

PERIODS OF SENSITIVITY WITHIN HUMAN LIVES

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Imagine yourself in a hall with a lot of people talking. Even if you used your will to make a silence you could not alter your environment in any appreciable way. However, imagine the scenario in a hall with me and I say to everyone:

Are you willing to try something with me? It will need the cooperation of everyone in this room. Each of our wills can, if linked together, have a great influence on our environment. To demonstrate together this fact, will you help, each one, to create silence?

Then we shall begin.

It will need absolutely everyone. Are you sitting comfortably? You will have to put down for a moment anything that you are holding. Now grow very still and close your eyes. (If you are insecure you will want to peep!) Now drop your shoulders. Now let your forehead uncrease, let your fingers, hands and arms grow still; now your body and legs heavy and still... even your toes...

We can almost hear the silence...

Had I said, "Please be quiet," you would probably have quieted, but the silence would not have been deep. You also would have missed a certain power that you have within yourself. The difference is when your own will comes into use. Now you have the willingness that turns into a willing action that brings a self-discipline with it. You entered into the imagining because of a wish to know and to understand.

This way of wanting to know and bringing conscious understanding through various stages is written about extensively by the philosopher Bernard Lonergan. He seeks to help us to understand this inner quest to know that is born within all of us, whatever our race or creed. This question 'Why?' is one that all children ask, but one that our present educational system gradually

stifles. So often the cry of the young person is "I'm bored!" We need to engage the will which, Lonergan says, is there in its potency. Then comes the willingness, which he calls 'form,' and then there is the actual willing which he calls act. So he says there is 'potency, form and act.'

Dr. Maria Montessori showed that if we match our teaching to the inner phases of development that are the same throughout the world, then the willingness and the active will are there and the child is not bored.

These stages of development with accompanying special interests were first pointed out by a Dutch biologist called De Vries, who lived at the turn of the century. De Vries pointed out the periods of sensitivity within some insects, so that when for instance caterpillars responded to the urge to travel up the branch towards the light, it led them to the parts of the tree where there was the best food to be found.

Dr. Montessori, who was a doctor of medicine and an anthropologist, began to notice periods of sensitivity within young people. In her great book, *The Absorbent Mind*, she pointed out these periods up to the age of twenty-four.¹ They are in broad six-year easily identifiable stages. The strongest divisions of change are from 0 to 6, from 6 to 12, from 12 to 18, and from 18 to 24. These are periods of strongly defined interests coming from within each person. Each stage also has its physical and social changes. Each of these main six-year stages seems to have a three-year specific development stage within it.

Let us think what will happen if we starve the child of the appropriate environment for these times of great sensitivity. For instance, there is a period of sensitivity when all children endeavour to stand and then to walk. Again, this is so throughout the world, and babies endeavour to stand and walk at about the same time wherever they are in the world. Let us suppose that we kept the baby strapped down in a buggy or carried it everywhere, never letting it attempt to stand or walk. It would not develop normally. Similarly, if a child is put into an environment where it does not hear language, then it will not speak. Even if it is in an environment with chickens, it will not crow and cluck like a chicken be-

cause nature has made a stage of development to absorb the human language around it. Its development would never be the same as intended and the child would be frustrated and probably aggressive towards the society that thwarted this inborn need to develop fully.

We learn from this that it is very harmful to ignore these stages put there for the development of all peoples' potential.

I believe that for the last generations we have mainly ignored the later periods of sensitivity, particularly from twelve onwards, and have consequently not helped with education in the way intended and as part of God's plan for the world. Our prisons are full particularly with young men, and we talk in the U.K. of building more prisons, without seeing why this anti-social behaviour is happening. During most of their young lives, instead of helping them find answers to their own questions and building on their own experiences, we have imprisoned them for several hours a day and for many days a week not only in a room but within a desk and chair. They know so little of the beauty, awe and wonder of the world and their natural desire to know has been stifled by the impositions of others asking all the questions and making them learn the answers by heart, where they have to be regurgitated at a set day at a set time within a set period.

I hope to show how we may work with nature for the fullest development of human beings.

1. The 0-6 Phase

Within the first six years, all young people learn through the senses and learn to classify what they discover, so that, for instance, they recognize the chairness of a chair even when chairs vary in many ways. Lonergan points out in his book *Insight* exactly how this learning comes about because of the inborn insatiable desire to know.² Now that a tap on one key on a computer can bring up most data, there has come a desire for a further leap for human beings. There is a great desire now for understanding. *Insight* explores our stages of understanding.

Dr. Montessori devised sense training apparatus to help to

clarify shapes, numbers, colours, scents, and so on. This forms the basis for later abstract understanding. Today we need to keep the same characteristics with materials that will give knowledge useful to the child of the new century. These are, namely, that one particular characteristic only should be shown each time (unlike the many characteristics that toy shops have for their toys); secondly, that as far as possible it should be self-corrective; and thirdly that the colour should be such that only the differentiation that you wish to show stands out.

For these young children, the discipline is within the environment, as everything has to be taken from its correct place and put back into its place. The teacher is able to be a companion and helps when asked. She does group presentations so that the children are encouraged to try for themselves and they choose what they wish to do from within the environment.

All theory within the child's later curriculum should have its fundamental experience within the early material, so that the child's own experience is built upon and we do not have just theoretical data without meaning. All learning is based on practical experience and then understanding is there, and the amount of rote learning done today becomes unnecessary.

Learning is a continuous whole. Cardinal Newman said:

“All knowledge forms one whole, because its subject matter is one; for the universe in its length and breadth is so intimately knit together, that we should not separate off portion from portion and operation from operation....”³

Montessori writing about education in her treatise on the new university says:

“There should be co-ordination in all schools from infancy to maturity, for man is a unity, an individuality which passes through inter-dependent phases of development. Each preceding phase prepares the one that follows, forms its base, nurtures the energies which urge towards the succeeding period of life.”⁴

Besides this period of sensitivity during which the child

experiences through the senses the actions upon the environment, Dr. Montessori also pointed out the extreme sensitivity to language experienced by children from babyhood to three years. During these years the young child absorbs its own language and all children in the world speak at about the same age, whether they live with a simple or a complex language. In fact, if they live at this time with more than one language they absorb and speak these. The learning of the language at this stage is absorbed by children all over the world; it is not learnt in the way that languages have to be learnt later. This period of sensitivity absorbs the language as a whole. All its grammar is assimilated and not learnt separately at the request of a teacher. The period of sensitivity is so great that every child absorbs it from its own environment through this inner urge. At the same time, nature also makes the child absorb the culture and adapt to the climate and the customs of its environment. Then by the age of four the child not only seeks to have the experience of objects but also is eager to name everything.

Within all of us there is also an inborn running commentary of reflection, both conscious and sub-conscious. To illustrate this, here is an anecdote about Christopher, a four-year old within the Montessori under-fives department. Here there was a cabinet of shapes, each drawer containing a few of the same type: a drawer of quadrilaterals of differing types, and one of triangles, etc. Christopher took out the drawer of wooden insets of triangles, feeling them and putting them back. Then he began asking for their names (this is the age that collects names of aircrafts, cars, and so on). He was told the name of the one he was holding and asking about. It was a right-angled triangle. For several days he said the names as he felt them and replaced them within the correct frame. Several days later, he called excitedly for me to come and see something outside. With great excitement and shining eyes he said, "Look!" and he pointed to a ladder against the wall. "Look!" he said, "A right-angled triangle!"

He had not consciously been thinking of the triangle, but there had been a storing of the data that he had experienced, and then the synapses had lit up and he made the conscious discovery with such delight.

The mind lights up and joins together into an ever-widening frame of conscious discovery. It is certain that had I said at the time, "Look, Christopher, this is a right-angled triangle, and a ladder against a wall makes the same shape," there would not have been the same delight. One is nature's own period and timing, and the other is the teacher's will and timing.

1.1 The environment and its care

The care and nurturing of the environment is the key to all this. The very way that we place the objects teaches so much. Children from 3 to 6 love to look at pictures. If you have very fine postcard reproductions and place them in drawers and little cabinets according to the nationality of the painters, and then within the national categories little divisions according to when they were painted, the children just get used to looking and seeing where it tells them is their correct 'home'. We found that very young children recognised Dutch or Italian art and when cards were mixed together they could immediately put them into their correct place in the environment.

Later the 6 to 12 age group place the painter's name by the reproduction and put it at the right date next to their time line. We get these results if we feed this absorbent mind.

