This study identifies philosophical and instructional values implicit in the educational thought of Maria Montessori and compares those values with Shapiro's (1986, 1987) set of humanistic value principles. Shapiro's 16 value principles, which are derived from an analysis of 100 works of 89 well-known writers who have been publicly associated with humanistic education, concern: (1) a process orientation; (2) self-determination; (3) interpersonal connectedness; (4) personal relevance; (5) integration of affect and cognition in a holistic approach; (6) consideration of context; (7) an affective, experiential bias; (8) innovation; (9) democratic participation; (10) orientation toward personal growth; (11) orientation toward the intrinsic value of persons; (12) individualism; (13) reality as concrete and pragmatic; (14) formative over summative evaluation; (15) encouragement of diversity and creativity; and (16) the cultivation of spiritual potential. A content analysis of Montessori's highly philosophical book, "The Secret of Childhood," yielded 156 value statements that were sorted using Shapiro's 16 value principles. Results demonstrate extensive similarity between Montessori's values and the values of humanistic educators. Each area of similarity is discussed. (RH)
Title: Montessori Education: A Humanistic Approach for the 1990's.

Short Title: Montessori: An Approach for the '90's.

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Abstract:

This study identifies and compares Montessori philosophical and instructional values with Shapiro's (1986a; 1987) set of Humanistic Value Principles. A content analysis of Montessori's book, The Secret of Childhood yielded 156 value statements which have been sorted using Shapiro's sixteen "Humanistic Value Principles" (1987). Results demonstrate a strong relationship between Montessori's values and values of humanistic educators. The similarity of Montessori writings and Humanistic Values implies that Montessori classrooms are fields where humanistic values are regularly implemented. Montessori's contribution to humanistic education is the vivid description of the necessary conditions to assist the normal developmental growth and self actualizing capacity in human beings.
As early childhood education and adequate childcare become the focus of national attention, the Montessori Model merits re-examination. On the whole, the limited discussion of Montessori's work in teacher training programs and educational philosophy texts (e.g., Biehler, 1971; Orenstein and Levine, 1985) has perpetuated both the isolation of Montessori educators and the Public School teacher's limited knowledge of Montessori's philosophy, methods and materials.

This study systematically examines Montessori's instructional values in the philosophical context of Humanistic Value Principles (Shapiro, 1983; 1987) with the intent to provide a better understanding of the ideas and values that have informed instructional behavior in Montessori classrooms for a half century.

Shapiro's studies of the Humanistic Value Principles, (Shapiro, 1983; 1985a; 1985b; 1986; 1987) provide the framework for comparison with Montessori. In Shapiro's effort to define the essential elements of Humanistic Education, he has analyzed eighty-nine well known writers publicly associated with humanistic education and one hundred pieces of their literature (Shapiro, 1987).

Shapiro has identified sixteen major operating value principles. The following definitions which have been
paraphrased from Shapiro's original studies (1985a; 1985b; 1986; 1987) were used in the analysis of Montessori's ideas:

1. Process orientation: "How" is more important than "what" or "why."

2. Self-determination: This includes autonomy, self-direction and self-evaluation. Students assume initiative, responsibility and accountability whenever feasible. The goal is to free rather than control the learner. Self-directed learning is encouraged.

3. Connectedness: This principle involves encouragement of empathy, pluralism, good relationships, mutual caring and understanding among students and teachers.

4. Relevance: Personal meaning and the student's readiness to learn are stressed. Instruction is related to the concerns and needs of the students.

5. Integration: Affect is combined with cognition, living with learning. The focus is on the education of the whole person, including values, feelings and attitudes, and the body, mind, and spirit.

6. Context: Awareness of environment, politics and culture in which the learning takes place are considered important influences on the learning process.

7. Affective, experiential bias: Use of feelings and concrete experiences in learning situations is preferred. Instruction also includes sensory awareness, immediate feelings and emotions, and the expression of these as a central part of the learning experience.

8. Innovation: New ideas and methods are intended to promote social change. This is an anti-authoritarian approach to improving educational institutions.

9. Democratic participation: Social equity, consensus, and collaboration in learning is emphasized.

10. Personal Growth-orientation: Self-actualization through self awareness takes precedence over the lesson plan and course content. Human development is seen as the primary purpose of education.

11. People-orientation: Based on MacGregor's Theory "Y"
(1960), people have intrinsic value not merely instrumental importance as units or means of production. This approach to instruction involves trusting the learners' capacity to actualize themselves. It is assumed that learners are basically hardworking, responsible, inherently good and naturally caring about one another, and that learning is often intrinsically rewarding to the learner.

