Quotations from Maria Montessori
Her Writings:

Maria Montessori Said

Addlo Montessori Training Center (2018)

Maria Montessori Said:

The Montessori Method

To prepare teachers in the method of the experimental sciences is not an easy matter. When we shall have instructed them in anthropometry and psychometry in the most minute manner possible, we shall have only created machines, whose usefulness will be most doubtful. Indeed, if it is after this fashion that we are to initiate our teachers into experiment, we shall remain forever in the field of theory. The teachers of the old school, prepared according to the principles of metaphysical philosophy, understood the ideas of certain men regarded as authorities, and moved the muscles of speech in talking of them, and the muscles of the eye in reading their theories. Our scientific teachers, instead, are familiar with certain instruments and know how to move the muscles of the hand and arm in order to use these instruments; besides this, they have an intellectual preparation which consists of a series of typical tests, which they have, in a barren and mechanical way, learned how to apply.

The difference is not substantial, for profound differences cannot exist in exterior technique alone, but lie rather within the inner man. Not with all our initiation into scientific experiment have we prepared *new masters*, for, after all, we have left them standing without the door of real experimental science; we have not admitted them to the noblest and most profound phase of such study,—to that experience which makes real scientists.

And, indeed, what is a scientist? Not, certainly, he who knows how to manipulate all the instruments in the physical laboratory, or who in the laboratory of the chemist handles the various reactives with deftness and security, or who in biology knows how to make ready the specimens for the microscope. Indeed, it is often the case that an assistant has a greater dexterity in experimental technique than the master scientist himself. We give the name scientist to the type of man who has felt experiment to be a means guiding him to search out the deep truth of life, to lift a veil from its fascinating secrets, and who, in this pursuit, has felt arising within him a love for the mysteries of nature, so passionate as to annihilate the thought of himself.

The scientist is not the clever manipulator of instruments, he is the worshipper of nature and he bears the external symbols of his passion as does the follower of some religious order. To this body of real scientists belong those who, forgetting, like the Trappists of the Middle Ages, the world about them, live only in the laboratory, careless often in matters of food and dress because they no longer think of themselves; those who, through years of unwearied use of the microscope, become blind; those who in their scientific ardour inoculate themselves with tuberculosis germs; those who handle the excrement of cholera patients in their eagerness to learn the vehicle through which the diseases are transmitted; and those who, knowing that a certain chemical preparation may be an explosive, still persist in testing their theories at the risk of their lives. This

There exists, then, the "spirit" of the scientist, a thing far above his mere "mechanical skill," and the scientist is at the height of his achievement when the spirit has triumphed over the mechanism. When he has reached this point, science will receive from him not only new revelations of nature, but philosophic syntheses of pure thought.

It is my belief that the thing which we should cultivate in our teachers is more the *spirit* than the mechanical skill of the scientist; that is, the *direction* of the *preparation* should be toward the spirit rather than toward the mechanism. For example, when we considered the scientific preparation of teachers to be simply the acquiring of the technique of science, we did not attempt to make these elementary teachers perfect anthropologists, expert experimental psychologists, or masters of infant hygiene; we wished only to *direct them* toward the field of experimental science, teaching them to manage the various instruments with a certain degree of skill. So now, we wish to *direct* the teacher, trying to awaken in him, in connection with his own particular field, the school, that scientific *spirit* which opens the door for him to broader and bigger possibilities. In other words, we wish to awaken in the mind and heart of the educator an *interest in natural phenomena* to such an extent that, loving nature, he shall understand the anxious and expectant attitude of one who has prepared an experiment and who awaits a revelation from it.

The instruments are like the alphabet, and we must know how to manage them if we are to read nature; but as the book, which contains the revelation of the greatest thoughts of an author, uses in the alphabet the means of composing the external symbols or words, so nature, through the mechanism of the experiment, gives us an infinite series of revelations, unfolding for us her secrets.

Now one who has learned to spell mechanically all the words in his spelling-book, would be able to read in the same mechanical way the words in one of Shakespeare's plays, provided the print were sufficiently clear. He who is initiated solely into the making of the bare experiment, is like one who spells out the literal sense of the words in the spelling-book; it is on such a level that we leave the teachers if we limit their preparation to technique alone.