We can put directions for the children if they want to alter the texture of their paintings, by means of a separate card telling them where to go to see texture made by the material on which the painting is crafted, and another telling if they want to alter the texture by the paints used; and yet another showing how to see the different levels that are painted and how it creates yet another effect on the texture. The child's curiosity comes of its own accord and then within the environment are the solutions he seeks. After this he will know what he wants for his own paintings. We must remember also that the other children may have been using one of these and he will have become interested possibly through this.

Geological strata shown on a wall give great delight especially if a fossil is embedded. The building can have the different shapes for this age group, picked out in the decoration...

the triangle, the polygon, the rectangle, the square and so on. Your own imagination together with the following stages of students will create a wealth of wonderful ideas.

1.2 Attitudes

As our attitude has a profound effect on our actions in life, it is those attitudes that are so important to engender in the absorbent mind stage of our young children.

At present in England, most of the television adverts have an underlying streak of sadism. Sometimes it is just in teasing, but many are openly sadistic in content. They depict selfish acts to an extraordinary degree.

Children take it as a norm when watching, that one doesn't have any feeling of compassion at the unhappiness of another, particularly where the subject's own wishes are concerned.

Recently the Royal Society for the Prevention of Cruelty to Animals said that there has been, during this last year, a very alarming and large increase in extremely sadistic acts of cruelty to animals.

Currently we have four young children on trial for murder of another child and a case where others tortured and then killed a very much younger little boy. These are extreme cases but are indicative of the climate of an attitude where respect and care for other life is lacking.

We can say that we didn't realise what we were doing to the coming generation but once we realise the power of the absorbent mind, then we must play our part in seeing that the surrounding attitudes are respect, love and compassion.

2. The 6-12 Phase

Lonergan remarks in *Topics in Education* that the fundamental problem is the horizon of the educationalist. So the function of a philosophy of education is to bring the horizon of the educationalist to the point where he is not living in some private world of educationalists but in the universe of being.⁵

Our problem is that teachers today are run by so much administration and by the jobs within the departments of education, that they cannot afford to admit to a real grassroots change being necessary. Even when teachers know that something is not as it should be, they are caught within the system. They make themselves ill trying to cope with all the tinkering changes.

Lonergan pointed a way to help the student and the teacher each to understand his own way of understanding and how to establish his own position. In this way it is intercultural because it values and respects the diversity of human life within our creation. We are bound together. Lonergan says that the Divine Essence is the idea of BEING. Knowing God by His essence is the consummation of all intellectual activity.⁶

The education of this age group depends on our recognising the new phase of development, which is so dependent on the phase before. In this phase the main activity is classification within the mind of the rich experience of the senses.

Now the young child turns his eyes out from his immediate family to the world. He expects us to unfold its treasures and the systems that empower the environment and ourselves and to keep the wonder of the whole. William Blake catches this:

To see the world in a grain of sand
And Heaven in a wild flower
Hold infinity in the palm of your hand
And eternity in an hour.

We have to serve the nature of learning put into all human beings and use it to discover ourselves. As our knowledge of the world and our universe grows we shall learn to respect ourselves as well as all human life with all its God-given diversity. We shall seek to go on until our last breath to know more of this wonderful awe-inspiring world as we help ourselves and others to seek truth and beauty and to be able to acknowledge death.

All our knowledge is linked. All knowledge in nature is linked. It is man who has tried to separate it into distinct subjects, until children want to truant and when asked why, they express the irrelevancy of what they are being made to learn.

If the young child is helped to answer his own question, then as soon as he has that answer another question will form and will lead him through many different subjects in his quest, and all will help him to understand himself; he will be more at home in the world.

Newman said, when pointing the way to real education in his book on the university, that all knowledge forms a unified whole. In another place he points out: All the sciences are connected because their subject matter has the unity of being... They are the acts and work of the Creator.⁷

Within all that the child asks and finds out, is this divine essence, for within every human being the creator has put this primordial 'Why?' We see now within this new age group from 6 to 12 that the needs are very different from the earlier age group when the whole of the child's environment was absorbed, so that the family satisfied and the culture and language and morality were internalised.

Now there is a complete change that is seen clearly in Professor Plomin's research on twins. They were separated at birth and brought up by different people in a different environment than their birth parents. He found that in those first early years each twin grew to look like the adoptive parents, often developing the same type of walk, mannerisms, speech likenesses, etc. But now at six he found that the genes of the real Birth Parents came to the fore, and the children began to grow like the birth parents in looks, the face and general physique, together with new capabilities and interests derived from their genetic endowment. We see this in the way the genes for musical talent of the Bach family were passed on. The genetic endowments of the birth parents together with certain of their characteristics, Professor Plomin found, came to the fore during the next few years of this period, and their characters and talents began to be clearer.

For the child the environmental family is now no longer enough. He seeks a wider scope of friends where his own unique personality can gradually find itself within the social environment. He likes to 'to go out to play' and within this play he learns how to be sociable and to give and take.

The impossibility of doing this now in our big urban conurbations needs to be thought about by educationalists because these children, with all the dangers from the present day population and traffic, are being deprived of a very important part of their development. We need to take this into account and allow a certain amount of unregulated play not governed by the adult's will, but within a safe environment.

Through our feelings we establish ourselves with energy in relation to our surroundings. Bernard Lonergan says in *Method in Theology*:

“Because of our feelings, our desires and our fears, our hope or despair, our joys and sorrows, our enthusiasm and indignation, our esteem and contempt, our trust and distrust, our love and hatred, our tenderness and wrath, our admiration, veneration, reverence, our dread, horror, terror, we are oriented massively and dynamically in a world mediated by meaning.”⁸

We need to cater for these feelings and those that have to be curbed must be sublimated in legitimate ways. The child until now has adapted to the morality that has been within his environment. Now reflection is more conscious and he will feel ashamed when this code is breached. He seeks consciously now to know more about his religious observances and beliefs.

Big changes have also come about in the way of learning. The sensorial experiences from those early days are so important as they now form the basis of abstract understanding. The child now consciously wants to know and seeks to understand his world environment. As he begins to understand he seeks the related data.

He enjoys materials that allow him to test himself. He enjoys having the means of correcting himself. He enjoys repetition. He finds this learning easy to retain because he knows its relationship to life itself.

His mind is continuously questioning. He seeks to know about the world and the universe in which he lives. He is interested in volcanoes, the way they erupt and why; the strange strong forces within the world that man cannot govern. He is interested in such things as how flocks of birds wheel together in the sky without

bumping into each other. He will find that often adults around him don't know the answers and that in the world there are still questions waiting to be answered, perhaps by himself.

By seven, children ask in a very simple way the main philosophical questions! ... "Who made God?" The child of this age asks about creation and procreation. Before the rush of hormones at adolescence, this is the age to teach him the facts of his own creation and let him understand the wonder of intercourse with its tenderness as well as passion, in a constant loving relationship that gives children stability and a glimpse of that great perfect love that is a deep-seated yearning within every human being.

This is the green age for learning how the world around him works. When he looks at the moon he begins to wonder why it is up there. He wonders about the sun and its warmth, and where it goes when he can't see it. The more he explores and finds out, the more will come wonder and awe. We need to help this wonder and to let the primordial 'why' that is born within each one of us have scope. We need to withstand the temptation to ask the questions ourselves, instead of allowing the questions to arise from within him.

There are so many ways in which we can help. Everyone's way is unique and our duty as teachers is to keep him company on his way and guide him to where he may find the answers. There are so many wonderful teaching materials: computer software, videos, films, books, the internet, visits, and above all... people. History comes alive with old people's memories. There is a lovely link here with people in a home for the elderly, who may feel no longer needed. Here are young children, some desperately needing loving attention, others seeking living history. Many enjoy being taught the old street games which our cities cannot now accommodate. Many of these games and rhymes enshrine the history of past generations. They were often clandestine ways of saying what was thought of kings, queens and regimes. They can still be passed on to city children in this way through the elderly.

2.1 Time lines

All children of this age seem to love dinosaurs, and time lines intrigue them: their own time line from conception to the present day with photos and drawings at certain ages with a long blank space for the years still to come; pre-history with dinosaurs, the time line of man, the time line of Christ or of their own religion, a time line of art, a time line of transport, a time line of conquests... and all with cards or objects to place by the side at the appropriate place. Children of this age need movement and they need the stimulus of conversation (and argument) about what they have understood.

I have had experience of all this and the easiest way of explanation is to be autobiographical here.

We had areas within the school each devoted to a subject and the children could move between these subjects. Before going away they showed what they had learnt and the time of going was noted. Sometimes they stayed behind for a little while to show another child what they had learnt and would interest them with their own new enthusiasm.