12. Individualism: The learner is unique, self-determining and self-aware and is therefore valued over the state or collective. Attention to individual needs is thought to be not only pragmatic but a prerequisite to caring about others.

13. Reality claims: "Reality" is defined as concrete and pragmatic. Reality can only be experienced by touching, seeing, moving, feeling, and doing.

14. Evaluation: Formative evaluation for growth and improvement is favored over summative evaluation in which final and additive numbers or stated rank are used in summarizing or labeling a performance.

15. Variety-Creativity: Spontaneity, originality, diversity are encouraged in the process of classroom learning.

16. Transpersonal: spiritual, mystical, intuitive and receptive modes of consciousness are cultivated. Schools are seen as environments for the development of whole human beings including their spiritual potential.

In his study of 40 humanistic authors and samples of their writing (1985a), Shapiro reported the results of a factor analysis based on the inter-correlations of the frequency of occurrence of the first fifteen variables. Three factors were retained from the inter-correlation matrix. The first of these factors, the "General Humanistic Value System or the Affective, Self-Actualizing, General Model," accounts for slightly over half (54%) of the total variance. Factor 2 is, "Participatory Group Approaches supporting Individualism"
and Self-expression" and Factor 3 is "Groups Supporting Consensus and Social change." Including these second two factors, 72% of the total variance was explained. (Shapiro, 1985a)

Although Shapiro's expanded analysis of 89 authors and 100 samples of their writing (1987), confirmed the original three factors, two additional factors emerged: Transpersonal and Self Determined Evaluation. Shapiro reported that the factor explaining the greatest percentage of the variance (39.5%) among the authors in the larger sample (N= 89) was the same as in the earlier study. Shapiro now refers to this factor as The Humanistic Instructional Paradigm. It is dominated by the same three variables, Connectedness, Self Determination and Personal Growth, found in the original study. "Humanistic education is thus defined centrally by the principle of self-actualization via the exploration and expression of feelings and concrete personal experience in the context of understanding between teachers and students in empathic, caring, face-to-face, (usually small) groups in the learning situation." (Shapiro, 1987, p.162)

Humanistic authors have differed in their agreement of the salience of the 16 humanistic value principles. Shapiro reported standard deviations ranging from 2.52 to 12.56 in the frequency of occurrence of the authors' identifiable statements supporting the 16 instructional values. None the
less a humanistic instructional paradigm has been identified and can now be used to compare other educators' values.

The researchers used the 16 Humanistic Instructional Values to sort Montessori's Value statements, attempting to answer these questions:

1. Which humanistic values are most strongly supported in The Secret of Childhood?

2. Is Montessori's philosophy different in kind from the contemporary humanistic educators sampled in Shapiro's studies?

3. Does the Montessori Model described in The Secret of Childhood offer pedagogy associated with humanistic values?

Method:

From among Montessori's many books on child development and her system of education and materials, The Secret of Childhood was chosen as a representative source for these reasons: First, its content is heavily philosophical and deals with the fundamental values which inform the Montessori Method. Second, the book was compiled for publication from several sources. Among these were newspaper articles and interviews from the date of the opening of the first Casa dei Bambini in Rome, 1907. Significant parts of the book come from an Italian book, Il Metodo della Pedagogia Scientifica applicato al'educazione infantil nella
casa dei Bambini published in Italy, 1909. Another part was originally published in English in MacClure's Magazine as an article entitled "An Educational Wonderworker," in 1911. Thus, published in 1966, The Secret of Childhood presents almost fifty years of consistent pedagogy. Third, in The Secret of Childhood, Montessori describes her scientific experimentation in the classroom, and the subsequent validation of her theories.

The content analysis and sorting was done by the two authors. Both are trained Montessori teachers with at least seven years experience in the Montessori Classroom. While the researchers assuredly have a positive bias for the Montessori Educational Model, both have varied experience and appreciation for other educational models in the United States and Europe. While the bias has to be recognized, the experience in Montessori education was felt to be an asset to the task of assembling a thorough analysis.

Identifying the Montessori Value Statements:

Montessori value statements were identified using Shapiro's definition of instructional value: a teaching/learning concept or idea which is preferable, desirable, enduring and makes a difference. Explicit indicators such as verbal imperatives, superlatives and generalizations were used by each researcher to identify statements independently. Results were then compared. Only those statements which were chosen by both authors were included. This process was
checked by a third, non-Montessori teacher, who was given the definition of "value statement" and asked to identify statements which fit that definition from The Secret of Childhood. Agreement on choice of statements among the three teachers was considered sufficient to indicate reliability.

