rogers (1969) may be describing children, adults, or clients involved in the attitudinal change, but it is the "meaning" which the learner perceives as important, which makes the event or material significant. The educators who enter a dynamic school environment, may anticipate a change in themselves as well as a change in others. The novice educator may be helped to open avenues of anticipation for this "personal involvement, both feeling and cognitive aspects".

Employing the techniques of the social cognitive psychologies, leaders and mentors will illuminate this aspect of the "meaning" of "professional". They will be modeling the "sense of discovery", "of reaching out" and being "self-initiated" in learning and in helping. In a school where communication and creativity are encouraged, and individuals are recognized for their differences, "organismic" learning in adults is likely to occur.

Mentor teachers and principals establish the environment for the model of interactions, by both their verbal and non-verbal messages. The healthy adult community within an institutional setting must grow through the process of communication with one another. The leaders must facilitate the relational process, through an understanding of the various adult developmental phases. It is important that they give individual consideration for the idiosyncrasies and talents of the novices.

Educators encounter the same crises in their lives as the general population. A "professional family" exemplifying a caring attitude, may ease the life crises of individuals. The "family" may give individuals in crises the courage to pursue the benefits of professional commitment in their lives, and provide a network of support and understanding.

Developmental Adult Theories

Developmental adult theory offers an understanding for utilizing the techniques of the social cognitive perspective, particularly in regards to the functioning of age related changes or day-to-day occurrences in a school.

The book, Passages, was a developmental life-span study based on a review of 115 life stores and showing the critical turning points or "passages out of the crisis" in people's lives (Sheehy, 1976). Sheehy views these "passages" as being a very dangerous

phase, but also as a time for creative change (Sheehy, 1976, p.31). These transitions between stages, produce a similar description in the path of development as Erik Erikson foreshadows in his earlier work, and concludes in recent studies (Erikson, 1986). Sheehy (1976) describes the end of each decade as "passages" or "transitions" representing the gulf between youthful dreams and active fulfillment.

The life-span, "epigenisis", developmental perspective taken by Erikson, describes the phases of affection which may enter the individual's life. It also allows for those crises that enter because of the "space time nature of all development". As defined by Erikson, "epi" can mean "above" in space as well as "before" in time, and in connection with "genisis" can well represent the space time and nature of all development (Erikson, 1986, p.38).

Erikson indicates that the loyalties and commitments of adolescence will lead to intimacy in adulthood. The commitments are termed as "eventual commitments to lasting friendships and companionship in general" (Erikson, 1986, p.37). He defines love "as the first adult strength". "...and is thus the basis of ethical concern as elaborated in affiliative patterns" (Erickson, 1986, p.37). The middle stage of adulthood, has the "vital strength of care and generativity within the cross-generational setting of the technologies and cultures" (Erikson, 1986, p.37).

Promoting Adult Autonomy

The nature of the Montessori psychology and curriculum in this setting promotes an evolutionary ideal. The technologies of teaching machines, computers, electronic music and video taping may be seen to be similar or in opposition to the Montessori materials. The neutrality and acceptance of both examining and questioning new technologies promotes exploration for adults. How the adults, in their phase of "care and generativity"

introduce these technologies to each other, and to children, reflects the inherent power of a cross-generational setting. The wisdom of age and professional experience, can intermingle with the openness and curiosity of the novice teacher. Or it may clash in a war between the various decades of "generations", which appear in the adult community of a school. As Erikson noted, "This group of adults has the reality of taking care of what is being procreated, produced, and created" (Erikson, 1986, p.37). "Taking care" of the technologies and cultures is only one aspect of a professional environment which promotes autonomy. The other aspect is creativity.

Teacher Creativity

However, what is being personally and individually "procreated, produced and created" by the professional cadre within a school environment is more important for the adult individual's autonomy and authenticity than the care of the technologies within the school. These individual "creations" by teachers reflect an adaptation or complement to preexisting, traditional information. Whether cutting out information from old surplus text books or making improvisations from Montessori's materials, teachers are natural creators and innovators. But taking new technologies, and innovating upon these for the child's classroom world is only one important form of creativity. Another form may come in the way in which one instructor communicates with parents, or introduces new program information or materials to their class.

The mixed age group of adults is no different in its social cognitive function than the mixed age group of children in a class. The individuals in representing friendship, affiliation and generativity should begin to perceive and understand other's view points. For this to occur, the leader and the institution must provide time and space. A setting needs to be provided for shared information and formal communication. Planning

programs and creating materials takes reflective time, and production time. Affiliation and friendship also require time and shared experiences.

Just as children in a classroom "move away" or move to a different level, those in the adult school setting may do the same. Leadership and examples set by mentors, become vital during changes in staffing, whether resulting from life crises, or by new professional assignments. With the loss and change of close associates, an educator regardless of age, may briefly enter Erikson's final phase of life's challenges. These losses created by change are experienced by each individual throughout the life-span, and create the anxiety which the existentialists view as the one important question that must be encountered. Courage is needed as change brings personal anxiety (May, 1967). Anxiety may open two roles for the educator; "possibility" as one changes and uses creativity to imagine new horizons (May, 1967). Or, it may bring "despair" as one denies and avoids the possibilities of change (May, 1967). Erikson's life-span work, defines aging as a stage which has a more permanent aspect. He describes this challenge as an existentialist would: "...to balance the despair and integrity of experience" (Erikson, 1986, p.38). Both sides of emotion must be considered by the aging. Integrity gives one the opportunity to express one's creativity without fear of failure, and to engender and give to the new generation of educators and children. This is the area where the mentor may excel.

Engendering Autonomy

Promoting autonomy development within adults, relies primarily upon the social cognitive frame for many of its observable techniques. The mixed age group, and the peer and perceived authority modeling, becomes paramount in the individual's conception of

autonomy. But the inception and consideration of autonomy within the school setting is more easily comprehended within the acceptance of cognitive field theories. Promoting individual "meaning" for adults is a difficult task for a leader. To encourage the actions of a self-directed professional, a leader must "set the stage" for creativity. Time, place and context become important. When individuals perceive that they have "something special to give to the children" or the school, creativity flourishes. Looking for the unique "possibilities of creation" which lie in each professional within a school culture becomes a large part of the leader's responsibility. The next step is to unite these unique individuals into a cadre of affiliated professionals.

