

LEARNING FROM LONERGAN AT ELEVEN *

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1. Untapped Motivation

The financial success of Rubik's Cube is only one of many proofs of the astounding motivation young children have for learning, and the amount of intellectual energy they are prepared to invest in solving a puzzle. It leads us to ask how successful our teachers have been in harnessing that motivation in education. My pleasant task this evening is to announce to you that the way for this is now wide open.

2. Simplifying a Difficult Innovation

Bernard Lonergan, at the beginning of his book Insight [1], judged it advisable to make an apology: he was starting with an example that some readers might consider too simple, that of Archimedes solving the problem of testing a goldsmith's honesty. Aristotle, on the other hand, shows no such qualms in commencing his Metaphysics [2] with the fairly obvious claim that "All men naturally desire to know." My suggestion is that this difference is symptomatic of a difference between the cultures to which these books were addressed, but a difference which can be overcome -- with great benefit to education, to philosophy and to religion.

The excuse that Lonergan offers for dealing with "the simple things that everyone can understand" [3], is the advice of Descartes. I wonder whether, as his book progressed, he still had Descartes in mind, though in a different sort of way -- as a genius who gave us in an extremely complex and difficult form a new discovery that could well have been expressed very much more simply. At any rate, the instance is a significant one. I put it before you as my own excuse for venturing to do what some aficionados of Lonergan may look on with horror as the casting of pearls before children.

Our debt to Descartes, of course, is not just in philosophy. Millions of people have learnt cartesian geometry at a relatively early age without more than a passing glance to Descartes himself, and millions more omit his name to communicate what they call graphs.

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Descartes, in expounding analytical geometry for the first time, made it look rather difficult by not starting with right-angled coordinates, by omitting the y-axis, and by giving, as almost his first example, the solution of a previously unsolved geometrical problem whose very statement as a problem takes some sixteen lines of text [4]. Unfortunately most readers of Lonergan would consider him more at home with this Descartes than with the one whose exhortation to deal with simple things he cites. Still the impact of Lonergan's Insight could, one day, be just as universal as the use of graphs.

3. Lonergan's Demand: Exercises

The key to philosophy that Lonergan offers us is self-appropriation, which, at times, he also calls self-knowledge. At the end of the first chapter of Insight he reminds us that the content of the chapter is not what is important, but rather our experience of our own mind at work while discovering that content [5]. That wealth and range of content is required when our learning is mediated by a book. But, more basically, what counts is the exercise of our mental powers, and that exercise is what is central to his instructions:

the only way to achieve [familiarity with what is meant by insight] is, it seems, to attend very closely to a series of instances all of which are rather remarkable for their banality. [6]

To experience an insight requires, as he says later:

close attention to instances of one's own understanding and, equally, one's failing to understand, and . . . the repeated use of personal experiments in which, at first, one is genuinely puzzled and then catches on. [7]

The reader of Method in Theology is told that he

will have to evoke the relevant operations in his own consciousness. He will have to discover in his own experience the dynamic relationships leading from one operation to the next. Otherwise he will find not merely this chapter by the whole book about as illuminating as a blind man find a lecture on color. [8]

Indeed, without those exercises the book would be empty:

Insight may be described as a set of exercises in which, it is hoped, one attains self-appropriation. [9]

4. Exercises in Tertiary Teaching

But what exercises should we use? The book Insight is too difficult for the beginner in philosophy; not all have the drive or the facilities of Archimedes; nor can they afford the years of constant struggling with a single problem that is so frequently mentioned by those many other most impressive discoverers to whom Lonergan refers us [10].

First and foremost, the purpose of the exercises is to provide data in which can be gained an insight into one's own mind; evidence to support a justified affirmation that I am an experiencer who is intelligent and reasonable. The exercises must give us the "concrete psychological fact" to which "every dispute in the field of metaphysical speculation" can be reduced [11]. Empirical method must be applied "to the data of consciousness no less than to the data of sense" [12]. I have to find the relevant data in the consciousness in my own mind at work.