The environment was prepared very carefully to fit the needs of the stages of the children by inviting materials, choices of suggestions, directions and self-corrective materials. I had John Rickard who later became top of 145 Nations in the Maths Olympiad, and at the same time this area had materials for a Downs syndrome boy (whom John taught to play chess!) We accommodated materials for Alastair Fairweather who was totally blind and who later read maths at Imperial College, London. They were together with children at many different levels of mathematical ability, so I know that it can work! The secret is in the careful preparation of the environment catering for the seven different types of intelligence,⁹ so that each child is able to find stimulating materials and suggestions.

One of the interesting things to put beside a time line is the History of Mathematics. Besides giving a gradual understanding of number, algebra and geometry and the way they were thought about, this may also give a fascinating insight into the discoverers'

lives, and how their discoveries were received by the people of their time. They will see that important inventions were often devised at the same time by people in different countries who had no contact with each other. Sometimes, though, two people come to think of a new way forward and have real contact. In the case of Leibniz and Newton who knew each other well, it is questionable who came to devise calculus. This was a new type of algebra used for systems in constant change instead of only static systems such as length, breadth and height.

Calculus is a very important part of our lives today and will be even more so in the future. Maths up to the time of calculus had dealt with examples with fixed quantities that were known, such as length or distance. Now engineers and designers of machines, structures and instruments need to be able to take account of changes. For instance, if a spaceship is going to be designed it has to have sufficient speed to overcome the gravity of the earth and the designer has to think of designing powerful engines. But on the other hand powerful engines will be heavier and will have to have more fuel, but then the designer must take into account that the extra fuel will mean more weight and because of the heavier weight the engines will burn the fuel faster. Then at the same time it must be remembered that it will need more power to take off because of the weight. All these types of problems have to be considered and the very best possible answer has to be found taking all of these into account. This is where calculus is needed and now there are wonderful computer software programs to do the work in a few moments that would literally have taken years to work out. One of the first programs to show this was *Mathematica* designed by Stephen Wolfram, putting the answers within the power of ordinary school students and yet also being of use to the astronauts.

Everything that the students will need to understand in the abstract should be able to be within a piece of apparatus in the Nursery. The abstract behind it is not presented but the child learns to know about it because he has sensory experience of it. Perhaps a student will try to make a piece of play material showing variables clearly. Montessori showed the binomial and trinomial cubes with simple play materials so that when later the students come to the

symbols, they have real meaning for them and will then recognise them.

There are two kinds of calculus to show, one that is called Differential calculus and the other, Integral calculus. ‘Differential’ is just seeing the rate that something is happening or the rate that it changes, in reference to another related happening. ‘Integral’ calculus is finding the various combinations that could be causing the rate of something happening. Give thanks for calculus and computers!

In *Topics in Education* Lonergan says: “What does a physicist mean by velocity? He means ds/dt . What does he mean by an acceleration? He means d^2s/dt^2 . If you know what is meant by those symbols from the differential calculus, you know exactly what is meant by acceleration and velocity....”¹⁰

If these symbols are on a card on one on one side with the meaning on the other side (d on one side and distance on the other), children of about 8 years enjoy them, as this is the sensitive period for language symbols. They will talk to each other about d instead of distance. “How far is your ‘ d ’ to school?” “What is the ‘ t ’ it takes?” It is fun and yet it prepares them for easy usage.

Lonergan goes on: “If they have a bit of calculus all these notions can be simplicity itself, and not only the notions, but handling the notions and seeing their implications and movement from one to the other.”¹¹

It really is a matter of presenting learning materials at the right time (periods of sensitivity) in separate stages so that it becomes a fascinating game giving them easy mastery leading to further insights.

2.2 Language

Children of this age show a great interest in language. They enjoy the fun of reading the clues with friends in a treasure hunt and sharing the tube of small sweets or raisins at the end. They pick from a variety of cards for acting, read it and act it to a friend without speaking. Cards such as, “It is your birthday; your uncle gives you a lovely necklace. You put it on in front of the mirror.

Unfortunately you catch your hand in the necklace and as you move away it breaks! You are very upset and a friend helps you to pick up the beads and helps to mend it.”

Children at this stage tend to write a great deal and it helps a great deal to do the following: I employed a pensioner for two hours a day to proof read. This is not instead of the teacher reading the story... or geography or science or history, etc. We had a very good book with punctuation exercises and another with spelling rules. The job of the proof-reader was to put in a directive with the page and the exercise or rule to be worked. These corrections had to be completed before being allowed to write more in that subject. The proof-reader is there to help with spelling and punctuation only, whilst the teacher will read for content and any omissions and commendations given.

Children at this stage enjoy recounting stories read and begin to understand criticism as they say what they liked and why. They can be helped to understand the difference between imaginative writing where it is allowable to make anything happen, and on the other hand the great exactness of language needed for science. I heard recently from a young grandmother who had been at The Gatehouse¹² as a child and who reminded me of a demonstration of exact writing. Apparently I said that I wanted to follow instructions as to how to fry an egg. I said that I would do what they said. I held the frying pan and an egg. I asked what I should do first and they said, “Break the egg.” Whereupon I broke it straight away and it broke on the floor (much to their delight!). They realised that their direction wasn’t exact enough!

Conversation is the mark of humanity, and the language part of the school at this age is so important. We should not keep the children silent, listening to a teacher and trapped within a desk and chair. Many children grow up today in cities as an only child of a one-parent family where the parent has to go out to earn. These children need conversation to do with their own understanding and they need the social aspects of life which are often denied to them.

When children have good vocabularies and ease of conversation they enjoy writing. As this develops, they enjoy putting grammar symbols over good authors and then putting them

over their own work. They enjoy making their language make balanced patterns with the symbols. They get to see the different types of writing such as strongly adjectival, descriptive writing, when they see a preponderance of the adjective symbols.

There are so many wonderful reading and writing activities for these children.

Children of this age have a love of words and poetry. They enjoy reciting poetry. Their way of learning long poems is listening or reading many times as a whole and gradually joining in and suddenly they know it all! They don't learn verse by verse as an adult does. They act and recite whole poems such as *Hiawatha* with everyone knowing it all.

They enjoy reciting poetry and often choose a poem that they don't understand completely but they love the sound! My children as babies loved me to recite to them long before they were old enough to understand.

From about the age of eight there is an interest in secret languages that they often make up with their friends. This is the age to introduce materials that allow them to understand and then use for themselves the language of the computer. They enjoy giving instructions to the computer and even writing simple programs.

2.3 The environment and its preparation

So much of the invisible in the world can be shown to open their eyes to science. A card might give directions to secure the stick of a windmill upright onto a radiator. Suddenly the windmill will begin to turn and this 'magic' will give great delight. The card directs them to a cool place to do the same but the windmill doesn't turn. It will be thought about when recounted to people later and suddenly understanding will come without being told. Try it and you will see.

Lonergan says in *Insight*: There is a tension of inquiry which follows inner conditions, and which suddenly results in insight. The insight is the pivot between the concrete and the abstract, and once it has been attained, it passes into the mind.¹³

Perhaps within the environment there is an illustration of

the water cycle. The child with the turning windmill will later see the connection with the weather. This age enjoys keeping a weather chart and from this, frequency charts, bar charts, etc.

Newman speaks about the power of viewing many things at once as a whole and referring them to their place in the universal system, of understanding their respective values and determining their mutual dependence.

The materials should be there but the thought process and choice should be the child's and not the teacher's. It is so tempting to spill out information but the joy goes. Think of Christopher and if the teacher had said, "A ladder against a wall will make a right-angled triangle." There would have been no excitement! Our minds are made to reflect and keep a running commentary of thought, both conscious and subconscious. We need to respect our maker and allow learning and understanding to flourish within each person.

The environment and its preparation is the key to successes of this stage. This is a way of education that believes that the aim of education is to help the individual to understand himself and his environment, to pass examinations that his society thinks important, to enrich the person's life, and also to put something back within the community.

Now within this total education scheme, I believe that materials, suggestions and directives to computer, video film, etc., should be made by students just leaving school. They now give their knowledge and interests to fit the key stages. The materials would be made for key areas within the subjects chosen to be studied at eighteen by these older students. In this way they give back to society something that they have received and do not keep it just for their own exam results and self-gratification. These form the basic choices that fit the national curriculums. Additional material to fit any specific needs are made or purchased by the teacher.

It is very important that whatever is within a senior school examination syllabus is matched by corresponding sensorial material within the nursery. Such material can be in very simple form: e.g. wind currents can be seen sensorially with the help of a bowl of water and a straw to blow through. What is important is that all the later abstract theory is given by practical experience in

those early years.

