

THE CONCEPT OF HISTORY

Our study of history now focuses on man himself. We begin by examining the ways in which man has satisfied his fundamental needs. Through the ages, man has met these needs in different ways. And at one specific point in history or another, we can examine differences in peoples who lived simultaneously, but met their needs in completely different ways.

But to begin to understand man, we must know him. In an answer to his tendencies and his needs, man has built what Dott.sa Montessori calls two territories: that of the material and that of the spiritual needs. All men have a common desire to survive which determines their special needs. And so we have common needs.

We recognize easily the material needs of man: for food and clothing, for shelter and defense, for transportation. But man has always been characterized, too, by a quest to discover the reason of his life. To learn where he came from and to where he is going. These questions have created in man the need for the Divine, and this we call the spiritual needs of man. The Divine is a constant presence, one which has been met by man with many different religions and has created different ways by which man nourishes these unconscious spiritual needs.

We can conclude that man, without regard to place or time, has similar needs which he satisfies in different ways. What we know of these ways comes to us through historical and sociological research. It is an important study for the children: one which leads them to recognize different expressions of life. And, as the child comes to understand these different expressions, he is better able to adapt to his own life. And we, as educators, are truly being "a help to life."

A brightly animated chart that shows the ways in which man satisfies his needs is a useful tool for the discussion of this topic with the children. We can note, then, with them, the material needs which we can all understand and observe in our own lives: our need for shelter for protection from the weather, the different ways and means by which we must obtain food, the clothing that we adopt in response to our environmental needs. We can note the many different modes of transportation which man has used, and we can note the importance that man's feet have had in an answer to this need. The ways in which man has chosen to shelter himself is a fascinating story, and his various defense inventions another area of interesting research.

The spiritual needs of man are a more elusive study. Vanity as a spiritual need is represented throughout man's history as a real human need for beauty. The small child loves beautiful things. . . the primitive man fashioned beautiful necklaces and other ornaments as a real part of his culture. The glorification of the physical through beautification is a significant part of man's cultural history. A spiritual need is understood as a need that is not a response to the senses. And we must help the children to see what truly real needs these are as well as how man has met them.

Through the use of the chart, we give an overall picture of man's needs, analyzing each part in brief. Then we are ready to study carefully one particular need and the responses to it. We might begin with a study of "the habitations of man."

THE FUNDAMENTAL NEEDS OF MAN: An Important Chapter of the Cosmic Education

Idealists have believed that it is necessary to understand man in order to understand the universe, as if man were a small cosmos that led to an understanding of the entire universe. Even though we may say that Maria Montessori, too, was an idealist, her idea was the contrary: "In order to understand man, it is necessary to understand the universe. The comprehension of the universe is the foundation for the comprehension of man."

Why? Because man is, in addition to a spiritual being, also a biological being, just as a plant or animal. Montessori explains the works of the universe: "The works of the universe represent two aspects: 1) we can name only the physical aspect of the universe. The works of the physical aspect manifest through the forces of our planet; and 2) the biological aspect, represented by the cosmic task of living beings, plants and animals with man included. (Man understood as humanity, mankind). And this is the work done by society, by a group of men. It is the second aspect, the cosmic task of living beings as determined by the biological aspect of the works of the universe, that determines the fundamental needs."

The fundamental needs and the ways in which they are satisfied constitute the basis of geography, of all history, of language, religion and every other field.

For Montessori the essential factor in awakening the child's interest does not lie in the argument, in the topic itself. But it consists in knowing how to offer the child the vision of the whole. (See "Childhood to Adolescence") In her book From Childhood to Adolescence, she refers to the great global vision. (Great referring to the scope, the sight; global to the content.) The question is: What must we do in order to give the child the universe in its two aspects?

In regard to the physical aspect, we must give the child the works of the universe, especially our planet earth, pointing out the forces which govern the changes of state: gas to liquid to solid. We must give the function of the atmosphere, the work of the water and wind; and the way that these forces still influence our planet. (This is functional geography: the impressionistic charts and experiments.)

The two forces which govern our planet are: 1) the two movements of the planet itself; that is, revolution and rotation resulting in day and night and the seasons; and 2) the inclination of the axis of the earth that determines the astronomic zones: Torrid, the two Temperate and the two Polar zones. If we correctly give these two great realities of movements and inclination, we are preparing the child to understand the needs of life, a direct result of the two.

In regard to the biological aspect, we must make the child understand that each plant and animal species takes advantage of the environment: but, at the same time, fulfills in the same environment a task. And this task is classified by Montessori as a cosmic one. The dictionary defines cosmic as "pertaining to the cosmos;" that is, an adjective of cosmos: All the reality existing in the earth and outside it; all the solar system. Therefore, it is everything that exists.

We can thus use another adjective instead of "cosmic." We might define it as general or complete. Or we might call the Cosmic Education "Education for Understanding." That would be an education in which there is an understanding that every element of reality has its own role. And this means that inorganic matter is also included. There are beautiful Montessori stories about the pebble, the sun, the water, about the cosmic role of the inorganic world.