For twenty years or so during which I have been teaching philosophy I have considered it essential to give my students an opportunity to grapple with a set of exercises in class, or at least between classes, so that our attention to, and description of, an insight is based upon a genuinely fresh sample. For this purpose I have chosen simple puzzles which are not all beyond the weakest of the students, while one or two are hard enough to tease even the more intelligent. Over the years I have accumulated further samples, brought to me by former students who are delighted both to contribute to my teaching resources, and to know that I will suffer a few hours or days of frustration similar to that which I forced on them.

5. Beneath the Dignity of Tertiary Students?

These puzzles have served their purpose well, but a few years ago one of my tertiary students complained about them. "These are kid's stuff," he said, "not worthy of a philosophy student aged 23." Most of my students, however, continue to enjoy them, but nevertheless my memory went back to a short car journey I had made years before with three of my nephews and nieces aged about ten, who had plied me with riddles which they had enjoyed immensely, but which were well beyond my capacity to solve. A new project occurred to me. If riddles and puzzles were kid's stuff, should not the kids be allowed to reap the philosophical riches they contain? "Render to Caesar the things that are Caesar's" and to children the things that are children's.

6. A Well-Known Interest

Further inquiries among teachers brought forth the information that children at about the ages of ten to twelve have an insatiable appetite for puzzles, riddles and jokes, though none could tell me how this was made use of in classes, unless indirectly as a reward or as entertainment. The books on

education that I consulted did not mention even the phenomenon [13]. While discovery was praised as an educational strategy, its value seemed to be confined to a means of gaining serious content rather than a means of securing intrinsic motivation [14], and the achievement envisaged seemed to be rather rare.

It seemed that I had to try out the possibility for myself.

7. The Teachers and the Classes

Some time later a former student invited me to the parish at which he was curate. There were 400 students in its parish school, with each class divided in two, so that Grade 6 (the top class in that primary school) had two streams of 31 and 32 students respectively. I outlined my plans at a meeting with the Priests, the Principal, the Religious Education Co-ordinator, the two class teachers and their support teacher (who covered other grades as well). They showed a polite interest until Fr. Farrugia asked me how I would actually use a joke in class. I told a very simple joke, which amused them, and within a few minutes we were all involved in a vigorous discussion of insight governing formulations, of modern theology, development of doctrine, and the fruits of the Holy Spirit. We were off to a good start, and from then on I had strong support from the school staff [15].

I arranged to visit the school for an hour each Tuesday and Wednesday, taking a 30 minute class with the Gold stream and then another with the Brown stream on the Tuesday, doing the same, only in the reverse order, on the Wednesday. After 20 of these days I met with the staff group for an evaluation of the experiment, and it ended in the sixteenth week, so that I had 31 classes in all with each of the streams.

The class teacher, Jenine or Chris, sat in the class during my lesson, keeping an ear on what was going on, while correcting exercises. Only rarely did they intervene, as when I tried to dictate a sentence without writing it on the blackboard, or when my writing turned out to be in an old-fashioned script so that I had to turn to block letters.

As my hour was the last in the morning I was normally able to stay for lunch, a useful opportunity to consult the class teachers and also meet the other teachers in the school. There were a couple of social meetings during the semester at which I was able to meet the parents, very few of whom had been born in Australia, having migrated there, in many cases with their own parents, from Italy, Malta, Lebanon, Holland, or the like.

8. Instructions

Though my aim was quite explicitly to teach the same philosophy as I was teaching in the theological colleges, I excluded all historical matter, all use of written texts, and, as far as possible, all technical terms, even those of Lonergan. Occasionally, where a special term was needed, I used the name of a student who had made the appropriate move, so that a question requiring a Yes or No answer became a Linda-question and a question for understanding a Gerry-question.

The students appreciated right from the start the danger that any of them could spoil things for the others by blurting out the solution of one of the puzzles, and in general they avoided this temptation. Indeed, those who had just succeeded in solving a puzzle displayed remarkable skill in giving hints to their companions, or in presenting, even in public, just enough evidence for me to judge whether they had a genuine insight without disclosing enough to enlighten the others.