Rational Autonomy Design of Learning-Teaching Model

> On a group of theories one can found a school; but on a group of values one can found a culture, a civilization, a new way of living together among men (Silone, in Raleigh, 1962).

The Educator's Dilemma

In promoting a theory of autonomy, one must begin to consider the values involved, (Please see Figure 5). Autonomy is a value; it becomes the leitmotif for liberty and freedom and prescribes a condition in which the individual may thrive. Autonomy as a dominant theme in education, might produce a unique culture for a child, and further the understanding of living in a participating democracy. It could teach the child the meaning of liberty, freedom, creativity and cooperation.

In the previous chapter, the affective nature of Kinship and the culture of the family was considered. The child's primary school, was considered to be an excellent site in which to encourage parents. Promoting autonomy in the home, was encouraged by allowing family participation by every member. The child who has not had an opportunity

to share in responsibilities, or to live in a responsible decision-promoting family, will need assistance in accomplishing this goal in school.

Socialization

The educator must help the child accommodate to the group process of socialization, by taking the child's perspective. In viewing Figure 5, the educator has the dilemma of rule enforcement, which forces the child to place all reliance for approval upon the teacher or other authorities. This will be ameliorated, if the educator is capable of preparing a learning environment, a culture within the classroom to habituate the child in decision making. The child may be able to eventually follow the "rules decided" through his or her own choice. Free choice to obey the authorities' fair and sensible rules is the highest form of autonomy to be fostered in the individual (Dearden, 1972, Montessori, 1949).

Thus, the major responsibility of the educator is to change the perception of oneself and of the child; to understand that although some rules are "determined" and inevitable, there will be "possibility" for "self-governance" within many realms of the school. This requires many changes in the educators point of view or perspective, and new education in preparation of the environment.

Indivdualism

If the child is always observed by the educator in comparison to the group, the child's self-concept may be damaged. If the child is first considered as an individual there will be opportunity to expand positive self-esteem in each child. The educator must bring

every child out of the third person conception of "me", and "what others do to me", into the realm of "possibility" and "free will". In viewing Figure 5, the educator will have, in every transaction with the child, and in every lesson and object which is prepared for the classroom, the autonomy to make a rational decision. The educator may encourage the "independence" and "possibility" for increasing "self-esteem" within each child. It is the educator's authority and autonomy which elicits the responsibility to plan the child's culture, and to allow "possibility" to rule over the attitude of "powerlessness". The educator may not ignore the inevitable institutional rules, or the individual child's "determined" disabilities or deprivations. However, these need to be minimized in the child's perception, and in the perception of the child's peer group.

Teacher Values and Goals

The young student's self-awareness, self-mastery and self-efficacy must dominate the perspective. Reliance upon the social group, and cooperation with peers will follow as the child is no longer compared to others by the adults.

The values, methods and goals of socialization will then be based upon affection rather than alienation. A child's culture prescribes: "The methods and goals of socialization, how he will be trained, which personality characteristics, motives, attitudes and values he will adopt" (Mussen, 1973, p.54).

When a child is respected as an individual who is capable of learning how to self-govern and to think and act independently, then the culture values autonomy. To have a school and home culture which extends autonomy into active personal decision making and problem solving, is a value which many adults cannot comprehend. Adults must change their point of view and trust in this inherent ability in children, before they will create the cultures of autonomy for children. This is where a theory of autonomy may

assist.

Young children are not always capable of verbalizing their decision making process. If adults provide small challenges for them, and then learn how to observe, children may demonstrate that they are capable of independent problem solving and self-governance (Montessori, 1912, 1936, 1949).

Dearden (1972) recognizes that autonomy is tied to an ideal of human development which the adult must perceive and then expect from children. Dearden (1972) does not link autonomy to a maturational stage or age in the individual.

> Becoming autonomous is not just a maturational process, since plainly many do not do so to any degree. It is in part a learning task set by a particular ideal of human development. But in that case we may reasonably expect that this task will be assisted by holding out to children expectations in which this concept of themselves is prominent (Dearden, 1972, p. 464).

But, Peters (1983), also reminds educators that the curriculum requires an account of "the type of social relations characteristic of an autonomous person, and the kind of social conditions under which they are possible (Peters, 1983, p. 43).

Dearden (1972), Peters (1983), and Spodek (1973, 1985) all propose autonomy linked to reason as a realistic aim for education. However, the "methods" and "training" within socialization, which Mussen (1973) points to as the dominant cultural means of assisting the child, remains the question.

Montessori, saw the direction which education must take in order to provide for autonomy, to be thus:

> The educator must be as one inspired by a deep worship of life, and must, through this reverence, respect, while he observes with human interest the development of the child life. Now child life is not an abstraction; it is the life of individual children. There exists only one real biological manifestation: the living individual; and towards single

> individuals, one by one observed, education must direct itself (Montessori, 1912, p. 104).

Thus, inspiration, respect and interest in the child's development are personal character traits for educators to obtain. The reality of observing and understanding individuals, not the total group, is the mission for education. But how does the educator, with twenty-five to fifty children in an elementary class encourage the value of autonomy? How does one build a curriculum, select materials and choose instructional techniques?

Before the educator becomes involved herself in the "hows", one must concentrate on defining learning. An educator's definition of learning will influence the curriculum, materials and instruction (Bigge, 1982). It will create the methods and training leading to socialization. But the potency of the educator's definition also creates the culture, the climate and the context of learning. The value of autonomy, whether internalized by the novice teacher or the young child becomes a powerful defense against tyranny and conformity. It becomes the "inner freedom" which Montessori (1970) and Rogers (1983) describe. If one defines learning in the frame of the social cognitive field perspective, the aim for rational autonomy becomes possible.

Educator's Dilemma: Cognitive Field Perception

In viewing figure 5, the adult educator is the figure at the top of the page. The child/student is in the lower position.

The cognitive field frame is brought into utilization with the word "perception". Each individual is within a unique "life space". Within field psychology, behavior is any change within a life space that is psychological in accord with a growing intelligence (Bigge, 1982, p. 190). The "life space" is a root metaphor which describes the person in interaction with the psychological environment. This is a useful way for educators to

observe others. Then the educator may ask, "If I were that person, what would I be thinking?" It is a way of considering someone else and their possibilities for personality and cognitive expansion.