We must, instead, make of them worshippers and interpreters of the spirit of nature. They must be like him who, having learned to spell, finds himself, one day, able to read behind the written symbols the *thought* of Shakespeare, or Goethe, or Dante. As may be seen, the difference is great, and the road long. Our first error was, however, a natural one. The child who has mastered the spelling-book gives the impression of knowing how to read. Indeed, he does read the signs over the shop doors, the names of newspapers, and every word that comes under his eyes. It would be very natural if, entering a library, this child should be deluded into thinking that he knew how to read the sense of all the books he saw there. But attempting to do this, he would soon feel that "to know how to read mechanically" is nothing, and that he needs to go back to school. So it is with the teachers whom we have thought to prepare for scientific pedagogy by teaching them anthropometry and psychometry.

But let us put aside the difficulty of preparing scientific masters in the accepted sense of the word. We will not even attempt to outline a programme of such preparation, since this would lead us into a discussion which has no place here. Let us suppose, instead, that we have already prepared teachers through long and patient exercises for the *observation* of *nature*, and that we have led them, for example, to the point attained by those students of natural sciences who rise at night and go into the woods and fields that they may surprise the awakening and the early activities of some family of insects in which they are interested. Here we have the scientist who, though he may be sleepy and tired with walking, is full of watchfulness, who is not aware that he is muddy or dusty, that the mist wets him, or the sun burns him; but is intent only upon not revealing in the least degree his presence, in order that the insects may, hour after hour, carry on peacefully those natural functions which he wishes to observe. Let us suppose these teachers to have reached the standpoint of the scientist who, half blind, still watches through his microscope the spontaneous movements of some particular infusory animalcule. These creatures seem to this scientific watcher, in their manner of avoiding each other and in their way of selecting their food, to possess a dim intelligence. He then disturbs this sluggish life by an electric stimulus, observing how some group themselves about the positive pole, and others about the negative. Experimenting further, with a luminous stimulus, he notices how some run toward the light, while others fly from it. He investigates these and like phenomena; having always in mind this question: whether the fleeing from or running to the stimulus be of the same character as the avoidance of one another or the selection of food—that is, whether such differences are the result of choice and are due to that dim consciousness, rather than to physical attraction or repulsion similar to that of the magnet. And let us suppose that this scientist, finding it to be four o'clock in the afternoon, and that he has not yet lunched, is conscious, with a feeling of pleasure, of the fact that he has been at work in his laboratory instead of in his own home, where they would have called him hours ago, interrupting his interesting observation, in order that he might eat.

Let us imagine, I say, that the teacher has arrived, independently of his scientific training, at such an attitude of interest in the observation of natural phenomena. Very well, but such a preparation is not enough. The master, indeed, is destined in his particular mission not to the observation of insects or of bacteria, but of man He is not to make a study of man in the manifestations of his daily physical habits as one studies some family of insects, following their movements from the hour of *their morning awakening*. *The master is to study man in* the awakening of his intellectual life.

The interest in humanity to which we wish to educate the teacher must be characterised by the intimate relationship between the observer and the individual to be observed; a relationship which does not exist between the student of zoology or botany and that form of nature which he studies. Man cannot love the insect or the chemical reaction which he studies, without sacrificing a part of himself. This self-sacrifice seems to one who looks at it from the standpoint of the world, a veritable renunciation of life itself, almost a martyrdom.

But the love of man for man in a far more tender thing, and so simple that it is universal. To love in this way is not the privilege of any especially prepared intellectual class, but lies within the reach of all men.

To give an idea of this second form of preparation, that of the spirit, let us try to enter into the minds and hearts of those first followers of Christ Jesus as they heard Him speak of a Kingdom not of this world, greater far than any earthly kingdom, no matter how royally conceived. In their simplicity they asked of Him, "Master, tell us who shall be greatest in the Kingdom of Heaven!" To which Christ, caressing the head of a little child who, with reverent, wondering eyes, looked into His face, replied, "Whosoever shall become as one of these little ones, he shall be greatest in the Kingdom of Heaven." Now let us picture among those to whom these words were spoken, an ardent, worshipping soul, who takes them into his heart. With a mixture of respect and love, of sacred curiosity and of a desire to achieve this spiritual greatness, he sets himself to observe every manifestation of this little child. Even such an observer placed in a classroom filled with little children will not be the new educator whom we wish to form. But let us seek to implant in the soul the self-sacrificing spirit of the scientist with the reverent love of the disciple of Christ, and we shall have prepared the *spirit* of the teacher. From the child itself he will learn how to perfect himself as an educator.