One hundred fifty six statements were extracted verbatim. The subject and predicate of some statements were connected for brevity and clarity. Great care was taken not to alter the meaning of the statements.

Sorting the Statements:

The Montessori Value Statements were sorted using the definitions of the sixteen humanistic principles (Shapiro, 1983). Three criteria were used:

1. Is the statement a value statement according to Shapiro's definition? (given above)

2. Is it a clear statement? Any identified statements which depended on prior knowledge and might be misunderstood by general readers were eliminated.

3. Into which category does it fit?

Montessori Statements which did not clearly fit any humanistic category were excluded.
<table>
<thead>
<tr>
<th>HUMANISTIC VALUE</th>
<th>RANK ORDER % OF TOTAL STATEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Determination</td>
<td>.19</td>
</tr>
<tr>
<td>Affective Bias</td>
<td>.14</td>
</tr>
<tr>
<td>Integration</td>
<td>.12</td>
</tr>
<tr>
<td>Relevancy</td>
<td>.11</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>.07</td>
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<tr>
<td>People Oriented</td>
<td>.07</td>
</tr>
<tr>
<td>Innovation</td>
<td>.06</td>
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<tr>
<td>Process</td>
<td>.04</td>
</tr>
<tr>
<td>Context</td>
<td>.03</td>
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<tr>
<td>Individualism</td>
<td>.03</td>
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<tr>
<td>Connectedness</td>
<td>.02</td>
</tr>
<tr>
<td>Reality Claims</td>
<td>.01</td>
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<tr>
<td>Variety and Creativity</td>
<td>.01</td>
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<tr>
<td>Transpersonal</td>
<td>.01</td>
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<tr>
<td>Democratic Participation</td>
<td>.0</td>
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<tr>
<td>Evaluation</td>
<td>.0</td>
</tr>
<tr>
<td>Excluded statements</td>
<td>.10</td>
</tr>
</tbody>
</table>
Results:

Of 156 Montessori Value Statements, 141 fit within the sixteen variables. Fifteen statements were excluded.\(^1\) Montessori statements were ranked according to the percentage of the total number of statements that fit the humanistic category. (See Table 1)

(Insert Table 1 here)

Montessori's statements support a value orientation similar to contemporary humanistic educators. The most strongly supported values are Self-Determination, Affective Bias, Relevancy, Integration, Personal Growth and People Orientation. There are enough statements in each of the following categories to warrant further investigation of other Montessori writings, or of Montessori teachers: Process Orientation, Connectedness, Context, Innovation, Individualism, Reality Claims, Variety and Creativity, and Transpersonal.

Montessori made connections between philosophical values with desirable educational ends and appropriate pedagogy to achieve those ends. Value statements identified by the researchers encompass both philosophical and pedagogical elements. The Secret of Childhood offers a rich source of pedagogy associated with the humanistic values of self.
determination, relevancy and integration. Recognition of Sensitive periods in child development, the importance of sensorial education and the effectiveness of the prepared environment are three important Montessori contributions to humanistic pedagogy. Following is a discussion of these results and implications for contemporary educators.

Discussion:

The humanistic values identified by Shapiro are highly interrelated. One value providing the foundation for others i.e., the capacity of human beings to self-actualize can be thought of as the fundamental assumption for all the other humanistic values.

A personal growth orientation builds on the assumption of self actualization. "Human development in all its forms is seen as the primary purpose of education." (Shapiro, 1987, p.160) While romantic humanists see personal growth as the path to self-fulfillment, (Rogers, 1983; Bellah, 1987) Montessori expressed the dangers of personal growth at the expense of others. Montessori beleived all creatures have a unique cosmic purpose and it is the object of personal growth in human beings to encounter that purpose. Thus, for her, education is the process through interaction with the environment, of finding and fulfilling that purpose unique to each individual. Montessori asserts that "as long as children cannot develop according to nature's norms but
suffer deviation, men will always be abnormal. The energy that can help mankind is that which lies within the child."
(Montessori, 1966, p. 207)

Another humanistic value category closely tied with personal growth is people orientation. Both values stress the importance of people over content or production, both see human beings as capable of and motivated to self-actualize.

Self-Determination, is the humanistic category most strongly supported by Montessori statements. Many of the statements which fit the self-determination category are pedagogical in nature. Instruction based on Self-Determination assumes not only the belief in the innate self actualizing quality of human beings but the intrinsic worth and goodness of people, and the value of personal growth as an educational objective.