The educator always has the dilemma of considering each child as an individual, and at the same time, interacting with the group as a whole. The educator will be analyzing and planning for the development of independence in each child together with the cooperation, reliance and self-concept gained in group activities.

The balance beam is an interactive beam and is never meant to be in a position of homeostasis. Rather, the child and adult will constantly reassess for self and others the interactions between the rational and the autonomous. Ultimate goals will feature the factors on the autonomous cognitive field side of the balance interactive beam.

Personality "Becoming"

In viewing figure 6, the adult relationship of parent to child, exemplifying the personality traits of attachment, is displayed as a rose and attached bud. This ideogram signifies love and attachment. The picture of the opening rose may exemplify the adult personality. New petals represent positive attitudes added to the personality as life-span possibilities are faced. Each one represents courage to face anxiety, and the decision to grow rather than wither. The "thorns of life" are the unmet challenges and may impede the interaction with others, of "blooming" in a newly chosen field, or entering a new path or direction. Interaction is the necessary ingredient which enhances the rose's development.

According to May (1976), the role which one takes when avoiding possibilities and living resignedly or narrowly, creates a narrow existence. Therefore, the metaphor of "the full bloom of the rose" could never be realized. However, affiliating with others and

engendering the "becoming" in children and adults creates an endless progression of possibilities.

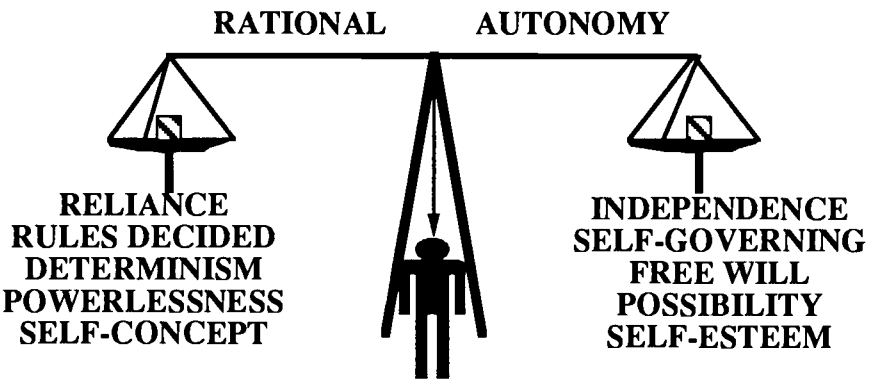
Summary

While the process of changing theory into practice is complicated, it is one of the most exciting and challenging parts of the learning-teaching process. Since the Design of Rational Autonomy is a theory of practice, this chapter focused on a definition of becoming a mentor and a teacher for educators involved with early childhood and elementary classrooms. A pictorial model emphasizing the educator's constant and everchanging dilemma in balancing considering the oppositional concerns between self and others is presented. The Rational Autonomy model signifies that the educator must have as a "mission", changing one's perspective to an understanding of other's perspectives.

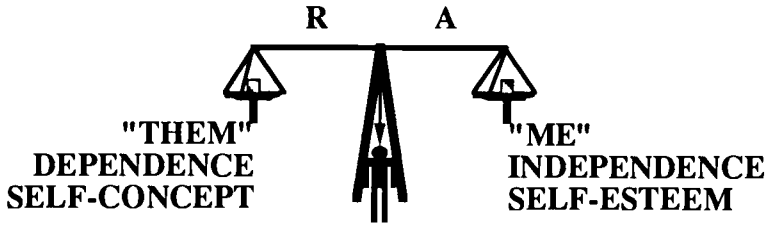
Looking at a spectrum of psychological theories which a mentor-leader might utilize in guiding novice teachers into autonomy, reflected an overview of the mentor-teacher process in the School.

An ideogram to remind educators of the engendering qualities of affect, which a school may offer to teachers and mentors alike, closed the chapter.

EDUCATOR'S DILEMMA



ADULT PERCEPTION



CHILD PERCEPTION

Figure 5

"BECOMING"

Figure 6

CHAPTER VI

INTEGRATING ELEMENTARY AND EARLY CHILDHOOD TEACHER EDUCATION THROUGH RATIONAL AUTONOMY

> Therefore, I hold that any reform of education must be based on the personality of man. Man himself must become the centre of education and we must never forget that man does not develop only at the university, but begins his mental growth at birth (Montessori, 1949).

Introduction

The Design of Rational Autonomy attempts to provide educational reform at the personal level, the personality. The model considers a higher phase of autonomy to be "authenticity", and that personality characteristic will be briefly described in this chapter.

The university is the place where reform often begins, but by taking a personal approach, perhaps progress may be made as educators leave the university or college and enter other institutions. Helping novice educators have integrative solutions for the dichotomies inherent in bureaucracies, is another important part of teacher education. Montessori recognized all education as originating from within the individual; thus from university to preschool, the Design of Rational Autonomy proposes that aim. The individual, particularly the individual educator, must transform the school through the transformation of individual attitudes. By utilizing the techniques of the Social Cognitive Field frame, one may both model and emulate the ideals of a democracy through the transformation of a classroom. "Organization may become a hindrance to freedom -- but there is no objective freedom without organization" (Dewey, 1922, p.83, in Archambault,

1964).

Dewey expresses the dilemma which will always be present in schooling, and in the democratic society. As the educator assumes a new perspective, and transforms both self and classroom, it is the interactions between the dichotomies which must be facilitated by the educator. The dichotomies of institutional organizational structure, and the individual; of creativity and conformity; and of authenticity and accountability must be both understood and promoted. Both extremes are existent; neither may be ignored by the educator.

Integrating Teacher Education

The Design Of Rational Autonomy is an important link in integrating the educational model for teachers from diverse levels and interests. The study of both human development and cognition have recently emerged as immense fields in psychology (Gardner, 1985). In the area of developmental psychology, there are few models provided for classroom interaction through teaching, as theories of human development are static. In the study of cognitive learning theories there are few which include humanistic and development paradigms of instruction. "Thus, either human development or learning theories have been neglected in teacher education and in the consideration of either teacher or student" (Fein and Schwartz, in ed. Spodek, 1983). The framework for Rational Autonomy proposes an integration of a teaching technique from learning theories, the Social Cognitive frame; and a humanistic and human development consideration, through the Cognitive Field frame.

