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Education involves preparing the inhabitants of this planet for dealing with the world, for co-existence and for leading meaningful lives. Indeed, in order to obtain food and shelter we need to know how we can partially manipulate circumstances; in order to live in peace we need to know how to behave in conjunction with others; in order to experience some form of happiness we need to be able to transcend our first impulses.

These three endeavors can be approached in different styles. Knowledge can be seen as a passive “learning by heart, based on the authority of the teacher”; but knowledge can also be directed towards gaining understanding and insight. Peaceful co-existence can be seen as a moral duty; but it can also be viewed as something to be enjoyed based on inner virtues like compassion and shared joy. Significance can be seen in the light of a value system imposed upon us; but it can also be found through inner experience and mental purification.

Thus, on one side of the spectrum we can place knowledge, morality and dogma; on the other side of the spectrum we can place understanding, social grace and spirituality. The first side of the spectrum is related to the view that everything can be brought under control. The second side can be related to the view that everything flows naturally and that we serve ourselves and the world best by adopting an attentive style of accomplishment by means of ‘doing without doing’.

A similar spectrum emerges for the actions we carry out in our daily lives. It is important to know both sides of this spectrum and their corresponding effects, so that a balanced choice can be made to how we would like to act.

1 Goals of Education

Mammals take ample time to educate their offspring. This is because the tasks to be learned are complex. For survival the animal needs to learn skills to obtain food and to find protection. As these skills often require collaboration, a second aspect of education becomes important: dealing with other members of the species. In humans, that posses the potential to be reflexive, a third aspect of education comes about. This is the education towards values, in particular finding a meaningful way to organize one’s life.

Let us look closer to the three goals in education. The goal of education towards survival involves learning skills and knowing facts. One of these skills is deducing facts from other known or experienced facts. This skill is present in some mammals and most prominently in humans. It has given birth to the wonderful art of mathematics, using which models of the world can be made that give more and more insight and thereby power of prediction. These predictions enable us to control part of the environment and ourselves (though most often the others).

In the animal kingdom the second goal of education geared towards collaboration may seem more essential than in humans. Indeed, without collaboration some species will simply fail to survive. By learning social roles animals often increase the stability of their social structure and hence the capacity to thrive as a group. Humans on the other hand are intelligent and therefore often have the pretension to be more independent. But this is a fallacy. If you, reader, find yourself in a world in which suddenly all other beings are no longer there, then you will have a hard time surviving. I am not even speaking about the psychological problems that surely will arise. The sheer difficulty of finding and obtaining food over a period of, say, a decade will be a tremendous task. We have to admit that we human beings depend on others. And let us not forget that we also depend on other animals, on plants and on the environment. From this it follows that also for us this second aspect of education, geared to live in harmony with others and our planet, is as essential as the first aspect. But unlike many animal species, we humans seem to have forgotten it. Someone may obtain a university degree, become a professional worker or a craftsman, without having learned to be able to live in harmony with others or the environment. Since we are so powerful, this obviously is a dangerous situation. It is the price of being smart.

The third goal of education is about the way we view ourselves, about the goals we set ourselves, once our first needs are fulfilled. The need for this originates from the fact that we live in a non-permanent world, while we would like it to be permanent. We may call this the spiritual goal of education. One possible view in this direction, coming from my non-theistic and non-finalist religious tradition, is that the universe and our life have no a priori goal, but they may be given a post hoc one. We will come back to this later.
Let us give names to the goals in education. We have education for dealing with the \textit{world}, with \textit{others} and with \textit{culture}. See Fig. 1.

\section{Styles of Education}

Independently of the goals of education there are several styles of education. Basically they form a spectrum with two extreme values at the sides. At one side we find education which is imposed by the parent or teacher on the pupil. For the first goal of education, dealing with the world, this results in presenting the material that has to be memorized. This may possibly be presented in its most attractive form. But even then the reason for the validity of the material usually is not given. It has to be accepted on authority. For the second goal of education, dealing with other people, the style may be as follows. One gives a set of rules how to behave and the pupil has to obey to these. Again no discussion or motivation is given. For the third goal concerning spirituality, the side of the spectrum we are discussing now will give us values and goals ready to be accepted. Usually they are brought as being valid \textit{a priori}, as dogmas.

At the other end of the spectrum there is a different style of education. Concerning the goal of knowing the world one places more importance on understanding than on knowing. The material is brought in such a way that the child sees why things are taught in this and that manner. Concerning the second goal one presents the rules of behavior not as an absolute obligation, but as a style that makes life much more pleasant and meaningful. And in the realm of spirituality one presents the great traditions and shows how they have contributed to a psychological hold for the people and to various forms of world-class art.