Considering the work of plants, we know that they produce oxygen and reduce the amount of carbon dioxide in the air, that they produce food for animals, that they take excess water from the ground. Montessori refers to the "Darwinian" process of photosynthesis. We see the work of the plants, then, in the series of botany charts. In the animal kingdom, we may consider the insects who help the reproduction of plants.

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world of animals and men. If we know about photosynthesis without the co-relation-ship to other worlds, we do not have the cosmic view: we have only chemistry. This kind of unconscious---and conscious, when man is involved---interchanges must be pointed out to the children, comparing them to the reality of trade and commerce. (As in The Great River)

All of these beings---plants and animals---must have a certain quantity of food to survive and defend themselves. The strong defense of man and animals make the instinct for survival: the preservation of the species. Montessori, in speaking about a botany chart, noted that there is a special plant which grows thorns in its environment only at the bottom of the stem where the animals can reach it. At the top there are no thorns.

It is evident that the satisfaction of needs for the preservation of the species determines the set of needs which can be called "The Fundamental Needs of the Biological World." . . . of plants, of animals, of man. For the Fundamental Needs of ***, we note all those charts which refer to the physiological functions of plants and animals. And those corresponding experiments. (Note that the experiments for the animals are more difficult to prepare because the life of the animals is involved.) We can, in fact, study animal morphology more easily than animal physiology. For the study of plants, both the morphological and physiological parts are well developed. (**Plants and Animals)

At last we come to the needs of man, the fundamental part for us. The secret of Montessori's thought lies here: An irresistible driving force, identified with the horse, pushes the individual (not only the human, but any being) to preserve his life. Therefore, it also pushes the being to satisfy the fundamental needs, looking for those conditions which are the best of those necessary to fulfill the aim.

To sacrifice oneself for the welfare of the community is an act of reason, not one of instinct. An instinctive act brings joy. Giannini Bellotti, directress of the Montessori Birth Center writes in On the Side of the Girls that it is a natural fact of the child, the unconscious satisfying of certain needs with certain activities, without concern for whether those certain activities might damage the welfare of the community's members. This is Montessori ideology. We do not seek to teach our children to sacrifice themselves for the welfare of the community. Bellotti interviewed many teachers, those involved in the nursery years and those in children's houses. A large consensus of the group reported that they made great sacrifices for the children. Bellotti declares that these people are not good teachers for children. She says that we need those who take joy from their work without these feelings of sacrifice. (Current events: Bellotti is in favor of divorce: she sits on the Pedagogical Committee of the Italian Montessori Society.) We can say that any sacrifice is an unnatural act; that it is against nature. When adults sacrifice, the child operates in an unconscious way, taking as much joy as possible.

Because of the presence of this driving force, each individual develops a certain pattern of behavior which guides him to satisfy his own particular needs in the best way. The cosmic task is intimately linked and dependent on the satisfaction of these needs. What does a plant, or a man, have to do to fulfill his cosmic task? Nothing special. Just by living and looking for the most complete satisfaction of the needs, each individual gives its contributions to the harmonic equilibrium of the whole, creating at the same time better conditions for the future. When Montessori says that the individual doesn't have to do anything in particular, but simply to live, that just by living each being fulfills its task, she means that this form of life is obedience in itself. The leaves, by living, are contributing; and by contributing, they are also obeying. "To live is to obey." (We are speaking TO THE CHILD) On the unconscious level, the phenomena of equilibrium is achieved in this way.

Among the tasks, that of greater importance is the so-called "controlled task." It is the careful attention to the economic budget of nature, the economic equilibrium. We must not modify conditions that allow a species to become dominant

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We must take into consideration this passage: Man, as other beings, is endowed with an irresistible driving force; an internal force; which determines his tendencies; which determine his needs; which determines how he satisfies them. The satisfaction of man's needs determines the history of man. For instance, the agricultural panorama differs for the man in India and the one in the Po Valley. In each case, their need for food must be satisfied. But how that need is satisfied is determined by the particular panorama.

To realize the value of the Fundamental Needs of Man means to understand in which way man, pushed by the different tendencies proper to him and by the need to satisfy the resulting needs, has built, through the period of his history from the appearance of man until now, religious, philosophical and moral conditions; that is, customs in general, as well as political and social customs. Dott.ssa Montessori: "To understand this fact means to understand how man, through the centuries, has built all these conditions. It is necessary to understand how man, through history, has built two specific territories. The first, the physical territory, has been transformed so that it is no longer natural, but supra-natural. The second, the psychic territory, is not a transformation of man, but has been constructed by the work of man. We also call this the spiritual territory. By putting all the conditions together, we have the formation of these two territories.

If we have to choose the most important territory, Montessori says that it is the spiritual one. If the spiritual territory permits man to lead a psychic and spiritual life, the physical territory constitutes the fundamental support. But when man gives up his life for an idea, the reference to himself is towards the psychic territory and not the physical one. Sacrificing one's life for one's country doesn't mean sacrificing for a piece of land, but for the contents of the human group living on that land. When he defends his own possessions, he is not defending the things, but the reasons for the things---their significance in his psychic life.