Stimulus lectures are one of the most important aspects of school life for this age range. Get the great people who are in love with their subjects to give a talk to children of this age and to open their eyes to the romance of the subject. For Physics we did this at The Gatehouse with Buckminster Fuller, the great American scientist. Buckminster Fuller talked about 'Spaceship Earth' and thrilled the children because he loved his subject so much. He wrote of his impressions of the way the children were so interested. Having seen them working of their own volition, he wrote of The Gatehouse that it was so thoroughly conceived and created, that it allowed the children to do their own learning while avoiding (1) their being shorn of their innate sensitivities, (2) being deprived of their innate genius, (3) having their spontaneous trust betrayed.

The materials on the subjects are provided by the senior students in the month before they leave. The teacher adds visits, videos, programs and books that add to the interest and knowledge of the children.

We should listen to the children's conversation following their reading and work, for we can learn a great deal. John Rickard the mathematician was given the lives of the great mathematicians. I remember it was a paperback Penguin book. His reply when asked what he thought of it was that all of them went to bed ill for a while and this was, he thought, to give them time to think. He was probably right! How much time in any of our schooling and home life gives 'time to think'?

All understanding is of course really individual but it is helped by more questioning and conversation. There are many times for group activities and one very much appreciated by this age group is the school shop.

2.4 The school shop

We try to help the young persons to enjoy their environment, to appreciate the wonder, beauty and awe of Creation, and to give them the knowledge that will help them to develop and play their part within their society.

The future environmental issue for most of the world will be the governing of water, because of global warming leading to flooding in some parts, and lack of rain leading to lack of water in other parts. The governing of water must therefore play a major part in understanding at each level. The major foundations for this are within the 6 to 12 materials and will incorporate scale models of local rivers and will involve mathematics as well as science, especially geology. There is also a great need for the young person to know a little of how money works and to have some practical experience within a safe environment. As we also need to encourage care for their environment, these two aspects may be brought together through their own shop.

The shop is managed mainly by the young people themselves and should sell things that they would like to purchase. However purchases may only be made with the school currency which may be acquired by earning.

The learning and leisure environment are places where there are always jobs needing to be done. These may include mending learning materials, checking lost and found items and storing where necessary; sorting out cutlery, tidying shelves. The tasks should be listed and a detailed assessment given in writing of what is required for the job to be successfully completed together with helpful suggestions. These jobs are listed and priced in the school currency so that children may ask to be given some particular task.

The actual money is the result of design and crafting within the school. There are also credit cards that may be issued and used with a set rate of interest. The school bank issues these and accounts are kept by designated students who serve on a rota basis. The bank is run by school committees who do all the financial workings.

Painting, cleaning, repairing, planting, etc. are all jobs needed within their environment and may be undertaken at the rates shown; harder or less pleasant jobs are paid more. When painting and cleaning are undertaken by the young people themselves, they take great care not to spoil it or let anyone else spoil it!

People may also make things for sale besides the stock purchased: needle craft, knitted garments, toys, pottery, art work,

lemonade, cakes, home-made sweets, etc. may all be sold. A set amount of ordinary currency may also be exchanged at the school bank at a set rate of exchange.

Just as the place of leisure or learning should be run mainly by the students themselves so should the running of the shop, the stock-taking, the purchasing. Obviously there must always be someone from whom advice may be obtained when wished and a final ruling made when in rare cases one is obviously needed. However the main running should take students through many aspects of commercial life.

Students who perhaps find Maths not interesting from text books often become passionately interested when it has application that they themselves encounter. To price objects requires them to add on a percentage onto the selling price over the purchase price. The profits are spent on their own suggestions for further items to be sold. Stock purchases are made by themselves and they become adept at finding the cheapest places to purchase and how to drive a bargain. When my own school students and their parents painted walls they managed to get the paint given by the makers! It is much more satisfying for them to run the discipline and general rules of common sense by meetings and general consensus and voting. Misdemeanours are best dealt with by the miscreants choosing their own penalty. Here a member of staff may be needed to suggest a lighter penalty, as often those chosen by the miscreants are too heavy or too negative towards themselves instead of involving a positive aspect of themselves. The aim should always be affirmation for the person and the future.

When we read of the appalling conditions found by inspectors in our young offenders' places of correction, it is so obvious that if the management were placed within self-governing groups, the conditions would be very much improved. Instead the suggestion is to put out to tender as private institutions.

There should be much more trust in young people's own councils. We need to do away with this 'Nanny Society.'

2.5 Examinations

Another thing that is needed is for all stages of development to have a complete change in examinations.

Having made tests always available in all subjects at any time for anyone, I found that pupils enjoyed them and often although having very good marks would ask to do the same level test again to get even higher marks! I saw a complete change in attitude to exams when they could be taken at any time. I also found that they were chosen when the person could pass. What is the point of taking it before the work is known? I also found that the age standards were not important. Often a younger child would be ready and take a higher test. The interest, as there was no general date set for everyone regardless of readiness, was in their own achievement.

Having seen this I believe that there should be ACHIEVEMENT CENTRES where anyone in ANY subject can take a test or an exam. These centres should be open for adults as well so that a man might want to start Latin and then be ready for that level in that subject. All types of subjects should be available. The possibility of computers being able to bring up random questions at each level makes this possible.

Achievement Centres would mean that the terrible date pressure of our present exam system would be avoided and the self-esteem of people would be helped. I believe that they would be a great benefit to the community as a whole.

2.6 Character and personality

All of these activities seek to feed the natural stages of development for this newly fast developing child at the latter end of this stage, that is from 9 to 12 years.

In all that we do we seek to affirm this child who is at such a wonderful stage of emergence as a unique personality. The character is becoming more pronounced. It is very helpful at this stage to show that the main attributes of the character carry certain talents that should be used within their environment.

I think that the main divisions used by the ancients are useful here. We should tell the child to pick out the character traits that most describe his own personality. There will probably be more than one that seems to fit but it is the dominant one that friends would choose as well to fit him. The children should understand that these are just positive traits, and that each one is endowed his own unique character, no one else can supply just these attributes. He is needed in the world to play his unique part. That is why we are each here.

The categories to choose from are:

1. principled and orderly
2. caring and generous
3. self-assured and enjoying competition
4. creative and intuitive
5. perceptive and analytic
6. likable and dutiful
7. accomplished and impulsive
8. self-confident and a leader
9. peaceful and reassuring

All of these character traits when recognised by the child as belonging to him need to be put to good use by the child with the help of the teacher.

The nature of the child is to question, to understand, to reflect, to worship, to dance, to sing, to make music, to paint, to act, to move, to use or make some form of technology, to be creative, to enjoy using language, to form relationships and above all to love.

We have to supply the possibility for all of these and show our loving approval for their own uniqueness where in its depth God is.

What an awesome privilege!

2.7 The development of true values

Up to the age of six, the young child is absorbing his whole environment and in a good environment, he gets to know love. We

can help him to learn the love of God through the sacraments and through helping him to know the life and parables of Our Lord. Everyone has to feel loved in order to be able to give love, and so this is a very important stage for the understanding of love and the love of God.

As the child blossoms he gets a recognition of kindness and truth, and as he is introduced to beauty within nature and in man's achievements, he experiences goodness and wonder around him.

Now as he approaches the age of reason his attention goes wider than his immediate family. He mixes and plays in a wider environment. He sees the actions of friends and grownups in the other wider world and he begins to wonder and question his own and people's actions. This is the stage for our help by discussion of true values, by giving the stories of lives of heroism, lives of the saints, the stories of Jesus in the parables. This is the stage above all to get to know Jesus as a friend by talking to him in prayer. This is a natural development following the experience and greater understanding of the Mass.

When the child is six years old he is sensitive to morality. He often comes and tells you when he sees something done by another child that he now thinks is wrong. He comes and tells you to see your reaction. When he tells of someone's wrongdoing it is really a question, "This is wrong, I think it's wrong but I shall have to ask you to see if you are angry or horrified."

We should therefore always confirm if the action is wrong, but now is the time to do three things:

1. Show what you think and affirm him.
2. Where possible get him to go to see if he can put matters right. (Do not rush off to punish as a result of his telling!)
3. Show the difference between hating the sin and loving the sinner.

Now that he has grown to know and love Our Lord and has a personal relationship with him, he needs instruction in the commandments of Our Lord:

To love God with all our heart, mind, soul, and strength.
To love our neighbour as ourself.

We need not to leave out that last part. We should always be careful to help the child to hold his own uniqueness with real self-esteem as he as a unique person is loved and wanted by God.