Classes in educational psychology for elementary teachers at the university traditionally include the study of learning theories and their implementation. These classes

may include some theory in human development. In contrast, early childhood teachers' education concentrates mainly upon the study of developmental theory, often concentrating upon maturational factors of development. It may not include understanding and practice of learning theory. The Design provides a psychological model that will complement both learning theories implementation, and the life-span developmental model. How might this affect teacher education? Spring (1986) points out that education can be brought into the service of either authority or independence (p.28). The aim of the Design is for a harmonizing of autonomy in the individual, with responsibility. To promote this across the life-span, one must consider theories of development.

A theory of development is necessarily passive because of its assumptions; that behavior changes as a function of encounters present in most environments. Developmental maturational theories present general statements, selecting experiments, and establishing factors. "Principles for modifying or generating these factors are not given" (Fein and Schwartz, in ed. Spodek, 1983). However, a theory of development is more comprehensive and broad in comparison to learning theories. It often conceptualizes many years of the life-span and may assist educators in understanding themselves and their students (Elkind, 1976; Erikson, 1968, 1986; Kagan, 1978; Kohlberg, 1972).

In comparison, a theory of practice such as Rational Autonomy, is a learning theory which takes an activist stance and is more specific. It usually assumes that some aspects of behavior or knowledge are more or less desirable than others. The task of a theory of practice is to describe to a novice teacher, what one must do to cultivate the expertise needed to produce the described results (Gagne, 1985; Roopnarine and Johnson, 1987). The expertise required in utilizing the RA Design as a mentor and teacher was explored in the previous chapter.

"One goal of such a theory is to formulate strategies for construction environments

that ensure the greatest beneficial impact on the greatest number of individuals" (Fein and Schwartz in ed. Spodek, 1983). Strategies were also reviewed in the previous chapters. The purpose of this model is to provide a conceptual framework for the psychological origination of Rational Autonomy, so that a theory of practice may be extracted from it and have the "greatest beneficial impact on the greatest number of individuals". This theory of RA may have an aim of encouraging autonomy, an aim which may be utilized in preschool, elementary and higher education. Thus, the Design of Rational Autonomy provides an integrative aim for diverse teacher education approaches. However, it requires new assumptions regarding education.

New Conceptions of Education

As explained in the history of educational psychology, in the emergent form of Cognitive Field Psychology, new conceptions of education require new frameworks for instruction. The synthesis and inclusion of the emerging humanistic and cognitive psychologies, are eliminating old traditions in education (Gagne, 1985; Glickman, 1984; Leeper, Witherspoon and Day, 1987; Myers, 1986). The new psychologies as applied to teacher education, imply new directions for all levels of education.

> Old assumptions about educating children and teachers were based on a mechanistic world view. Today, the segmented and simplistic approaches of the past industrial age are changing. Integration of ideas and models between individuals and groups is becoming important if organizations are to survive (Burbach, 1987).

Thus, it is important for teachers to consider their personal understanding and instrumentation of the model of Rational Autonomy, in relation to the models of others who teach at various age levels. Insular attitudes regarding the education of teachers and

children should not remain. These attitudes

> ...are rapidly being displaced by new assumptions that are more integrative and emphasize the interdependence of the organization's parts and the relationship between organizations and their environments (Burbach, 1987).

Integrative modes give first attention to the human element, for it is the educator who has the political autonomy to conceptualize and animate a model. Most significantly, it is the young child who will be the one to be influenced by the changes which educators could make through an integrative psychological approach toward education. Integrative frameworks and actions could increase positive attitudes of learning across the life-span (Goodlad and Anderson, 1987). Adult learners in teacher education will be affected by integrative concepts and actions too. Whether in elementary or college education, it is the educator who has the responsibility of conceptualizing life-span human development and matching it to the appropriate learning theories and to the individual child or adult. This is not merely a "developmental approach", or a learning theories approach. It is an integrative knowledge of psychology. It is an exploration of cultural, political and economic dilemmas, as they are applied to children.

As demonstrated in the previous chapters, this could be accomplished by first considering the individual, and centering reform upon the individual and his or her education.

The University and Personality

> When autonomy is yoked to critical rationality, the concept has no place for those concerns where the giving and criticizing of reason is only modestly engaged for the concern with how one came by one's beliefs and values, and in the case of teachers, with the role played in how others will come by theirs; this is a main stroke in authenticity (Cooper, 1983, p. 23-24).

How might the university assist the prospective educator in becoming both authentic, "autonomous" and "agents of change" (Glickman, 1985, p.36). Deterministic views will prevail, if the different manners of process which distinguish authentic process from other processes are not examined. At the university, attention must be centered on developing an authentic individual, for the authentic level is one level higher than autonomy (Peters, 1972). The novice educator must comprehend how to elicit authenticity from the individual student. The prospective educator must also understand how the young student "comes by one's beliefs and values", and how the educator personally has "come by theirs".

Gendlin's (1962, 1969a, 1974) existential psychology develops a scheme for developing authenticity; linking relationships from the processes of symbolization to concrete experiences. Gendlin's theories tell how one recognizes when something is authentic for an individual, and when it is not. Gendlin asks how one can compare experience with expression (1974). This is an essential difficulty in working with children and adults. The influences of others can be so great, that the student attempts to please the teacher or the peers, by giving the "correct" answer. However, the student may not truly comprehend the material, or it my not have any personal meaning for him. Thus, the cognitive field frame is lost.

Gendlin (1974) promotes a view of experiencing described as "non-numerical" and "multi-schematic"; corresponding to the cognitive views of Bruner (1987). There is a defined relationship between the subjective "authentic" involvement of an "individual in the experience of learning and the extent of his/her learning. The student must perceive and understand in his/her own way, and in his/her own time frame (Gendlin, 1974, Maslow, 1968).

By addressing the problem of "just how symbols (thoughts, speech, other symbols) are related to, or based on, concrete experiencing" Gendlin, (1974, p.320), bridges the two concepts of the subjective and the objective. This is solved by changing the educator's question from, "what?" is authenticity, to "how?" does one recognize it or achieve it.