In mankind there exists an identity of tendencies, meaning attitudes, dispositions, vocations. Each man, for example, doesn't only want to survive, but he must. As these tendencies are on an unconscious level, there is not a difference between "will" and "must." (and "be") Identity meaning "common to all" gives us the identity of tendencies which determines the identity of means that is "common to all."

Which needs are common to all? Each man nourishes himself. It is not important whether he does it out of duty or will. But each man, during his life, also has the need for the presence of the divine. Such presence in each of us is constant, and it manifests at an unconscious level. The presence of the divine sometimes manifests in a religious life; some profess to "believe" in nothing. And the latter form a group of believers just as the former. What Montessori calls the divine may take the names according to the philosophy or creed of the particular group. But we can conclusively proceed from Mankind to an Identity of Needs to the Needs To Eat and To Believe in Something.

All of us believe in a form of divinity. It can be science. This is so true that even those who declare they possess no religion almost always agree that in the conscious there is something that can be identified with the divine.

If we all have the same tendencies and needs, we will have satisfaction as a consequence. What distinguishes the differences between groups is the differences in the solutions for the same problem. That is, how the fundamental needs have been satisfied. The needs are common to all; the solutions are different. Each human group achieves nourishment in a different way: each have different beliefs, different concepts of God. What changes in the groups is the ways of satisfying the needs: these form different realities, different ways of life. Montessori specifically notes the different historic realities: there is a Chinese reality, a European reality. These are the result of satisfying needs in different ways. These tendencies and needs which are common to all ARE NOT related to the two factors of time and space. Space

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The house of the caveman, then, is quite different from the home of modern man just as the houses of modern men vary from Africa to Alaska.

We have divided man's fundamental needs, then, into two groups: 1) **Needs of a Material Nature** and 2) **Needs of a Spiritual Nature (religious and emotional needs.)**

Material Needs

Dott.sa Montessori: For the past, present and future man has, had and will have a need to dress himself. How are the clothes of man? His clothes are different according to the different materials he uses, different in the way they are made and, above all, different because they follow different fashions. He therefore chooses his clothes according to certain psychic factors. The people in India always dress with very light clothing because the climate is torrid. In northern Italy, the climate, though it changes, is mild, temperate; and the clothing is heavier. In the different modes of clothing we must appreciate the different colors of the material. Do the shades of nature influence our taste, our choice of colors?

And food. Man had, has and will always have the need to nourish himself. But foods differ in substance according to the agricultural picture. In India the diet consists largely of rice, bananas, tea. The Indian does not have the possibility to eat animal and plant products of such a large variety as the European because they aren't a part of the agricultural or technical program.

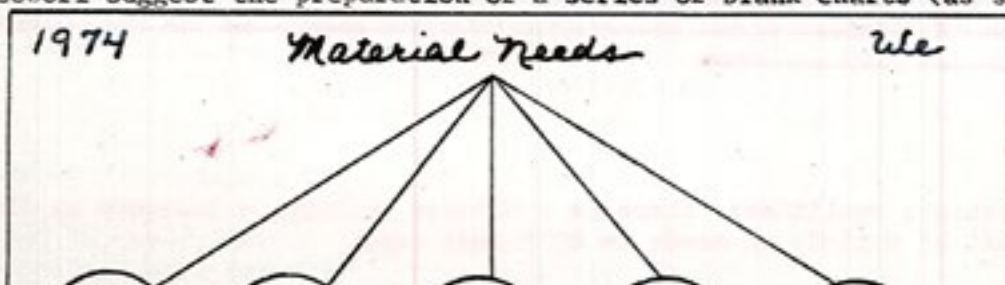
Man had, has and will always have to defend himself. Weapons have changed through time and according to place.

Man wanted once, wants, and will want to move from one place to another, but the modes of transportation are different. Here, however, there is a common element: the feet of man. We consider the passage from Genesis 18: 4,5 in which Abraham asks his servants to first wash the feet of the guests and then they shall be served food. In the New Testament, too, we see this great appreciation for the feet of man in the custom of washing the feet. Montessori also quotes an Italian poet Gabriele d'Annunzio: "I kiss your feet that walk." (to kiss your feet just because they walk)

"I will kiss your feet that know the way." (because they know where they go.) In From Childhood to Adolescence Montessori urges us to talk to the children about the great role which the feet of man have played in the development of civilization. To move is a need; and it has been the tendency to satisfy this need that is responsible for many developments of civilization. And so, too, our need for food has brought us to new techniques of growing, production, and eventually trading, etc. Again we can say that **the satisfaction of my needs seems to be selfishness, but the search for the satisfaction of those needs contributes to the well-being of others and to the development of civilization.** Montessori continues regarding movement: Animals move great distances, plants don't. She quotes another Indian example: at the time of writing there were few cars or bicycles. Many still traveled by animal. She tells of an elephant trip and remarks on the techniques of guiding the elephant used by the man in Calcutta---that his techniques were different from those of the man in Madras... That is, man develops techniques according to what the environment offers him.