Let us give names to the sides of the spectrum of styles. The first one with its authority of the teacher and the material being taught I will call the \textit{subject-directed} style. The second one with its greater freedom and responsibility for the child I will call the \textit{child-directed} style. See Fig. 2. I will not try to indicate precisely how one should organize education. In this talk I just would like to point out the differences in style, so that one realizes the possibilities. The right
form of education uses aspects of both sides of the prism.

The spectrum of styles of education correspond to a similar spectrum in lifestyles. One can try to be in control of as much situations as possible. Or one can try to improve one’s skill in being flexible. Again it is advisable to follow the middle way between the two sides.

3 Subject-oriented education

There are certain skills of which it is important that they are being taught. Being able to speak and understand spoken language, in order to communicate with others, is indispensable for our existence. In our modern society the same applies to reading and expressing oneself in clear written way. This establishes language as an essential subject to be taught. A second topic is arithmetic. In our merchandised society elementary insights in numbers and skills to manipulate these are still important, this in spite of the present day abundance of computers. Let this be enough as examples of subjects that are so essential that one would want them to be taught as worldly knowledge to all children.

Along the line of knowing to deal with others it is important to know emotions, of oneself and of others. Also how one may deal with these and how one should not deal with these. Besides this, it is important to know that language that seems to be clear may be deceptive. Or that arguments that sound convincingly may be only a form of rhetorics. In human interaction it should be made clear that cooperation may lead to increased well-being and power and that quarrels or worse may lead to violence and destruction.

Along the line of human culture and spirituality the pupils could learn a few examples of master pieces of the arts. Of course in their historic context, for better appreciation. Making children familiar with religion and spirituality is
more delicate. We will come back to this later.

4 Child-directed education

Having discussed shortly the subject-directed side of education, let us look at the child-directed side. Based on Socrates’ idea of the maieutic method, i.e. the way of a midwife, Maria Montessori (1870-1952) developed an impressive style of child-directed education. First she realized that a child is an individual having his or her own emotional and intellectual level of development, that needs to be respected. Each child has a different speed of absorbing material; moreover within one child this speed may vary, being dependent on circumstances of the day. At Montessori schools, therefore, children are being taught individually.

In order to ‘implement’ the maieutic method, Montessori designed learning materials, each teaching a particular task in such a way that the child has a ‘self-control of error’. This means that the pupil can judge him or herself whether the task has been performed correctly or not. This judgment, moreover, is not based by ‘looking up the answer’, but on clear insight. A simple example for children at kindergarten age may explain this very well. A child needs to be able to control its world. Montessori, therefore, judged that it is important that the child is able to open and close a zipper of a coat, something that needs to be done daily and at first is done by adults, usually the mother. As material she designed a wooden frame with on both sides a piece of fabric, each with half a zipper. When the child has chosen this material to work with and asks for explanation the teacher shows how the zipper can be closed and be opened again. Then the child is invited to try to perform this skill. It may take little or more time, but eventually most children can do it, knowing exactly when this moment has been reached. It gives a strong feeling of happiness contributing to the building of a proper self confidence.

In almost all Montessori material this method is built in. The advantage of this self-control is that the pupil obtains a skill and understanding simultaneously. Moreover, without it the teacher has to tell the child right from wrong. And, so argues Montessori, if the child has no insight why this is so, it is denigrating that the adult serves as an irrational ‘oracle’ that determines the correctness of a performed task. At the same time, neither a frustration is caused by a teacher saying “No, incorrect”, nor an improper motivation is built up by a compliment, present in a classical Pavlovian educational setting. The moment of insight is also coupled with a realization that school does make one independent: now the child will be able to open his or her own coat.

As to human interaction, Montessori has emphasized the notion of social grace. This refers to well-behavior that is natural, taking into account oneself, the situation and the others. If morality is based on duty, one may always decide to disobey, because one may at a certain moment not feel like doing one’s duty.
If, on the other hand, behavior is based on virtue, social grace becomes built in and does not take an effort. When there is ample opportunity for collaboration, and the participants have already developed some inner security, the social grace usually develops by itself. If this is not the case and a quarrel arises, the teacher should interfere. Although Montessori has had some good ideas about these matter, there is place for extra attention here, for example coming from the Jena-Plan school system (Peter Petersen 1884-1952).

Teaching appreciation for art in the child-directed way may benefit from encouragement of active participation, for example in singing or other musical activity. Staging a play to produced by a class is not only exciting and of cultural value, it also has its spin-off for the learning of how to interact with others. More introvert pupils may want to help produce stage objects or costumes. Nerds may want to help with the technical support. In such an enterprise no pupil needs to be left out, as there is always a need for helping hands in the production.