It is salutary if we examine our own conscience on each item and then help the child to examine his. Help the child to develop the right attitude, which is the safeguard against sin. This is best done by positive rather than negative examination. At night or whenever seems appropriate, look together at events when he showed love in each of its different forms, and rejoice together each time. Go through each item of Jesus' commandments and look for confirmation through action.

Everyone has a continual flowing of reflective thought and this blossoms at this age, at about six. This means that the child uses an inner judgement to bring out the times when he achieved an action that exemplified our Lord's commandments.

When his own reflective judgment brings out the fact of a negation of love, then this is the time to teach him to ask forgiveness. He must of course know what forgiveness really means and that the greatest love and forgiveness is what Christ showed us in the parable of the Prodigal Son.

When he makes his own reflective judgement in bringing out good actions, he will have an inner sense of when there has been a negation of love.

It is this inner reflectiveness that we should seek to develop by accentuating the good. In this way the person is affirmed and will be able to see the basis for his actions by his own reflection and not by external pressure. When he expresses consciously a weakness, then is the time for the help of Confession. For it comes naturally through this inner reflection that is given by God.

The First Communion may well have come before this or it may come together with Confession.

The important thing is now to let a natural examination come from the spotlighting of the good. The inborn questioning and inborn reflectiveness will bring about then the times that cannot

be rejoiced about, because the good cannot be found without inward rejection of the negative.

When the child is ready for Confession, the Priest will help the development of a new ATTITUDE to help him avoid the continuance of habitual sin. He will have the knowledge of being able to start again with a clean sheet and the penance, usually a short prayer, will fill the child with relief and love, knowing that he can start again now with added help as he will have the willingness to act with true values from a base of love.

2.8 Sex education

Tiny children accept the world around them. They have an inborn absorbent mind that makes them absorb the culture and environment around them in its totality.

Within nature they see natural mating in birds and animals around them. It is just part of the general scene that is normal. I do not believe in 'sex education' as such. I believe that later the going into the wonder of love and relationships and the biology of the body should be given but never 'sex' as a disintegrated function from life as a whole.

Young children should have videos and films of the world so that they know of the ice caps and volcanoes and rain forests and deserts. They will see nature films and all the natural mating procedures and when given them in the context of the whole, they just accept as they do everything else around them during this natural age of absorption of everything from their birth to the age of six, when there is a new stage of development.

Most of the children see films nowadays with sexual scenes that are often quite explicit but not often loving in a peaceful happy way of continuous family life. The sex acts are often very fast and quite violent, whereas a truly loving sex act is tender.

Rather than a silence about human intimacy and then snippets from films and 'sex education' at adolescence when hormones are rushing around, I would educate in an integrated way.

First I would include within a nature film, as a natural part,

a tender loving true scene of sexual intimacy and the carrying of a baby and then the birth. This would be in the middle of a nature film with the wonders of the world, so that it comes as part of the natural whole of creation. I would not accentuate it by giving it as an unrelated part of the world. The child will accept it as all other natural acts. In this way the children would have the true facts of all of nature surrounding them.

During the 7 to 12 stage the child in a Montessori school works with teaching materials in History, Maths, English, Biology, Chemistry, Physics, Languages, Art, Music, etc. In fact they learn the fundamentals of many subjects but always they are related to the whole and not given as watertight subjects. There are not separate subjects really, as everything in the world is related and not in isolation.

Now the children will know the biological make up of the body systems. They will know the diagrams of these as intellectual exercises because they bear little resemblance to the feelings of one's own body, but are important to know for the understanding of the whole.

3. The 12-18 Phase

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.
- T.S.Elliot, *Little Gidding*

These lines are so applicable to this stage of 12,13, 14, and 15, 16, and 17 years. This stage is so very different, but it relies for its basis on the 6 to 12 age group, where children begin to understand their own uniqueness and get to know and to use the talents that their type of character brings with it.

During the 6 to 12 stage the young are interested in the physical properties of the world and how things work. In this way they are adjusting to a worldview of the nature of things, and whilst they are coming to understand themselves, they are also adjusting to an overall view of the world, its properties and systems.

Now at puberty everything changes. Their attention is directed towards people, particularly their friends and their relationships. During the first three years, 12, 13 and 14, they are unsure of their bodies and the strangeness of their new emotions, and they are very vulnerable. The stage from 12 to 18 divides clearly into developmental stages of three years each, both physically and psychologically.

The great inner need of this age group is to belong to the social group, yet to do this they have to be at ease and belong to themselves through acknowledging their uniqueness and valuing its creation. At this stage of relationships, they often develop a relationship to the creator as well as finding the value of ordinary relationships (although there is no 'ordinary relationship' really as each is so unique).

A bond of affection is felt now towards other living things, especially towards animals. Girls here often develop a love of horses and their welfare. However the boys instead of horses develop a fascination for engine power!

Writing about the activities of the age groups is very hard as all life is not a single continuous stream but is lived at very different levels all at the same time, yet when writing it has to be put as a single stream. It should therefore be remembered that many of the things mentioned happen at the same time. People are not predictable in their choices or needs; however we all have general stages of development, whether a poor Inner City child in Europe or a rich Indian child in a town in India. Muslim, Hindu, Jew, Buddhist, Christian, or of whatever religion, we all have the same inner developmental needs that have to be recognised within education and used to produce harmony within each person.

The publication of the human genome research has shown a relatively small number of gene differences between mice and us. This shows how important the environment is for our development. During this last generation we have not seen very clearly the real needs of our young people. In nearly all schools the 12-15 age group is found to be difficult, and in England the Inspector of Schools said recently that he was noting that this age group is generally noted to be badly behaved. The accent of education has

been on data learning and memorising for personal gain of certificates. We have kept the young during their growth spurt years sitting for many hours each day for five days a week at desks or tables and chairs of the same height often regardless of these physical changes. We have pressed so much fact learning into them and then expected them in examinations to regurgitate it on a set day at a set time regardless of for instance the new discomfort of menstruation, etc. We have made some people sit for exams when they would almost certainly fail and have left them feeling inadequate at the time when it is so important to be affirmed. It has been impossible for our children to play safely alone in the parks or on the streets with their young friends. It has been a time of enormous restriction for the young in this country and we have pressurised them to such an extent that thousands in the UK truant! When they gain certificates and high grades we encourage the feeling of self-glorification for achieving the certificate rather than the work!

When we follow the development of the nature of humanity the individual will discover his potential and he will value his actual understanding and will be pleased to use that learning for the benefit of others. Not long ago I read something that I found humorously indicative of our education in England (and which we exported with the best intention, all over the world). This was a parody on an imaginary present day scene of the Sermon on the Mount. This is the important sermon given by Jesus Christ teaching the crowds and his disciples. It can be found in St. Matthew's Gospel, chapter 5, and is known generally as the Sermon on the Mount and the disciples are being taught the most important values to live by. I wrote this parody down when I was in America but failed to find who wrote it. I think that it is a very clever parody on dominant concerns within our education system today. The Sermon on the Mount is given and is then followed by these remarks:

Simon Peter: Will this count for the exam?

Andrew: Are you giving us a test on it?

James: When do we have to know it by?

Philip: How many words does it have to have?

Bartholomew: Will I have to talk about it in front of the others?

John: Does everyone have to learn this?

Matthew: How many points towards our results will we get for this?

Judas: What is it worth?

Then one of the Pharisees asked to see the Lesson Plan and demanded to know what were Christ's terminal objectives in the cognitive domain!

This is very amusing and witty. However after enjoying it, if we begin to think about it, it becomes very sad, for it brings home to us how within our last decades education has become lost within these parameters and how learning is often not valued for its own sake.

Now begin the decades when hopefully we will value understanding more than external learning. The university dons have often protested that students have learnt to answer examination questions well but without having understood the principles behind the results and data and yet they gained high grades.

Bernard Lonergan in his wonderful (but unfortunately in some places very difficult to read) book *Insight* says, "The awareness ... is the awareness of intelligence, of what strives to understand, of what is satisfied by understanding, of what formulates the understood, not as a schoolboy repeating by rote a definition, but as one that defines because he grasps why the definition hits things off."¹⁴

3.1 Relationships

In this third stage of development, children who have followed the inner needs of development will be academically advanced. In the second stage they sought to know and were helped to acquire information and understanding of their world environment. Now with puberty the students' interests are very different. Now it is relationships that count and they seek more understanding of their own personality and physical well being, together with a real wish to know how their society works that they may feel and be part of it.

Children often become cross with their parents because they are not so aware of the emergence of a very different personality from the previous stage. Worry often makes the parent pry and invade the young person's new sought after privacy.