Let us consider the attitude of the teacher in the light of another example. Picture to yourself one of our botanists or zoologists experienced in the technique of observation and experimentation; one who has travelled in order to study "certain fungi" in their native environment. This scientist has made his observations in open country and, then, by the aid of his microscope and of all his laboratory appliances, has carried on the later research work in the most minute way possible. He is, in fact, a scientist who understands what it is to study nature, and who is conversant with all the means which modern experimental science offers for this study.

Now let us imagine such a man appointed, by reason of the original work he has done, to a chair of science in some university, with the task before him of doing further original research work with hymenoptera. Let us suppose that, arrived at his post, he is shown a glass-covered case containing a number of beautiful butterflies, mounted by means of pins, their outspread wings motionless. The student will say that this is some child's play, not material for scientific study, that these specimens in the box are more fitly a part of the game which the little boys play, chasing butterflies and catching them in a net. With such material as this the experimental scientist can do nothing.

The situation would be very much the same if we should place a teacher who, according to our conception of the term, is scientifically prepared, in one of the public schools where the children are repressed in the spontaneous expression of their personality till they are almost like dead beings. In such a school the children, like butterflies mounted on pins, are fastened each to his place, the desk, spreading the useless wings of barren and meaningless knowledge which they have acquired.

It is not enough, then, to prepare in our Masters the scientific spirit. We must also make ready the *school* for their observation. The school must permit the *free*, *natural manifestations* of the *child* if in the school scientific pedagogy is to be born.

The Absorbent Mind

Maria Montessori Said

The teacher, when she begins to work in our schools, must have a kind of faith that the child will reveal himself through work. She must free herself from all preconceived ideas concerning the levels at which the children may be. The many different types of children...must not worry her...The teacher must believe that this child before her will show his true nature when he finds a piece of work that attracts him. So what must she look out for? That one child or another will begin to concentrate…

The teacher becomes the keeper and custodian of the environment. She attends to this instead of being distracted by the children's restlessness... All the apparatus is to be kept meticulously in order, beautiful and shining, in perfect condition... This means that the teacher also must be...tidy and clean, calm and dignified...The teacher's first duty is therefore to watch over the environment, and this takes precedence over all the rest. Its influence is indirect, but unless it be well done there will be no effective and permanent results of any kind, physical, intellectual or spiritual…

The teacher must...entice the children... The teacher, in this first period, before concentration has shown itself, must be like the flame, which heartens all by its warmth, enlivens and invites. There is no need to fear that she will interrupt some important psychic process, since these have not yet begun. Before concentration occurs, the [Montessori teacher] may do more or less what she thinks best; she can interfere with the children's activities as she deems necessary... She can tell stories, have some games and singing, use nursery rhymes and poetry. The teacher who has a gift for charming the children can have them do various exercises, which, even if they have no great value educationally, are useful in calming them. Everyone knows that a lively teacher attracts more than a dull one, and we can all be lively if we try... If at this stage there is some child who persistently annoys the others, the most practical thing to do is interrupt him...to break the flow of disturbing activity. The interruption may take the form of any kind of exclamation, or in showing a special and affectionate interest in the troublesome child…

Finally the time comes in which the children begin to take an interest in something: usually, in the exercises of Practical Life, for experience shows that it is useless and harmful to give the children Sensorial and Cultural apparatus before they are ready to benefit from it. Before introducing this kind of material, one must wait until the children have acquired the power to concentrate on something, and usually...this occurs with the exercises of Practical Life. When the child begins to show interest in one of these, the teacher must not interrupt, because this interest corresponds with natural laws and opens up a whole cycle of new activities... The teacher, now, must be most careful. Not to interfere means not to interfere in any way. This is the moment at which the teacher most often goes wrong. The child, who up to that moment has been very difficult, finally concentrates on a piece of work... Praise, help, or even a look, may be enough to interrupt him, or destroy the activity. It seems a strange thing to say, but this can happen even if the child merely becomes aware of being watched. . . . The great principle that brings success to the teacher is this: as soon as concentration has begun, act as if the child does not exist... The duty of the teacher is only to present new things when she knows that a child has exhausted all the possibilities of those he was using before…