The idea that the natural and normal state of human beings is inherently good is fundamental to both humanistic and Montessori education. Shapiro (1986) states that "People have intrinsic or ultimate value,...This approach trusts the learner's capacity to actualize him/herself. Learners, as other people are basically hard-working, responsible, inherently good and naturally caring about one another."

The essential contribution of Montessori's work with children presented in The Discovery of the Child is that this naturally good, hard working, self actualizing capacity
will emerge in the beneficial conditions of the "prepared environment."

The Montessori statements referring to the prepared environment offer a key to the understanding of how to stimulate the human capacity to self actualize. "The solution is to be found in preparing a suitable environment for the child where he may manifest his higher tendencies." (Montessori, 1966 p.86) In the prepared environment the child is free to make choices. "A child who is free to act not only seeks to gather sensible impressions from his environment but also shows a love for exactitude in the carrying out of his action. His spirit seems to be suspended between existence and self-realization." (Montessori, p.99)

Montessori recognizes that self-determination apparent in the psychic instincts and movements of the newborn child will be developed and strengthened by offering choices to of the older learner. She states unequivocally, "The educational system should be one in which the children's own choices are the guiding principles and their natural vivacity prevents mistakes." (Montessori, p.139)

Montessori statements ascribed to the category "Self-determination" include both positive effects of the prepared environment, and consequences of inappropriate environments. One of the Montessori statements proposes that "a single source for all deviations (in personality) is the inability to actualize the primitive plan of development because of
the hostile environment encountered in the formative period." (Montessori, p.214)

Three other Humanistic Values receiving significant support in Montessori's writings are Integration, Affective Bias and Relevancy. Montessori pedagogy support these humanistic values by describing means of stimulating the process of self-actualization.

Shapiro's definition of integration stresses the combination of affect and cognition and the education of the whole person, including values, feelings and attitudes, and the body, mind and spirit of the learner. The Montessori statements which fit this category stress the importance of nurturing the "psychic needs" of the child as well as the physical needs. Montessori's use of the word "psychic" is assumed to be inclusive of the cognitive, affective and spiritual domains of learning. "The psychic life of the child needs to be protected and to be surrounded by an environment that could be compared with the wrappings placed in nature about the physical embryo." (Montessori, 1966, p. 20)

Montessori advocated many basic tenets of what is now known as developmentally appropriate pedagogy (Bredekamp, 1986; Calvert, 1986) It is through active investigation of the environment that the child develops and grows. "The importance of physical activity or movement in psychic development should be emphasized," (Montessori p. 96).
the intense concentration of purposeful activity. She received criticism for her apparent lack of attention to emotions and personal feelings. (Kilpatrick, 1914) The significance of this criticism persists in the literature today. (Elkind, 1981; DeVries and Kohlberg, 1987)

The final humanistic category which received significant support in Montessori's writing is relevance. Awareness of the Sensitive Periods for learning is a strong indicator of Montessori's value of relevance. "Relevant learning experiences and relevant instructional materials take into account the learning styles and the important motivations of the learners." (Shapiro, 1987, p. 159) Montessori observed sensitive periods in children and her pedagogy reflected her observations and experimentation. "Sensitive periods enable the child to come into contact with the external world in a particularly intense manner. At such a time everything is easy; all is life and enthusiasm." (Montessori, 1966, p.40)

The idea of sensitive periods is of supreme importance to the trained Montessori teacher. It is by observing the child that the Montessori teacher knows when to offer a particular apparatus or introduce a new lesson. Didactic response to sensitive learning periods is an area of child education that warrants further investigation.

"As a general point, it seems that the most vulnerable time for an organism occurs during these sensitive periods. Irreversible damage to the central nervous system seems particularly likely to occur in the wake of even mild restrictions during such a critical period. Conversely,
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rapid growth will occur if the proper conditions obtain during the critical period." (Gardner, 1983, p. 40)

Free choice within the prepared environment is another important way of achieving relevance for the learner. "A child's different inner sensibilities enable him to choose from his complex environment what is suitable and necessary for his growth." (Montessori, p. 42)

In conclusion, Montessori's writing supports the humanistic assumption of the self-actualizing capacity of human beings. Montessori believed in the development of the unique personality, as the ultimate purpose of education. "The child is the father of the man." Montessori stresses the importance of self-determination within a prepared environment which responds to the developmental needs of the child. The humanistic values of "integration", effective/experiential bias and relevance are evident in Montessori's Model. If educators of the 1990's are looking for pedagogy that is consistent with a humanistic philosophy, Montessori classrooms are a good place to start.

Notes

1. The excluded statements were used in a previous analysis of Montessori Value statements which generated their own categories.
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