At early adolescence thinking upon such things as 'Freedom' is usual because it relates to their changing needs and their exploration of what it is that they are seeking. Here is a poem written by a girl at the very early stages of adolescence just before twelve years:

FREEDOM

By Gabrielle Orcutt.

It is the way that wolves roam,
No one to stop them.
It is the wind through the pine trees,
Never held back.
It is the waves in the ocean,
That seem never ending.
It is the soaring birds,
For the sky cannot stop them.

It is to speak your own language,
With no one complaining.
It is to have your own thoughts,
For a thought is your own.
It is to sing and to dance,
And no one will stop you.
It is to run with the wind,
As free as a song.

It is an old virgin forest,
No trees are cut down.
It is a land with no people,
As pure as love.
It is a small country road,
That goes onwards and onwards.
This is to know freedom
Or you are not free.

The second verse especially speaks with this new sense of self:

It is to have your own thoughts,
For a thought is your own.

The psychology shown in the poem is the psychology of the beginning adolescent with the changes of the body and the new longings that come with the glandular changes.

The early rules of family that were taken unquestioningly are now found irksome, hence the thoughts on 'What is Freedom.'

The realisation now that the thoughts are not necessarily the same as the people who are responsible for the upbringing and the constant direction is now found very irksome.

It is to speak your own language,
With no one complaining.

There is the realisation of being an individual and consequently gradually of accountability.

It is to have your own thoughts,
For a thought is your own.

The adolescent has a longing for perfect love. There is the gradual realisation that however much one hopes for it, human love is never perfect even if it is very deep.

It is a land of no people
As pure as love.

Now is the obvious time to let them feel in every possible way the perfect love of God. This is the age for a real relationship for a Christian with Christ and a wonderful way is to explore the uniqueness that God created within themselves. They are someone completely new who was made because they were loved in their very essence and that is nowhere to be found anywhere else on earth and that no one therefore can play their part that is there only for them. They have a vital part to play in God's plan for His

continuous creation.

3.2 Self-mediation

It is important at this stage to begin to help all the students to understand their actions. It is now that the former growth in the values of truth, use of intelligence, and a reflective reasonableness are going to be needed.

With self-mediation as described by the philosopher Lonergan, the young persons who obviously are concerned now with values, should be encouraged to look at an action of theirs as if it is quite independent and just an action. They should then see what is the value that is with the act. It is often a shock to see the action as a subject of its own. The goal is to know and to recognise the operating structure of our way of knowing. As we learn to do this, as we become aware of our actual procedures that are part of our actions, we become both subject and object. As this activity of knowing is realised rather than the content, ideas can be seen and corrected because questioning and understanding will be there and then judgment becomes very clear.

During the first stage of development from birth to six, the child absorbed the traditions, the actions of the parents, and the surrounding environment, and made them his own. Now the young person is becoming an adult within a different epoch with differing morality around and different possibilities through advance in science. This present stage is the stage where gradual understanding of actions and prejudices may be explored and acted upon by rejection or affirmation. It is each person's development that makes them no longer a prisoner of their parent's past, but a new individual with a task to do within the world.

In the first stage I showed through the anecdote about Christopher how to see the various stages of cognition and ever-expanding understanding. I would like to show how during the next three years (13, 14, 15) the students may be helped to understand and recognise these stages within themselves. Then in the following three years (16, 17 18), they would be greatly helped to discard false actions and attitudes grown by habit and to recognise

actions for the help of themselves and society based on truth. During the 13-15 years we could help by encouraging the posing and answering for themselves of these three questions:

1. What am I doing when I am knowing? (cognitive theory)
2. Why is doing that, knowing? (epistemology)
3. What do I know when I do that? (metaphysics, or understanding how that understanding, through conscious and subconscious reflection, has unlimited expansion and links to make a united whole within their known world).¹⁵

The cognitive stages of knowing can then be used for devising learning play materials of key stages for the younger age group.

During the 16-18 years they will be helped to SELF-APPROPRIATION by going further into the realm of metaphysics, ethics and transcendent knowledge. This is the stage to help acquire the possibility of self-transcendence. For this will be required: attentiveness to what they are exploring within themselves, intelligence, and reasonableness. They will have to be clear about their starting point, their direction and their values. They will learn with help and friendship to be attentive to what they are experiencing; they will be intelligent in their understanding and recognise direct insights and see formulations, they will look at the cultural values and be reasonable in their judgment; as questions present themselves for reflection there will be more insights, and then facts will be looked at and judged; decisions will be presented as to how to proceed, then the values will present themselves for deliberation and judgment. When the questioner is satisfied then the decision is acted upon and the subject is aware of the loving respect which their action carries through and there is a feeling of a link with creation and creator.

They will become aware of why they have picked certain areas rather than others; why they ask certain questions and not others, and they will become aware of the distinction between their activities (suggested by society or within their own minds), and the real content within these actions. This is so important because this is the stage of idealism and the possibilities of the ideals being

allied to perhaps something like Hitler Youth. We want in this way to teach them the richness of what it is to be truly human: to teach each to foster attentiveness to their actions, to use their intelligence, to reflect, and in the light of discovery of what seems to be true, to judge; and then when the certainty comes, to act with real responsibility in action that is based on true authentic values, with the resultant contentment.

This type of self-questioning and then self-transcendence, rising above our habitual actions to find the truth from which they spring, will heighten our real love of God but will trim away some of our actions from the time of the absorbent mind stage when we discover that they are no longer actions springing from a real truth. It was inherited action with the reality no longer present behind it.

In *Insight*, Lonergan warns of the types of avoidance that we may use as a way of escape to save us from changing to an action with love and respect. The first and most common form of escape is avoidance of self-consciousness. We try to give the explanation of character in terms of ancestry and environment. The second is inconsistency between knowing and doing. (We so often talk about ‘extenuating circumstances’!) The third most common way of escape is when we deceive ourselves by rationalising. We confess but we say within ourselves that there is no hope of it really being possible to mend our ways.¹⁶

As our seeking adolescent understands through questioning, judging, and acting on this judgment with common sense, then he/she will feel that wonderful perfect love and will become part of the ‘Universal Viewpoint’ of Creation. This will affirm the blossoming personality of the young person and they will know Love of our Creator for themselves. In his book *Quest for Self Knowledge*, Joseph Flanagan, SJ speaks of this love very movingly:

“Love affects the whole person, mind and heart (intellect and will), immanently and transcendently. Just as love discloses and reveals the goodness and dignity of another person’s whole being. So you in turn love that person in and through your whole being. But when the beloved is love itself and infinitely valuable, then that love may be absolute, unlimited and the ground for all

other limited forms of love. Therefore such love may form the basic motive and direction for other lesser loves. It transvalues all other values and provides a people with motives for carrying out the personal and communal goals that are deemed to be truly worthwhile."¹⁷

What a wonderful gift to give the young person as he comes through his adolescent stage of self-discovery!

3.3 Activities

Here is the general scheme for this age group before elaborating in more detail.

For the first three years (12,13 and 14) the students should have activities that do not require them to be continually within desk and chair but enable them to move about and get used to their developing body and its new size.

Art, handicraft, music, drama, literature, biographies, discussions, hero worship, will sublimate these new hormonal mood changes.

In the first three years during these changes the males and females need to have space away from each other.

Separately, each will learn more about their bodies and their care, nutrition, etc. They need to see videos of births and breast-feeding and have discussions following lectures by believers in the various very different types of childbirth.

This age group values opportunities for visits to places where people who are mentally or physically challenged receive care. The 14-year-olds should be able to choose some hours of apprenticeship. There should be a wide choice such as carpentry, decorating, dressmaking, pottery, and any subjects that are useful in home making and repairs. When apprenticeships were common when I was young, the skilled workers liked to have pupils at this age as they found them eager to learn. They found that at age 16 the personality of the pupil was more dominant and he was not so eager to be shown but more generally thought that he already could do it!

It is a very different inborn stage and needs to be acknowledged by giving different opportunities.

This age group should have mobile classrooms for demonstrations and hands-on activities done on set topics and arranged by the Universities. Examples:

Showing the different colours of soils, caused by iron and organic matter.

Measuring particle sizes of sand, silt, and clay.

Seeing a textural triangle and organisation of the 12 different classes.

Feeling the different textures and placing them in named categories.

Being shown how to use key identifying characteristics.

Being shown the four major components of soil and how to work out percentages.

Being shown how to judge soil to raise food.

Seeing food problems of other countries and indicating alternatives or helpful additions for agriculture.