> The experimental method of thinking allows one to obtain the power which symbolizing gives, and yet also return again to the experiential 'felt meaning' one wished to articulate. One doesn't lose hold of experience as if a conceptualization could substitute for it. Symbolizing in this view, is not giving a representational picture of what is experienced, but is itself a farther experiencing (Gendlin, 1974, pp. 320-321).

Gendlin's theory of symbolization has been used extensively in psychotherapy, and research was developed from Gendlin's Experiencing Scale, (1974). The Scale measures the effectiveness of its use and makes it possible to measure authenticity during therapy. The degree of authenticity is correlated with successful outcomes of therapy, and measuring authentic learning in the classroom might take its cues from this research. Gendlin (1974) describes the therapist's interaction with the client, both verbal and non-verbal "as carrying the client forward". In psychotherapy and the one-to-one process, one has more time to measure this.

Measuring Authenticity

In a classroom of many children, the art of this type of teaching becomes more complex and difficult to measure. The educator, perhaps through video, critique, role play, or self-examination might come to understand that it is the "manner" or context, in which the teacher teaches the student, that will elicit autonomy and authenticity in them.

Thus, the context and the process become the important ingredients to supplement the environment and the subject content. This becomes the central theme for the university teacher in educational programs for elementary and early childhood teachers.

Melby (1959) thirty years ago, defined the need for creative teachers who not only know subjects, but identify the "golden threads in the tapestry of creative teaching" (p. 64). Melby identified these as faith, respect, humility and love; not unlike the values proposed in a Design for Rational Autonomy.

> With faith he supports himself and inspires his pupils. His respect of the unique and creative capacities of his pupils moves him to set them free. His humility in the search for truth is an example to his pupils, and with them he humbly seeks and often finds them the new reality. Finally, and most important it is love that gives life to teaching as it does to painting (Melby, 1959, p.64).

Montessori's Paradigm

Autonomy

The central idea of the Montessori psychology is that no individual may be educated by anyone else. One may be inspired, encouraged or assisted in learning; may be directed, taken, elucidated, or "led out of the darkness"; but in the end, the individual must do the work of learning. Every detail of Montessori's psychology, the sum of her 20 books and pamphlets, every piece of her learning materials, and the constructs of her psychology reflect this statement. Whether it is a child of three, or a professor of eighty-three, the Montessori psychology centers on the role of autonomy. It remains focused on this one principle -- auto-education, and its nourishing effect upon the individual's personality.

Montessori does not ignore the benefits of educational leadership, an enriched

environment, or natural abilities of the learner. What she does emphasize however, is that the dominating idea of any classroom must be autonomy for each individual. Higher education must also incorporate this model and this aim, or the personality of the novice educator cannot expand. Personal liberty connected to learning will result in full personality development. Anything less, than the liberty to learn in one's own way, creates a burden for the individual in the path to independence.

Liberty

Montessori intuitively understood that social influence, social motivation, and attributions were so powerful that the greatest responsibility of any educator was to protect and encourage the student's liberty; even within the social milieu of the classroom. Yet, her personal value system was such that Montessori realized that one had to live and make one's way in a world of people. The healthiest personality, then, was one that could give affection and respect to others. Thus, a good beginning in personality development was more important than remediation later.

Montessori regarded the educator as resistant to change. Thus, her techniques allow the teacher educator to be more authoritarian than the teacher of the young child. A professor in a university classroom is more accustomed than at any level of education to demonstrate and elicit personal liberty from students, and to model it for mentor educators. But Montessori would not expect a teacher education plan to allow as much liberty for college students as to be allowed for the preschooler or elementary school child. The college student's personality if regarded as more stable and more resistant to change. Montessori learned that in changing an adults personality, it might take firmer educational measures, than what an educator in a classroom of preschoolers should be permitted. Allowing a child to fulfill his innate potentials within the "prepared environment" became

the dictum for the educator of the young. Many of the "liberty" principles could benefit adults, but it was not for Montessori to suggest this in the education of teachers. Rather, Montessori suggested deep concentration, and a planned, structured approach for teacher education. Liberty, as an educator, would be allowed after the education was complete.

Self-Actualization

Maslow fulfills this concept by recognizing that an aim of liberty for the individual is to seek self-actualization. One of the characteristics of self-actualizing people, "...is their relative independence of the physical and social environment" (Malsow, in O'Neil, 1969, pp. 224-225).

Maslow states that these "self-actualizing" people are propelled by "growth motivation" rather than by a "deficiency motivation". That is, they live out their entire lives "meta motivated" or their personality seeks growth rather than seeking to fill some deficiency in the personality. Their lives are a dynamic, growth process; "Being rather than Becoming" (Maslow, in O'Neill, p. 223).

Montessori never viewed liberty within a vacuum. It was related to the learner's unique personality traits, and the maturational phase. She recognized similarities among the age groups, but attributed a larger age frame than developmentalists. Furthermore, Montessori always gave the benefit of "possibility" to students, whether teachers or children. The educator must prepare for the student's success and expect it. Montessori's law for educators was to prepare the environment, then "watch and wait" (Times Educational Supplement, in Kramer, 1977, p.365).

In a theory of autonomy, once the educator has the principle of self-education or liberty in mind, what else remains for the educator to know? Several educational psychologists have attempted to delineate this statement; and when one examines closely

Montessori's writings, it becomes clear that two central concepts evolve.

Teachers' Knowledge

To support the concept of liberty, the knowledge of life-span human development is necessary. Theories based upon scientific knowledge of the child's physical development, and emotional and social maturation are necessary ingredients. The knowledge of adult development and personality theories augment this in contemporary education. An effective educator today, will understand parents, families, other teachers and children. This information must also relate to the new cognitive research and the current learning theories.

A strong foundation in human development and learning theories, hardly answers all of the questions to be present in instilling the principle of "liberty" in the classroom. However, it does provide the understanding of the child in the hurried journey to adult development. Montessori realized the importance of allowing that journey to be interrupted by pleasurable frequent visits to the oasis of the classroom. By viewing the classroom environment as a very small, but extremely important part of the learner's development, educators might begin to emphasize the importance of the classroom culture. The classroom environmental influence, and its organization remain important new considerations for educators. Educators must realize the importance of beauty, scarcity and orderliness in the environment, and understand that it has motivating factors for the individual and the social group (Mehrabian, 1976). All of these factors must relate to the learner's maturational or developmental level. Since it is impossible to know the exact level of the learner's maturational or developmental phase, then the material must allow for multiple contingencies and be self-correcting (Skinner, 1971, Bandura, Bloom, 1985).