We consider in the same way the need of housing.

Montessori suggest the preparation of a series of blank charts (as shown).



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On each chart then is written a specific date: 1) Primitive Man - 10,000 B.C., 2) Discovery of America - 1500 A.D., 3) Today - 1974. . .etc. . .Then pictures are shown on each of the charts representing the various modes in which the needs specified have been met at the different times. Then the charts are superimposed, as many as one has chosen to prepare, and one particular circle is cut out. So, by cutting the circle of "clothing" we have three (or more) pictures of diversified clothing and we can tell a short history of clothing using this short series of pictures. In this way each of the circles can be cut away and a short history developed.

Man here is no longer the center of our study; but now we consider a thing. With each series of circles, the child can make a comparison of a particular thing, one need that has been answered in different ways through time. That is, each picture represents a temporal solution for the same need. This is a **VERTICAL STUDY.** We are looking at things by going "down" into the layers of the past. The circles will form a pyramid in which the pictures at the top will be the most recent, the very top the house where we live.

The opposite study is the **HORIZONTAL STUDY:** Here man is the study. We have one plane with all the needs and how they are satisfied at one particular time. This is called the "Technical Study of the Human Environment." In the vertical study, then, we have only a particular segment of man's picture. But the horizontal study prepares the child for the charts of the study of civilization.

There is, therefore, a fundamental difference between the vertical and the horizontal studies of history. The VERTICAL STUDY begins early, for the child from 5½ years to 6 - 7. The work, as described above, is a simple one in which the child can investigate a wide range of the material needs, one at a time. Such studies as the history of shoes or hats or houses gradually builds an understanding in the child of the history of all of man's material needs. And the spiritual needs of man may be considered in this way, too: these provide a more difficult presentation of materials; the pictures must be of objects representative of the concepts of spiritual and moral needs, objects through which these needs are satisfied. Using a particular series of pictures, then, the exercise for the child consists first of the superimposition of several planes (charts) and the cutting out of one particular need on which the pictures are shown. Later, with this series, the child takes the pictures, mixes them, and then arranges them in logical order discovering "the way certain people satisfy a certain need in different times." We can see this series of pictures as the first step in a work which leads us to the booklets (collections of these pictures) and finally to the Classified Nomenclatures of the "Stages of Civilization."

The **HORIZONTAL STUDY** addresses a complete plane of work. Using the series of blank charts again, we select one, isolating in this way one whole plane. For example, we might select the study of "1974---We." This study is limited in time to one period (in this year); and it is limited in space because we are living in this specific environment. So we consider ALL the needs of man in this specific time and place. Man is considered as a unit in this important mode of the study of history. Here the environment is important: man is the man of his time and place; and he has certain spiritual and material needs.

Montessori states: "The living reality lies in the horizontal study of history and not in the vertical study because here all the needs can be put in relation." We might take the study of The Child as an instance: we can explore how he dresses, how he travels (in an automobile) and already we discover that the needs are inter-related. As we further consider how he defends himself or what he eats, we discover a living reality which grows. Thus in the horizontal study, all the elements of reality unite to form a living organism. The vertical study, instead, has the character of a museum study. What gives life to the horizontal study is NOT that we study the current age, because the second plane or the third (of primitive man or the man of 1500) is also there. It is instead the contemporary character of the study

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Chart I:

I. What is their natural environment like?			
1. What is their land like?	2. What is their climate?	3. What is the flora?	4. What is the fauna?
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
II. What are their human activities?			
1. What kind of agriculture?	2. What kind of industry?	3. How do they carry out commerce?	
<input type="text"/>	<input type="text"/>	<input type="text"/>	

Shown is the first in a series of the four charts which are titled the "Study of Civilizations." In this work, which begins at about age 10, the child meets the research aspect of the horizontal study of history. Montessori provides some suggestions for presenting the horizontal history in a vital way; 1) the use of the present tense as a descriptive device and 2) the interrelationship of all those aspects of the study; that is, each question should not be answered in isolation, but in relation so that the result is the formation of a unity--that is man.

The Charts of the Fundamental Needs of Man: **Our Aim is to permit the child, through these charts, to explore, observe and reconstruct the environment in which he lives.**
AGE: 5½ - 7

Chart I: The Fundamental Needs of Man

On this chart we see the needs of man subdivided into two groups: material needs (transportation, housing, clothing, defense, food) and spiritual needs (artistic and cultural needs, religious needs, and vanitas.)