This mobile classroom would be prepared by university students of agronomy and would be manned by students who display their own enthusiasm that made them choose that subject. The outcome will be to make all the surroundings more interesting and understandable.

The mobile classroom would go around to schools and then the project would be changed to one from a different discipline, perhaps a particularly interesting maths project.

It is a way for university students to follow through a project and give it back in key steps within a younger age group.

As the main interests of the 12-18 age group are people, history should be biographical together with human geography and archaeology. All subjects should be done in relation to their own lives:

Law: domestic, traffic, civil courts, criminal courts, courts of appeal, etc.

Maths through their own budgets.

Imaginary budgets, e.g. the budgets of landowners.

Budgeting of homes, mortgages, upkeep, repairs, and safeguards.
Budgeting and debt; the best ways of handling debt.
Personal money and savings, other ways.
Stocks and shares, etc.
Gambling and probability.
District finance.
The country's finance.
Ways of income and spending income.
Cost of war and defence.
International debt, international rescue.

The age group from 12 to 18 is one where the main interest is in friendships. These young people naturally find that the family no longer meets their needs. They now enjoy being together in a group of like-minded people. Communication means a great deal to them, as parents know who pay telephone bills where there are teenagers. They create their own vocabulary, and wear distinctive clothes and hairstyles and decoration common to their chosen group.

This is also the age for excitement, teasing and adventure. In a primitive society this is the age for initiation into the art of hunting. These same inclinations are there in young males and need to be sublimated. At present many young fellows on industrial housing estates have little legitimate possibilities for excitement. Many on these estates at this age joyride in stolen cars. They get a buzz by escaping the police. In cities where there are parks, they are not allowed to climb the trees or even to jump up catching hold of branches. In the UK now, it is a very 'nanny' society: everyone is anxious not to be sued when they are in charge of young people. Even traditional playground games are now often banned. We have now got to really think about how to give legitimate excitement for these ages. For these are the young males so often seen on our television screens, throwing stones at an opposing group and filling our corrective institutions.

Communal activities are loved at this age. They enjoy having a campfire together at night, sitting round and singing. With new physical development, the new emotions need a number of outlets. Shouting and singing brings great relief and songs and poetry learnt now will remain in their memory throughout their

lives. Sexual expression is also obtained through communal dancing. They get used to the new sizes of their bodies and learn to govern their limbs. They enjoy traditional dances as well as new ones.

Often the music for the dances is performed by a band produced by themselves. Music making in all its forms is a great delight. Each generation produces their own signature within their music.

Another way that emotion finds legitimate release at this stage is through art appreciation and also the execution of art by themselves. Again there is a recognisable signature that comes through for each generation. This is an indication of how important it is emotionally.

Drama allows young people to express their emotions and to role-play with the opposite sex. It is useful sometimes to have them act certain situations without presenting them with a script, allowing them to make up their own words.

Another useful activity is to encourage mime. This encourages expression through the whole body. The great Shakespeare tragedies are a wonderful source for seeing how the sins of one person can cause tragedy for others. The great myths are the nightmares and dreams of former generations. They give expression of the great emotions and hopes and dreams of each successive generation as they are the emotions common to all humanity in every generation. It is said that all novels really carry the same themes under different descriptions. In this way they sublimate our deep emotions. Poems have a way of being able to express great aspirations. The highest religious thought often finds this way of poetry the nearest that language can get to what it wishes to convey. There is a general need now to discuss and to express different aspects of their religion in ordinary language and this is what theology does, and so it is of great importance now.

The awe of God is experienced through great landscapes. The power of God and His creation is felt through the power of great waterfalls, vast canyons, high mountains, great dams and the awesome silence of deep caves. All this leads naturally to quiet and meditation. Now in this time of bonding relationships is the

time that a real relationship comes together with the person and God whom he now begins to feel deeply. This is so within everyone and can be fostered by books about prayer and the lives of great saints, but this is the time for real experience.

This is a natural stage for care of animals and to enjoy contact with the soil and plant growth.

This is also the stage for emotion with actions. Now at this age it is often most frequently shown by compassion or sadism. Much depends on what is presented within the environment at this time. If on television and in films we show much sadism, then that becomes the norm. To foster compassion it is very helpful at this time to allow the young people to help the disadvantaged both physically and mentally. When young people get to know these people as personalities, they overcome their initial recoil or fear. It can be very rewarding not only to the afflicted but also to the helper.

We can see how wonderful it is to have the companionship of young people of this age and to be able to help their unique personalities to blossom. What an awesome privilege!

3.4 Sexuality

Young people at adolescence have glands working that make them have very varied emotions. They find themselves very different and feel the changes in their character from when they were much younger. They are not yet mature and need ways therefore to legitimately express these new emotions.

The age considered for maturity is very different in different countries. In Western countries the general age for marriage is much later than in some Eastern countries. During that time before having full sexual maturity and having to wait before having a partner in marriage, these emotions and drives need to have means of sublimation. Poetry, literature, art, drama, music, singing, dancing, debating, sport, are all very much needed as outlets at this stage.

In order to have discipline over oneself there is need to know the self. This is why it is helpful to the person concerned to see the general main types of character, each with its own talents. The person is more fulfilled when using these talents.

At this stage the young person is beginning to feel rather apart from the adult generation and the parents who often are also unsure of this new young personality. It is at this stage that it is very useful to introduce the young person to the way of self-mediation. This helps each to find what actions they have inherited that are very important and those that are not helping towards a harmonious and developing society.

When the young person is developing in this way, he is very sensitive to developing morality. This is the important time for realisation of the sanctity of life.

For myself this was brought home to me when I was young and was probably being rather obnoxious, when I was told by my mother that she had tried to abort me. I therefore realise that each embryo has a part to play within the world!

4. The 18-24 Phase

In the previous stages we saw that sensitivity to time was very different at each stage and plays a very important part in development. The children at the 0-6 stage are always very sensitive to the present so that they absorb the culture and traditions, and the traditions and the language become part of themselves.

The 6-12 stage has a sensitivity to time, past as well as present, and this makes the individual seek out the nature of the earth and how it works. They seek to know about their environment and about cause and effect.

The 12-18 age group, like the very young, are very sensitive to the present, but now the sensitivity is directed towards people and their own relationships with their peers and others. This is the dominant feature of this age. They seek to understand more now their own identity and they need to know how their society works so that they feel part of it.

Now in the 18-24 stage their sensitivity to time alters in two ways. First of all their interest and values are directed towards the future. This is the inborn stage for idealism. We can see throughout history that many are prepared even to die for their ideals. They seek to know about topics that concern their future

life and also now they are increasingly interested in space and their universe.

At this stage Time itself creates interest. They begin to see that time and space are connected and they begin to understand that time is not regular and clock-like as they used to think. They begin to understand that time can alter in space and go more quickly or more slowly and that time alters yet again according to the distance away from the pull and strength of the gravity of their own or other planets.

This age group will feel the importance of this understanding even more, for this new generation anticipates that the new field of travel probable within their lifetime will be space travel. When thinking of time I personally I find it reassuring that the one constant physical thing is the speed of light, because the speed of light always remains the same! What a wonderful creation! It is our duty to convey the wonder and the beauty and also the awe of the universe that we all are living within.

Everyone should also be helped to see the wonder of real mathematics. This is not just computation but it is an international language that can know about the possibilities of things before they are physically discovered! It has shown now that there is a great mass out there that has become known by mathematics but that we don't yet know the reality of what it is physically like. Scientists call it 'dark matter.'

There is so much that is waiting for them to discover, and which will be a help to the next stage from twenty-four to thirty. This is the age of daring and exploration of new territory, whether at home, in business or on land or sea and also now in space exploration. So how is our education taking all this into account? In England we have encouraged as many young adults as possible to go on to the universities. Modern life depends very much on educational skills and so this is a very good thing for many young people. However it has changed the universities and they are now more an extension of education similar to school except without the pressure on attendance and more freedom from discipline. Something more is now needed. We need now to have a place of academic excellence that is revered and used internationally and

where only the very highest academic work is done.

In the Middle Ages the University of Bologna was renowned for being a centre of very high academic research and it was revered throughout Europe. The coats of arms of each country whose students attended were (Montessori says in “The Functions of the University”) put up on the walls.

There is now a need for such a special place of international excellence for the most academic students from many countries, where students may study with great intensity, being passionate about the treasures of knowledge. Such a place would become a centre of culture for the students to propagate the new knowledge and would be an important central instrument of progress and civilisation. Because of the previous experiences and the previous stage of self-mediation as described by Lonergan, there would now be the stage of mutual self-mediation. As a result this would be the centre for propagating true values and a universal viewpoint of respect and care for all creation.