This is when knowledge of the behavioral psychologies provide the technique for the utilization of the cognitive field psychology.

What the studies of child and adult development provide for the prospective educator, is the realization that one may lead the learner to drink at the classroom oasis, but the student must be thirsty. "Thirst", or internal motivation, arises from individual need for development. There must be reason for the learner to be motivated, and to have from a perceptual and authentic basis, a reason to find "meaning". Maturational and life-span factors often provide innate motivation, particularly in the early years of a child's life. These factors may be as powerful as those found in social theories (Montessori, 1912).

Teachers' Attitudes

The second area of the understanding of "liberty" is the modification of one's personal attitude toward its implications. This is the process of changing one's perception of liberty as necessary for learning, and personality expansion. The third concept requires action; or the analysis and encouragement of liberty's more positive aspects within the educator. Teacher education programs may easily do this in examining autonomy from the review of authenticity development. The fourth concept of liberty requires the educator of teachers to help the student analyze the full range of liberty upon it's continuum, both as a personal characteristic and as a social practice as liberty harmonizes with freedom. In analyzing liberty and freedom, one begins to analyze classroom practices, and to consider the implications of politics and economics upon education.

Liberty or Equality in Politics

After World War II, American schools were increasingly linked to the policy

needs of the federal government (Spring, 1986). This has often destroyed independent efforts of schools to consider new curriculum or school policy. One interpretation of the expansion of federal government into education is a "neo conservative" interpretation of educational events (Spring, 1986). It is argued that a major concern after the war was to provide equality of opportunity.

> At every level of formal education, from nursery school to graduate school, equal opportunity became the overriding goal of postwar educational reformers (Ravitch, 1983, in Spring, 1986).

Spring (1986) concludes that the major problem for the future, is to separate educational policy from other national policy goals, and to develop a develop a philosophy of schooling based on concepts of liberty. His book, The Sorting Machine: National Educational Policy Since 1945 (1983), concludes with the consideration that educators might begin to formulate a national educational philosophy based upon individual liberty, and not one that only reflected service to state or corporate interests (Spring, 1983).

As the teacher educator assists students to view liberty and its implications however, the oppositional pole of freedom and its positive inclinations must be kept in mind. The main effort of the university education must be to keep this examination and analysis proceeding (Goodlad, 1988, Wood, 1980).

Liberty for Novice Teachers

Not all forms of liberty are realized by every individual, but within some constraints, may be emulated and finally elicited as the individual has ability and interest. In educating novice teachers for the various public and private school cultures, the permission and encouragement to examine oneself, and move toward many points on this

liberty continuum, becomes paramount. If this is not encouraged at an early time in a professional's career, it becomes more difficult later to elicit an attitude change. Institutions may profess individual autonomy, but they do not foster autonomy. Thus, as the educator works within an institutional culture, the concepts of autonomy are often lost.

As the psychological impact of liberty is realized, and studied by the educator as a personal "what and how", the novice realizes it may be practiced. However, liberty must also be considered from the "why" point of view. This is where the philosophical questioning of education issues resulting from politics and economics becomes extremely important. Examining values in the culture becomes supreme in the prospective teacher's understanding and future implementing of liberty and freedom for self and others (Goodlad, 1988, Wood, 1980).

The Learning-Teaching Design of Rational Autonomy

> A universal revolution is what we need. This revolution requires only that man should raise his values and become the master, instead of the victim, of the environment he himself has created (Montessori, 1955, 1962, p.18).

The precepts and values of autonomy within education include the recognition of democracy as the ideal which provides the foundation for American public education. Please refer to Figure 7. Melby (1955) examines freedom and public education by dividing the concepts between personal freedoms, "liberty", and public freedoms, "freedom".

Liberty and Freedom

Democracy is based upon the personal rights found within the Bill of Rights

(liberty), and the public rights provided within the U.S. Constitution (freedom). In viewing Figure 7, the educator is seen as having the opportunity to understand and utilize the appropriate body of psychologies to foster both liberty and freedom. The social cognitive psychology promotes social and group experiences; social learning. It fosters emulation, and modeling and may encourage cooperation, equality and a model for representative government. As the individual participates in the group, the self-concept is formed in comparing self to others. Please refer to Figure 5, for "self-concept". The interactive beam between the social cognitive psychology and the cognitive field psychology, in Figure 7, is a reciprocal tension which the educator must facilitate.

The perception of "self" as derived from the cognitive field psychology becomes the most important component in creating positive tension. It must represent the more dominant picture in education. Please refer to Figure 5, for "self-esteem". Without an individual who views "self" as an esteemed, unique and conscious decision maker; capable of assuming self-governance and possessing free will, the tension between self and others will become negative. Where affection, consideration and understanding might have provided a positive dialectic; the tension between the poles of autonomy and rationality will harbor resentment, prejudice and misapprehension.

Thus, the educator within a democracy, who wishes to create a democratic classroom, must concentrate upon the perceptual cognitive field psychology. Consideration for the individual must always remain the preeminent consideration, and this is particularly true when the child is in the early phases of schooling. Please refer to Figure 7.

The cognitive psychologies illustrate the differences between learning and teaching. Educators are stimulated to consider the learner as an individual capable of purposeful, conscious decision making. The individual is not merely a victim of

circumstance, controlled entirely by others, or by the situation. The individual is capable of making choices and influencing the direction of personal destiny. Courage is needed for this immense task; thus the new educator is viewed as not only a teacher, but as a facilitator, a director and a co-learner in the students process of learning (Combs, et. al., 1974).