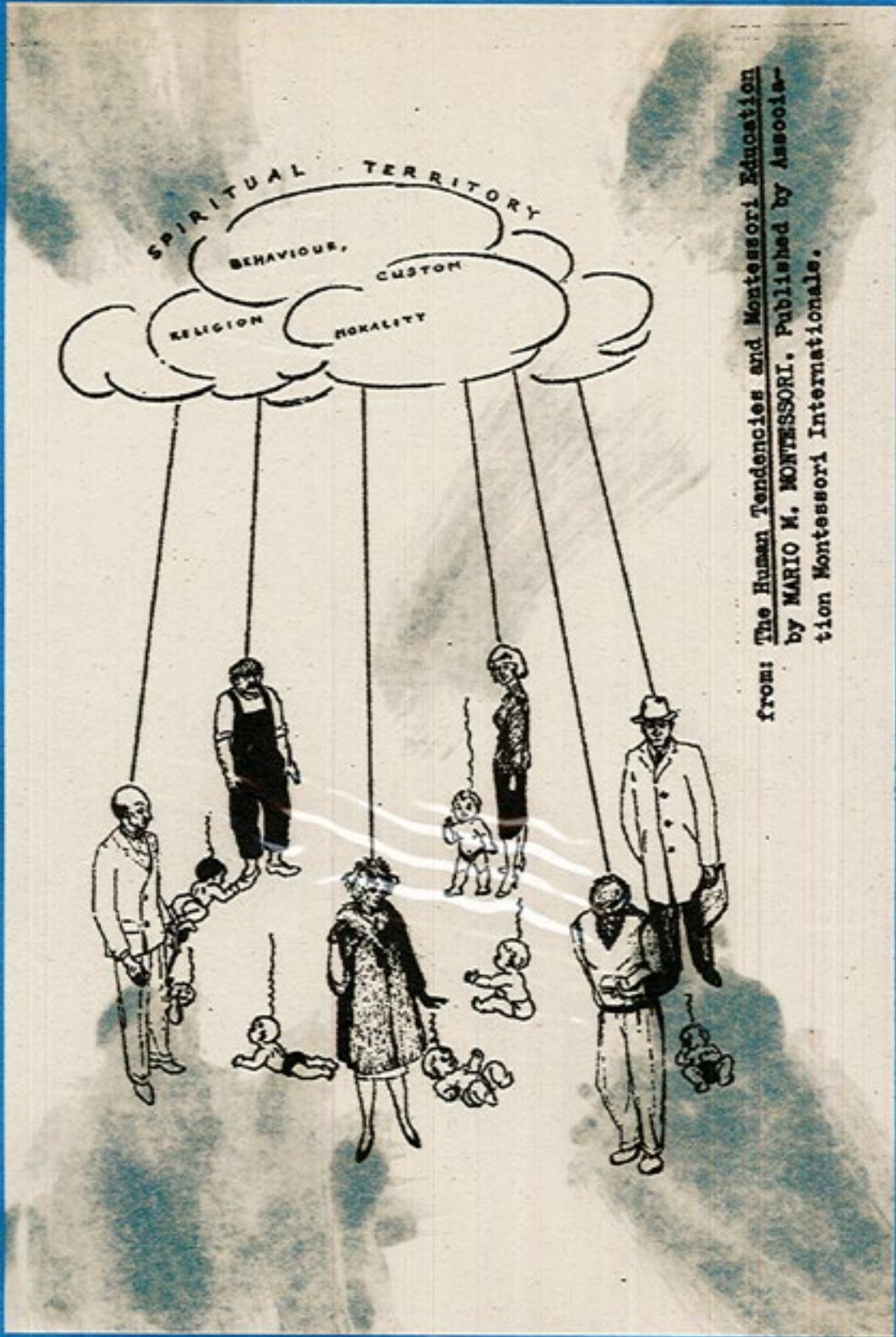
We note the similar organization of man's needs according to Ovide Decroly, a Swiss psychologist who lived from 1871-1932. He describes centers of interest: 1) nourishment, 2) protection: clothing, self-protection, 3) defense (from enemies), 4) need to react, 5) need to work with solidarity, 6) need to rest, to have fun, and 7) need to develop our spirit. A French pedagogue, Debaud, also reconsidered the Montessori chart, containing the whole chart in a red circle and naming it "the Christian contribution to the development of civilization."

Regarding the spiritual needs of man, we note particularly the concept of "vanitas," a word given a negative character in dictionary definitions as a result of the Ecclesiastes passage on "vainglory." Here we have the moral implication that vanity should be put away from men. (SEE "The Little Prince") But, from Montessori's point of view, we see the need for vanity expressed in men. Vanity thus understood is the need to be beautiful, the need to be seen, the need to be accepted. This need to be beautiful is one that exists in all people, no matter what their interpretation of beauty may be; it is a drive that pushes them to be beautiful. We can consider this concept from the moral, from the physical, from the psychic point of view.

Finally we note that the various elements on the chart may vary according to the time and place. The chart can be reconstructed to meet an ever changing picture of man's needs.