So far we have shortly discussed the possibilities of education about things and others. We strongly plea for the value of the child-directed method. This can go together with a responsibility for the important subjects to be taught. The often heard objection that present-day children are no longer interested in learning; they are said to have little span of concentration. This may be true. But for this very reason the child-directed form of education is of great importance. Concentration can only grow on an elementary form of mental discipline. And this kind of discipline depends on genuine interest. In order to cultivate interest one needs to rely on child-directed education.

5 Spirituality and religion in education

In our lecture delivered for SSQ at Harvard (October 2001) we distinguished three forms of spirituality. There is spirituality based on believing, based on revelation and based on purification. The form based on believing is like an axiomatic system. It can give mental support, specially if it is sufficiently ingrained. On the other hand this has as disadvantage that it may lead to intolerance. “Only our system describes the Truth,” thereby avoiding to say that it really is an assumption. Spirituality based on revelation has two advantages. The resulting mental hold does not depend on theory but on personal experience; therefore it is more firm. The personal aspect of it moreover does have a liberating effect having. There is no need to see spirituality as a belief; this prevents dogmatism. The same applies to spirituality based on purification, as it is also based on experience.

One important aspect of whatever religion is that it enables the follower to be able to find a purpose for our life, whether this is an a priori or a post hoc one. In an a priori purpose one often presupposes that there is a creator of the universe who has given a meaning to it and its inhabitants. In a post hoc purpose
we humans may choose one. Another aspect of religion/spirituality is that we are being helped with mourning, something that is inevitable in this ephemeral life. In the style of subject-directed education one may be tempted to impose one particular form of religion or spirituality as being the only truth. This, however may lead to intolerance.

Dealing with spirituality in the more child-directed way the teacher may present the pupils with the several forms coming from the great religions. Next to theoretical knowledge about the great religions one may attend one time during the school years a well prepared service in the different living traditions. The acquaintance with the arts is a good preparation for spirituality based on experience. But an even better preparation is the child-directed education itself. The building up of discipline, concentration and insight is a well-known sequence of mental states described in classical Buddhism. Some people, even those that do appreciate child-directed education, can become a bit ‘allergic’ to this aspect of the method. My opinion is that this irritation depends on how one deals with spirituality. Indeed, any skill that one has obtained may lead to an ‘attitude’. In the case of the spiritual state of mind, obtained through child-directed education, I believe that it is the environment, the parents for example, that may have cultivated such an attitude. For the child this spiritual being is just natural, nothing special at all.

6 The importance of proper education

Education is necessary to help us to provide food and shelter. In our complex society proper education also protects us from rhetorics that tries to impose on us wrong ideas. For this reason it is concerning that at present the level of our education is not protected well. It should be the task of governments to ensure a balanced minimum level, so that pupils are not depending on the varying quality of schools or books. In Europe this used to be the case, but these day there is a strong trend that this responsibility is being abdicated. In the USA education never has been seen as a governmental responsibility. True, the USA has some of the best schools in the world; they, however, also have some of the worst schools. Much depends in that country on the price one is able and willing to pay for education. Paying for education is seen in combination with the view that it is a product and that the student is the client. I think this is fundamentally wrong. If one does want to speak about education in commercial terms, one better states the following. Schools engage an economic activity in which teachers and students are co-workers with different roles; the client is society and the product consists of science, the humanities and the arts and virtuous people that know how to appreciate and use it.

One of the fallacious arguments to let go the governmental responsibility of quality of education is the following claim. "Our modern society needs many
people with degrees, so we better make a large percentage of the students pass
the exam" (by lowering the standards). Of course the effect will be similar to
printing unlimited quantities of money: in both ways one asks for devaluation.
In spite of this danger in many European countries the deregulation of education
is taking place. Perhaps some of the developing countries are more wise and will
understand that freeing education from commercial interests will on a relatively
short term increase the possibilities of their human resources.

The essence of the spiritual traditions of the religions provide a mental training
towards a more purified mind, from which all behavior flows in a spontaneous way.
Purification of mind, however, is a time consuming practice. The importance of
the child-directed education is that it leads to a development of the personality,
in which there is less to purify (as a pupil has been less subjected to conditioning
using punishment and reward). In fact in this way the pupil has already reached
some initial level of spirituality, that of meaning.

If we want to have a more harmonious world, this needs to be built by the
collaboration of people. Examples of groups that are meant to do this are political
parties, governenmental committees and groups of volunteers. Often, however,
this collaboration is being frustrated because the participating people are being
directed by fear and desire. One essential aim of education is to create happily
interacting children that know how to deal with differences of opinion in a peaceful
way. This happiness will be the basis for a better world.

We thus see that the three aspects of education are essential. They are nec-
essary for the survival of the individual but also of our culture and world. Here
at the Unesco Headquarters it is the right place to emphasize this.