Lonergan says in *Insight* that we become part of the Universal Viewpoint and part of the intended order of the universe because we are then making judgments and decisions with this higher collaboration.

The various research disciplines would all take part in philosophical debate. They would know their own true value and identity. This would enable them to assume attitudes and ideals, working towards this universal viewpoint.

Before considering the vocational universities for architects, lawyers, teachers, etc., we must remember that some students leave school at sixteen. They will have been helped to achieve self-mediation and to know how their own society works. They will be ready to take their place within their society at that age and have a part to play. Their basic inner needs and development are similar although not so academic, and we should care equally for this age group. At present the young men of this age have the inner need for excitement and daring. These young men may be seen on the television in many different countries throwing stones and sometimes petrol bombs. Their bodies are now racing with testosterone and they are easily whipped up to be part of an

aggressive mob. The idealism is there but is misplaced and they seek to achieve by ignoring respect for the individual. Once given a collective generic term it is easy to forget the individual and then atrocities occur. This age group who have left education need to be incorporated into society and to be encouraged to debate and if possible to have national competitive debates.

This is the stage where if they had been primitive men they would have been hunting. Today in our 'nanny society' they are bored. They need some possibility within society to sublimate this need for excitement and danger.

Others go to the universities where there are often excellent degree vocational courses such as architecture, law, the sciences, etc. However we tend to place subjects into watertight compartments, whereas everything in life is really linked.

Newman says that we should enlarge the range of studies so that a clear apprehension of the great outlines of knowledge is obtained: its principles, the scale of its parts, its lights and shades, its great points and its little. This produces a philosophical habit of mind, whose attitudes are freedom, equitableness, calmness, moderation and wisdom.

At present the student has to overload his mind in preparation for examinations and he is given too much knowledge to handle with understanding and not enough time to reflect and to see its connections with other areas of knowledge. This accumulation of data tends to see the end of learning as acquirement rather than thought and reason exercised upon knowledge that is understood rather than learned by rote for self-aggrandisement.

Cardinal Newman in *The Idea of a University* says that the end of intellectual training is not learning or acquirement but rather thought or reason exercised upon knowledge.¹⁸

Add to this what Lonergan says:

"They have to put whatever they are told into their own mode of apprehension or they do not apprehend at all. They can make slight adaptations to what they already know, but they cannot make a total transformation of their own minds."¹⁹

True understanding by each person at their own pace is necessary, and it must relate to their own experience in their lives, both past and present, to bear fruit. Each preceding phase prepares the one that follows, for to be at peace with his own identity, man must be a unity of all stages as one continuous whole.

All the time each person is coming into contact and relationships with others, and mutual self-mediation marks this stage. People are becoming themselves, as Lonergan says, not just by experiences, insights, judgments, choices, decisions, conversions, not just freely and deliberately, not just deeply and strongly, but as one who is carried along.²⁰

It is up to all disciplines to see that the environment provides scope for the different types of intelligences that are now generally accepted:

linguistic
 visual spatial
 logical mathematical
 musical
 bodily kinesthetic
 social
 intuitive

Most universities provide scope for all of these through their many activities. This provides rich ground for the continuation of mutual self-mediation described by Bernard Lonergan. "It is not a matter of study of oneself or analysis of oneself," he says, "It is a living, a developing, a growing, in which one element is gradually added to another and a new whole emerges."²¹ And again: "In this process, which is universal, which can regard every act, thought, word, deed, and omission, there is a complete universality, a possibility of the complete growth of every aspect of the person."²² It is self-mediation through others and the others are we and all men.²³

To gain an insight into other people's cultures I suggest that during the second year, six months are spent at the feet of someone in another country and known to be learned in the same subject. This could be on an exchange basis. This should be for

extending knowledge and experience within their own chosen subject and also to experience new life styles and cultures. The student would become more certain of the special field that he would like to study and submit for examination. The next six months would be devoted to this project and at the end of this research, a mobile classroom should be set up by students to demonstrate one of these projects. This mobile classroom should be taken round to schools by the students. They would go to different schools and demonstrate this more detailed work to students visiting them. About three days might be spent at each school, inspiring and widening pupils' interests. In this way society benefits from the learning.

Whilst answering questions, because of an ever-expanding consciousness new questions will present themselves to the university student and he will be able to research these during the final months of the course. Fr. Joseph Flanagan says in his book *Quest for Self Knowledge*: "Truly authentic knowers are continuously struggling knowers, always on the alert for further questions that will advance their accumulative knowledge or reverse their mistaken assumptions and judgments."²⁴ Montessori says: "Every contribution able to bring out the latent power of love and to throw light on love itself, should be welcomed with avidity and considered of paramount importance."

How might we have the courage to change our places of study, so that they be linked to places promoting true values and a universal viewpoint?

Home schooling has shown that school buildings are not always needed but leisure centres are needed. These should give individual physical programs for each individual to acquire new skills that are suitable for that person.

Leisure activities should be promoted that will be suitable as people get older or when the weather is too poor for their sport.

Leisure centres should try to provide subjects for learning as requested. Many older people would enjoy coming to learn. There is no age limit for the quest to learn. The ideal is to make the learning able to go very fast or very slow or in between according to the need. Computer software easily enables this to be a reality. There

should be a cafeteria where friends can meet.

Together with the leisure centres there should be an Achievement Centre where examinations may be available in as many different subjects as possible and at all levels and regardless of age. If I began to learn Japanese I should need the most elementary level possible, whereas a child of Japanese parents living in England but wanting Japanese language skills for exams, would need much more advanced levels than this very aged person. I think that this last century will be looked upon as the age when we kept children imprisoned for many hours each day for most of the week, keeping them immobile for hours. We forgot that movement is a natural part of learning and understanding leads to knowledge being exchanged in conversation and natural discussion.

Unfortunately we exported our system.

Notes

¹ Maria Montessori, *The Absorbent Mind* (New York: Dell, 1982).

² Bernard Lonergan, *Insight: A Study of Human Understanding*, Collected Works of Bernard Lonergan 3, ed. Frederick E. Crowe and Robert M. Doran (Toronto: University of Toronto Press, 1992).

³ J.H. Newman, *The Idea of a University* (Garden City: Doubleday, 1959) 87.

⁴ Maria Montessori, *The 'Erdkinder' and The Functions of the University: The Reform of Education During and After Adolescence* (Battersea: The Maria Montessori Training Organisation, n.d.) 25.

⁵ Lonergan, *Topics in Education: The Cincinnati Lectures of 1959 on the Philosophy of Education*, Collected Works of Bernard Lonergan 10, ed. Robert M. Doran and Frederick E. Crowe (Toronto: University of Toronto Press, 1993) 106.

⁶ Lonergan, *Topics in Education* 174.

⁷ Newman, *The Idea of a University* 127.

⁸ Lonergan, *Method in Theology* (Toronto: University of Toronto Press, 1990) 31.

⁹ Linguistic, visual spatial, logical mathematical, musical, bodily kinesthetic, social, intuitive.

¹⁰ Lonergan, *Topics in Education* 145.

¹¹ Lonergan, *Topics in Education* 145.

¹² *Editor's note*: The Gatehouse Learning Centre is the school founded by Phyllis Wallbank in London. It has the distinction of being the first Montessori school in England.

¹³ Lonergan, *Insight* 28.

¹⁴ Lonergan, *Insight* 346.

¹⁵ The three questions are from Lonergan.

¹⁶ Lonergan, *Insight* 599.

¹⁷ Joseph Flanagan, *Quest for Self-knowledge: An Essay in Lonergan's Philosophy* (Toronto: University of Toronto Press, 1997) 260.

¹⁸ Newman, *The Idea of a University* 149.

¹⁹ Lonergan, "Theology as Christian Phenomenon," *Philosophical and Theological Papers 1958-1964*, *Collected Works of Bernard Lonergan* 6, ed. Robert C. Croken, Frederick E. Crowe, and Robert M. Doran (Toronto: University of Toronto Press, 1996) 254.

²⁰ Lonergan, "The Mediation of Christ in Prayer," *Philosophical and Theological Papers 1958-1964* 180. [*Editor's note*: Lonergan is speaking here of self-mediation through another, where the other is Christ. The 'being carried along' is a reference to grace.]

²¹ Lonergan, "The Mediation of Christ in Prayer" 179.

²² Lonergan, "The Mediation of Christ in Prayer" 180.

²³ Lonergan, "The Mediation of Christ in Prayer" 181.

²⁴ Flanagan 232.