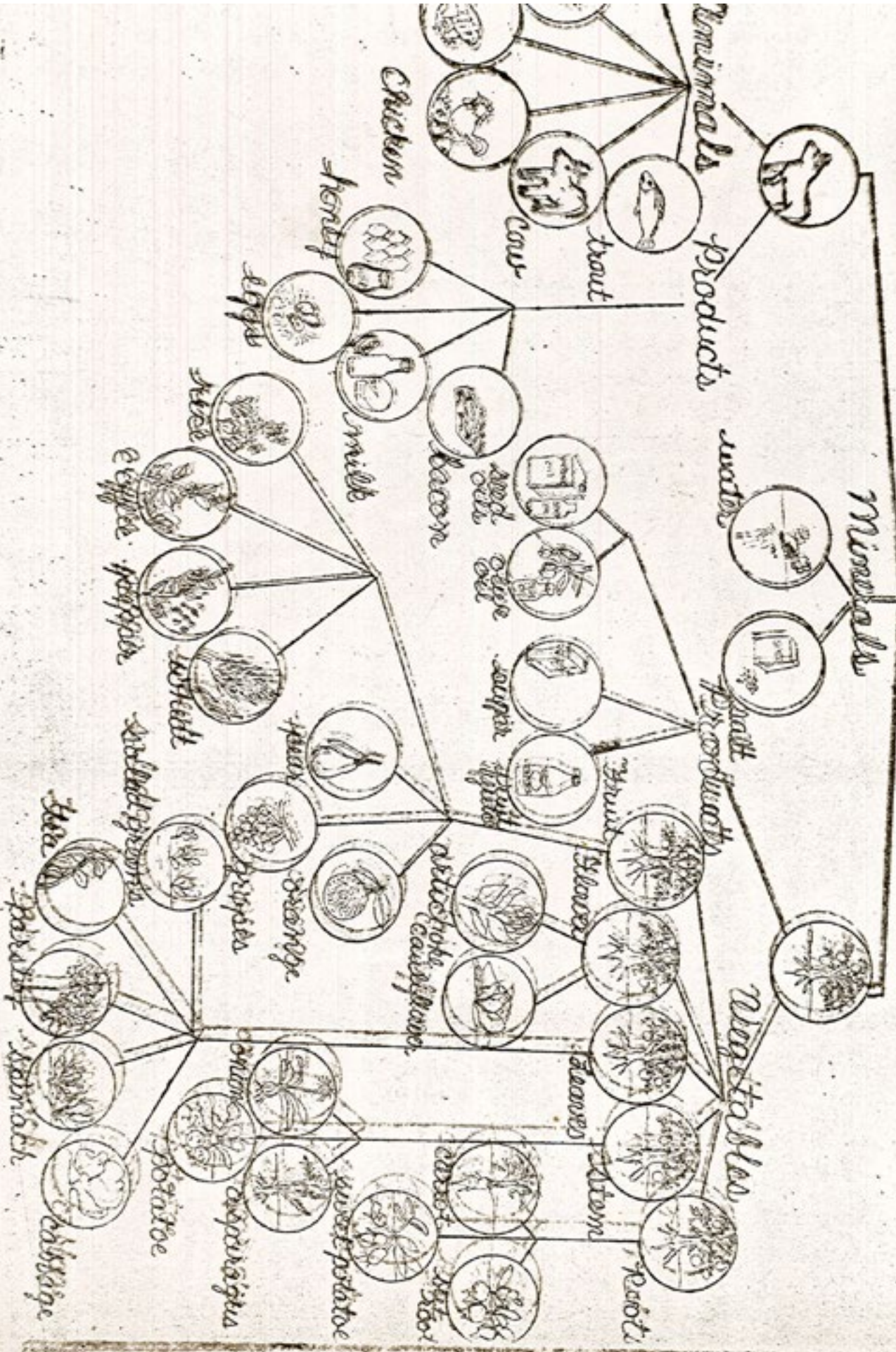
Chart II: Nourishment

The second chart is an enlargement of the central division of the first chart, that section which considers the ways in which man satisfies his need for food. We can make a similar development, an enlargement, for each of the various elements of the first chart, giving a detailed and complete picture of that particular need.



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The Fundamental Needs of Man Foods



The Fundamental Needs of Man. . .

And from the five circles which represent the plant and its parts, we see a further subdivision which designates the particular edible types of each:

- 1) Roots. Examples are the carrot, a conical (swollen) root;
the beet, a napiform (swollen) root;
the sweet potato, a tuberous (swollen) root.
- 2) Stems. Examples are the asparagus, an erect (aerial) stem;
the potato, a tuber (subterranean) stem;
the onion, a bulb (subterranean) stem.
- 3) Leaves. Examples: cabbage, parsley, lettuce, spinach, tea. Each leaf can be classified from the botany nomenclature according to shape.
- 4) Flowers. Examples: cauliflower, artichoke.
- 5) Fruits. Examples: the apple, a pome (succulent) fruit;
the orange and the grape, berries (succulent) fruits.

NOTE: more specific name for the orange group: esperidio.

There are also two divisions of the "products" of the vegetables: the actual vegetables and their by-products.

Looking closely at the division of "animals" we find two subdivisions: the animals and the products. It is interesting to look at the animals pictured in terms of their classifications. We discover four classes of vertebrates: the trout, the ox, the chicken and the frog (fish, mammal, bird and amphibian, respectively.) We can conclude that: "My human group eats four of the five groups of vertebrates." There are also two animals pictured from the invertebrates: the phyla mollusk is represented by the oyster and the class of arthropoda, crustacean, is represented by the lobster. We can also analyze carefully the circles which represent the by-products of the animals.