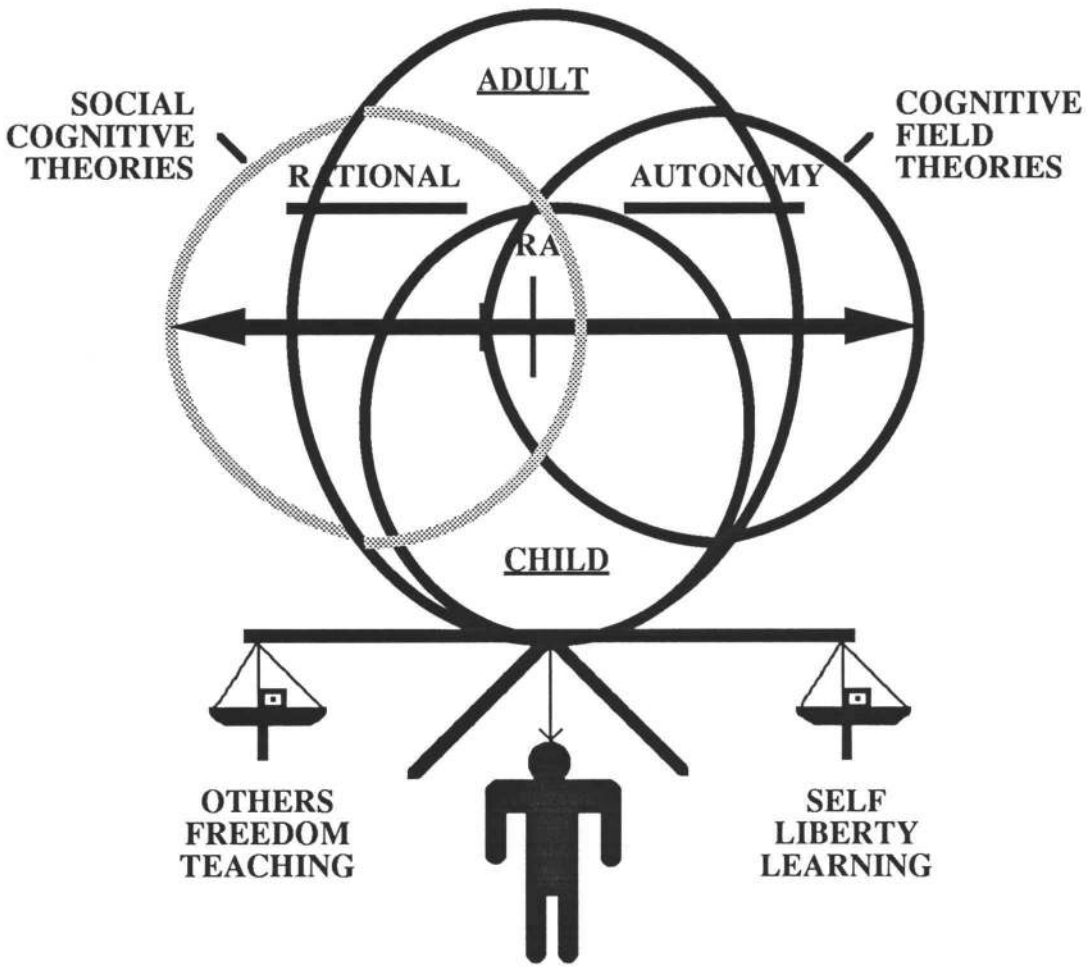
Summary

Integrating the two diverse strands of education, private and public; preschool and elementary may be accomplished with an integrative view. "Authenticity" as an additional aim for adults, is considered as an extended view of liberty for the personality, and the next step after comprehending autonomy. An existential point of view needs to evolve in the individual for this to occur.

By designing a school experience where the child might extend his autonomy and authenticity, Montessori encouraged interaction with a "prepared environment". But responsibility yet remains with those who educate educators. Concepts of liberty and freedom, and the tension that is created between the personal and the social, the individual and the bureaucracy, must be understood. Classroom educators have the opportunity to raise their values and become master of the situation, or to conform with the environmental demands, Good examples from the university yet remain the best teacher, and a major part of the educator's social cognitive field paradigm.

DESIGN OF RATIONAL AUTONOMY (RA)

PSYCHOLOGICAL FOUNDATIONS OF A LEARNING-TEACHING THEORY



Human Development and Personality Theories

FIGURE 7

CHAPTER VII

SUMMARY

Introduction

Chapter VII will examine the Social Cognitive Field paradigm as derived from the Montessori psychology, in light of current and future expectations for education. It will also provide a review and summary of the Design for Rational Autonomy. There will be an enumeration of characteristics educators might anticipate if they direct educational aims toward either liberty, and autonomy in the individual; or toward freedom, with the emphasis upon the rationality of group norms.

> ...The aspiration to create a prescriptive science of educational practice is, I believe, hopeless.
>
> What I think scientific inquiry can provide in education are rules of thumb, not rules. Rules of thumb are schematics that make interpretation and judgement more acute. Scientific inquiry can provide frames of reference that can sophisticate our perceptions, not mechanisms that will control the behavior of students, teachers, or administrators. In short, if a distinction can be made between the prescriptive and the interpretive, between rules and schematics, between algorithms and heuristics; in the human situation I opt for interpretation, schematics, and heuristics, rather than prescriptions, rules, and algorithms (Eisner, 1983, p.13).

Purpose of Inquiry

The purpose of this "scientific inquiry" was accomplished. It provides an "heuristic" "interpretation" of the Social Cognitive Field learning theories, and how they might encourage the development of autonomy in both educator and student. The interpretive "schematic" has included a historical review, an origination of autonomy as a

psychological and educational characteristic, and an aim resulting in a Design for Rational Autonomy. The Design promoted a theory of practice to be based upon the psychological foundations of the two values; autonomy and rationality.

Autonomy was considered as the dominant theme, in an analysis of the perceptual cognitive field perspective, and in its assumptions about the nature of humankind. A theory of autonomy, thus provides insight about the nature of individuals, their perceptions, and their motivations. However, the Social Cognitive perspective provides a technique; a process and a method which may be used to achieve the purposes of the autonomy theory. Therefore, the Design provides a psychological integration for educators; one which may be utilized across the life-span.

Montessori's Paradigm

Montessori's life, the development of her cognitive psychology, and her paradigm of autonomy as harmonized with responsibility, were traced in the previous chapters. The relationship of Montessori's cognitive psychology to two contemporary learning theories, Social Cognitive and Cognitive Field theories, was exemplified.