Our analysis of the chart is made with this question in mind: What can the child do with this chart? The child can prepare a CLASSIFIED NOMENCLATURE which enriches and provides a depth study of any one of the circles on this chart. He may take, for example, the circle of the carrot, investigating other conical swollen (bitter) roots. The result may be a nomenclature entitled "Conical Roots that We Eat." He may find pictures, identify the classifications, make simple definitions. He may take one whole group such as swollen roots. In the division of "Minerals" he may find mineral water labels which list the various minerals and salts that are consumed. He might take that circle of the trout, cut out the pictures from frozen food labels of fish and collect them in a simple nomenclature entitled "Edible fish."

The pictures and the collected research that the children make provide the enlargement, the enrichment for the chart. It is not necessary, therefore, to continually change the chart; but rather to use their work to further investigate each category. Their pictures may actually be superimposed on the corresponding circles, providing an accumulation of examples and bringing the chart into direct relationship with their everyday experience and needs. With a chart which expands the topic of clothing, the further work which the children might do would include such simple researches as "From the cotton plant to the shirt." It is clear that the charts, then, provide a springboard for the children's own investigation of their lives; of those factors which contribute to the satisfaction of their needs. It is, again, of bringing to consciousness the very facts with which one lives, but of which one seldom knows.

In these charts, there are hidden two major Montessori ideas. First: In these charts there is the schematic representation of the needs of our child. His personal needs must be our starting point; and then gradually we pass into the environments of the lives of men who are: 1) faraway in space, but living in our same time; 2) men who are in an environment close to us in geographical space, but faraway in time, or 3) men who are distant in both space and time. We may start as simply as to answer the question "How did my grandfather live as a child eighty years ago?" In this research, which is helped and guided by the teacher, we help the child create a specific historical view. The view of a time and how men satisfied their needs in it. This is the sensorial beginning of the study that leads us to the horizontal study of



SPIRITUAL

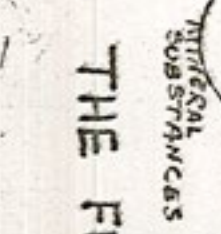
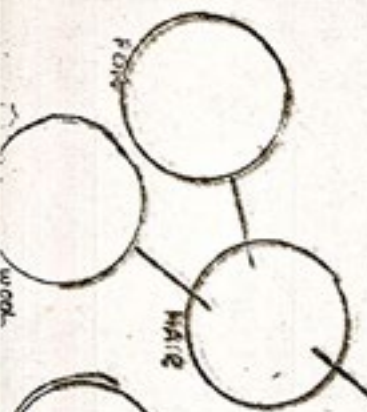
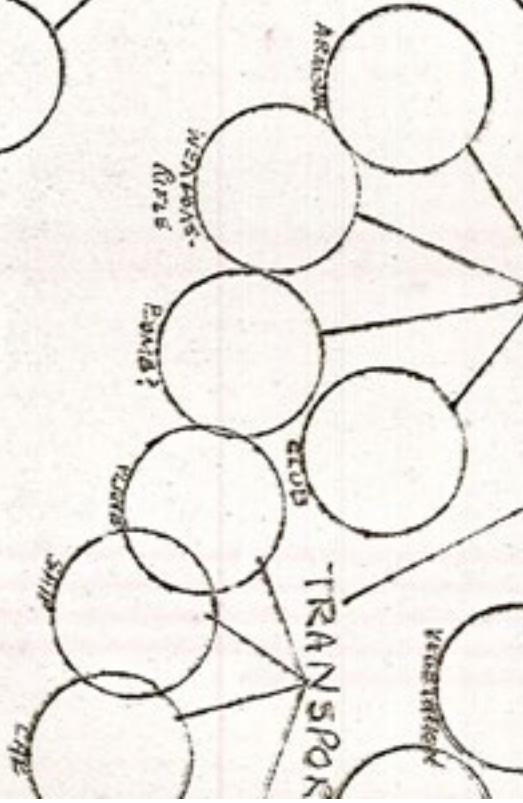
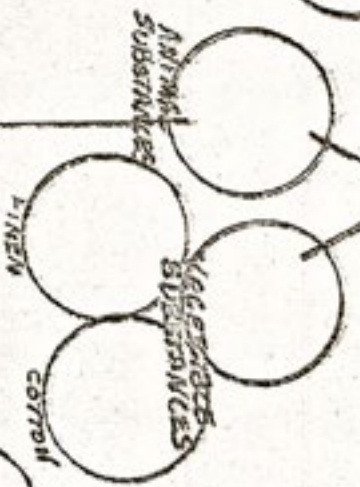
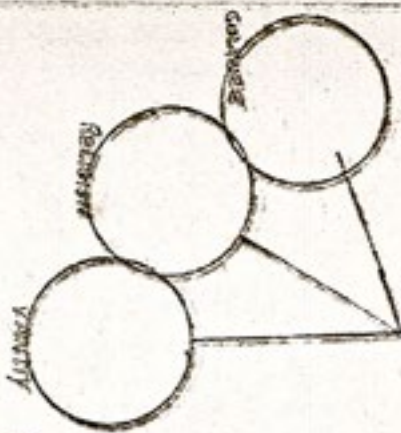
CLOTHING

FOOD

DEFENSE

MATERIAL

HABIT



THE FUNDAMENTAL NEEDS OF MAN

STAGES IN THE PROGRESS OF CIVILIZATION: An Exploration

DIRECT AIM: To make the child aware of and familiar with the history of man and the progress of civilization.
To be a real help to life. . .that is, to help the child adjust to the society in which he lives and to understand the different societies in other times.

Point of Consciousness: The technical civilization, once it reaches a certain level, begins to progress faster and faster.
To realize how diverse groups in different countries satisfy their needs at the same period of time in different ways.

Material

1. A series of nomenclature booklets containing:
 - a) a series of pictures depicting the development of a particular progression of civilized life: various habitations of man throughout the ages.
 - b) labels identifying each picture.
2. A series of arrows, one group for each nomenclature folder, on one side of which is written the label name and on the reverse of which is written the date of that picture.
3. The narrow strip of the centuries.

Examples of the material: Many such nomenclatures must be prepared.

Means of transportation by land: "The History of my Father's Car"

1. Primitive cart. 400 B.C.
2. Roman wagon II Century B.C.
3. Medieval wagon XII A.D.
4. The first steam-driven automobile. 1765
5. Tricycle with a piston-engine. 1886
6. The first Ford car. 1908
7. The Topolino. 1936
8. My father's car. recent years.

Dwellings of Man

1. Stone and straw hut. 3000 B.C.
2. Assyrian building. 2000 B.C.
3. Greek house 7th Century B.C.
4. Roman house 3rd Century B.C.
5. Medieval houses 11th Century A.D.
6. Renaissance mansion 16th Century A.D.
7. A nineteenth-century building 19th Century A.D.
8. A typical modern skyscraper. 1931

Means of transportation by Air

1. Dirigible by motor Gifford I. 1852
2. Plane on which the Wright Brothers achieved first human flight. 1903
3. Bleriot flies across the English Channel. 1909
4. Lindberg: flight across the Atlantic. 1927.
5. Helicopter. 1941
6. Rocket ship Bell XI. 1947
7. Four-engine jet propelled aircraft Douglas DC-8. 1958
8. Space ship: Vostok I. 1961

STAGES IN THE PROGRESS OF CIVILIZATION. . .

Materials. . .

My bicycle

1. Vehicle with 2 wheels. 1790
2. Vehicle with handlebars. 1818
3. Vehicle with pedals. 1855
4. Vehicle with solid tires. 1865
5. The bicycle (velocipede) 1875
6. The first bicycle with chain. 1880
7. The first bicycle with pneumatic tires. 1888.
8. My bicycle. This year.

Weapons

1. Arrowheads with wedges. 8000 B.C.
2. Bronze weapons. 2000 B.C.
3. Iron weapons of Greece 1000 B.C.
4. Roman sword. 3rd Century B.C.
5. Bronze cannon. 14th Century A.D.
6. Rifle. 18th Century A.D.
7. Tank. 1918
8. Mobile missile launcher. 1944

Exercise #1: **Introduction of a nomenclature**

1. Lay out the whole set of picture cards in one series, and through conversation with the children, identify each one. Begin with what the child recognizes and knows. Supply the missing information. An important time for dialogue.
2. Three period lesson.
3. Distribute the labels and the children match them. If definitions are included in the set, distribute them also, the children read them and match.

Exercise #2: **Historical progression**

1. Using the nomenclature already introduced, begin with the picture cards displayed and have the children match the labels.
2. Again through conversation, discover which picture comes first, second, etc. Arrange in order.
3. Distribute the set of arrows. The children match the label side of the arrows with the pictures and labels displayed. Then, turning the arrows to show the dates, the children discover whether their choice of progression is correct.

Exercise #3: **Vertical Presentation**

This presentation is called vertical because the pictures are arranged on the timeline from the bottom to the top. . . that is with reference to antropological discovery which locates the oldest fossils at the bottom layers.

STAGES IN THE PROGRESS OF CIVILIZATION. . .

Exercise #3: Vertical. . .

1. Lay out the narrow timeline of centuries.
2. Place the pictures and labels (arrows) together at the corresponding point on the timeline.
3. Observe: In the study of the dwellings of man, there is a long space between the first primitive hut and the next habitation. Then the faster the development of civilization, the more crowded the examples become.
4. The child writes in his notebook the labels and the dates, illustrating when he chooses. Perhaps noting on his own timeline sequence.

Exercise #4: **The horizontal study of history**

Here we look at all the different areas of history at a certain point.

1. Choose a particular point on the timeline.
2. The child then looks through the nomenclature cards and arrows for all those during this period of time. He takes one from each booklet.
3. The discovery here is of the character of a certain period of history.
4. He writes the information for that period in his notebook.