The constructs of Montessori's psychology resulting in a paradigm of autonomy, were substantiated through descriptions of the educative process including the child, educator and family. A theoretical framework, as developed from the Social Cognitive Field theories, was applied to the mentor-novice teacher process, university teacher education, and the practice of teaching. Further explanation extended the development of personal adult autonomy for the novice and teacher educator, creating a life-span conception of the characteristic. Finally, an educational model which promotes an understanding of the psychological and educational bases of autonomy, was examined within the context of liberty and freedom.

Design for Rational Autonomy

A summary of the theory and the "Design" thus far derived from it are presented below:

The model for the child and the classroom interaction is considered to demonstrate a portion of Montessori's unique, but unrecognized learning theory which is reflected in the Social Cognitive Field interaction model. In Montessori's model, this included personality development linked to learning.

The educator must first observe the individual child, and attempt to understand the child's perception of the world, or "life-space". This includes instigating and maintaining interactions with the family, to assist them in understanding the child and the educative process. The educator must have an understanding of both life-span human development and learning theories. The educator must "prepare" the environment using the techniques prescribed in the Social Cognitive perspective. Adequate materials must be provided to stimulate each child's motives of interest within the class, and peer interaction and modeling is employed. The Cognitive Field theories are exemplified by the perceptual frame and the "Gestalt" whole. Affection and interaction are characteristics to be nurtured by the educator. They represent the importance of parents and educator working together for the child's benefit. The educator's affection is modeled through the characteristics of respect, acceptance and interest in each individual.

The Design is intended to assist educators in constructing their psychological and educational understanding of children's and adult's personality expansion across the life-span, particularly in regards to the promotion of autonomy. The Design will accommodate the personal cognitive experiences of each educator, as the educator enters a new perspective of the learning-teaching process.

Teacher Education

Through teacher education, the precepts and associative values of autonomy and rationality are introduced. The novice educator must be assisted by the teacher educator and mentor teacher to recognize that democracy is an ideal which provides the backdrop for American education at all levels -- preschool through the university. Inherent within the democratic ideal are the opposing values of liberty and freedom. The educator who fulfills professional responsibilities at any level of education, must examine, deliberate, and appreciate both value characteristics. Autonomy represents the individual's uniqueness, dignity and rights to be self-governing: the liberty side of the equation. Rational is the complementary characteristic: an addendum for the comprehensive characteristic of autonomy. Rational represents the freedom side of the democracy ideal, symbolizing the responsibilities to conform to society and its rules.

An educational leader must become the ally of the novice teacher and the child, in assisting each individual to realize and practice the two oppositional ideals. It is through the efforts of the educator, that the positive interactions between these oppositional values may be facilitated. The ability of the educator to assist with these interactions, rests on the premise of providing the context and the content for autonomy and rationality to co-exist. In educating the child, emphasis on autonomy promotion becomes paramount in developing positive attitudes toward self-motivation in learning. If the aims of contemporary education include creating a self-governing individual, one who makes resonable decisions throughout the life-span, then early practice in this ability becomes urgent.

Aims and Anticipations From Rationality and Autonomy Promotion

The emphasis of freedom within an educational setting may encourage rationality and heteronomy, reflected by:

1) The ability to accept the rule of the majority.
2) Learning to abide by the values chosen by the democracy: equality, representation, etc.
3) Functioning as a cooperative member of a group.
4) Adjustment based upon outer direction.
5) An attitude of acceptance toward diverse cultural groups, and other individuals.

The emphasis of liberty within an educational setting may encourage autonomy, reflected by:

1) The power to make decisions.
2) Learning to distinguish between illusions and seducements; or those values which build personal identity.
3) Functioning as an autonomous, independent individual.
4) Identity based upon inner direction.
5) The ability to imagine and reflect.
6) The ability to create.
7) The attitudes of courage, hopefulness for achieving full potentiality, and optimism.

Engendering may occur as a result of understanding both self (autonomy) and others (rationality) and may encourage the attitudes and actions of:

1) Empathy, or the ability to care for others.
2) Generativity, or the ability to share and empower others.

"There is not one kind of learning. It was the vanity of a preceding generation to think that the battle over learning theories would eventuate in one winning over all the others" (Bruner, 1985, p.7-8).

Recommendations

The following recommendations are presented for consideration:

1) School districts should recognize those educators who foster independence and autonomy in their classroom environments, and acknowledge that these educators might have the characteristics to foster adult autonomy. Thus, they would be good candidates as mentors for novice teachers.

2) Mentor and novice educators should have the opportunity to meet with other mentor-novice teams in various combinations at the building, district and university level. In-service and pre-service education, promoting democratic ideals through the Social Cognitive Field paradigm, may better be realized through a cooperative education between institutions.

3) School districts should recognize the problems which exist for children who attend preschool and attempt to transfer to public school. Today, the majority of children are not beginning at elementary school without previous schooling of some type. Integrative attempts should be made by school districts to assist the child and family in the transition from preschool to elementary. Communication may occur at the teacher level, and the school administrative level before children transfer. Parents should

also be included in the communication. An open attitude should be promoted by the elementary educator, to consider the child's psychological welfare as basic to learning.

4) School districts should recognize families as important contributors to the child's success at school. Revision should be made for school schedules, and educator's schedules, to allow more parent contact. This will probably involve contract negotiations. It will also necessitate further education for teachers and administrators in personality and life-span theories, counseling, and facilitation in order to improve communications and understanding.

5) As more children are home after school, with both parents absent, the safety and self-help home skills of Home Economics, Manual Arts, child care, First Aid, etc., need to be moved to the elementary grades. Perhaps these classes could be held after school for children, as a help to the parents; or be encouraged as a parent/child learning activity at the school in the evening or on the weekend. These skills and responsibilities aid the child's autonomous development, and provide a role and responsibility for the child within the family.

6) Grouping public school mentor-leaders and administrators together at the university for week-end retreats which emphasize, renewal, creativity and group facilitation could assist the mentoring process. Credit classes in life-span and counseling theories, and cognitive psychology could extend their understanding of self and others.

7) The non-graded classroom, with mixed age groups, offers superior advantages for the social cognitive field paradigm to succeed.

Changing the schools' concept of the self-contained classroom, may be accomplished with one school at a time participating.

Conclusion

Autonomy as encouraged through the schools and the learning-teaching process will provide results in attitudes which will last a lifetime, and positively influence families, children and educators.

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