An occasional repetition of my initial warning not to spoil the puzzle for others was quite sufficient to preserve this atmosphere. As for the public sharing of hints, I myself chose a suitable time for commencing this, normally after four or five students had discovered the solution, so that the satisfaction of making such a positive contribution to our enterprise would not be confined to one student, and two or three could share in being the focus of present attention.

An instruction that did, on the other hand, have to be repeated continuously, even within the context of a single puzzle, was the need, not only to attend to the data, but to adapt the data [16], add to them, play with them, seek other similar, or simpler, cases, take a new viewpoint, or attend by listening or feeling, perhaps, as well as looking. Some children, after finding success in such an active approach, may eventually develop it as a habit. Whether this can ever be done with adults, I am not yet sure. My experience, at any rate, of adult audiences, suggests a great unwillingness to ever use pen and paper as a means to solving a problem, even in the face of the most encouraging exhortation.

The central point in our whole exercise, that had to be insisted upon above all, was the key to the whole process, attending to oneself and one's operations as soon as possible after these had occurred. This is what Lonergan calls 'interiority' [17]. So, as soon as I was satisfied that someone had solved a puzzle, or appreciated a joke, I had to direct attention in this way, asking "What are you?" and "What can

you do?" There seemed to be no great loss in making suggestions at this point, probably because their experience was able so emphatically to confirm the suggestion. But the students' own descriptions were, of course, preferred, and often needed little prompting. The same turn to oneself as operating was required with each of our cognitional activities, and not just with the solving of puzzles. In these areas they were rather more used to attending to their activities but even here they were still helped by the exercises. Right from the first day we found a simple technique for moving in the realm of interiority by seeking partial definitions of ourselves, in answer to the question "What am I?" We retained these definitions and gradually added to them until a fairly full description of a human being had been reached. I have to admit with some embarrassment that even that lowest question which is the last resort of the television interviewer had a definite place here: "How do you feel?" While the frustration of seeking an insight in vain was easy to recall, the joy and power and exhilaration of success were often passed by unmentioned -- even though these had been their main motivation in devoting themselves to the otherwise thankless task of seeking the solution. Once the appropriate concept had occurred to them, however, they were able to say with conviction: "I am something that enjoys insights."

I mentioned just now the danger of someone stating bluntly the full answer to one of the puzzles, and so depriving others of the experience of arriving at it for themselves. There was, on the other hand, no such danger of loss in the switch to the interior mode. Any single student who had just had an insight could be an Archimedes to the others. He could give an account which would help others to recognize how it feels to be a discoverer -- in the way that Lonergan's five points based on Archimedes were intended to help the rest of us -- without in any way lessening the joy that others would experience later on in giving a similar account of their own insights when the light dawned in each of them.

Their accounts were often so accurate, so sincere, so enthusiastic, that a lesson on the nature of insight that could be of great benefit to the whole class could be drawn immediately from these few students. Such a lesson could be recalled with profit by any who solved the problem at home or on a later day.

These accounts of a student's recent experience of insight were the very key to the teaching process, as were, at appropriate times, accounts based on some recent striking experience of any of the other cognitional activities within Lonergan's structure of knowing.

Such accounts should concern not just the conditions favoring the occurrence of the insight (or other cognitional activity), but the powers flowing from it, and the contrast between the experience just before and soon after the event itself.

The keenness of the preceding drive to solve the puzzle, the unexpectedness of the solution, its transcendence of exterior conditions though focused quite precisely on the concrete presentation of the problem [18], were some of the interior data that had to be experienced and discovered in the students themselves, and named or recognized. There was also the new feeling of power: an ability to state the solution in ordinary words, an ability to formulate the solution in a variety of ways, an ability to select aspects of the solution that could be expressed as hints, the ease in retaining this ability [19] and utilizing it in a wide variety of ways and circumstances.

That list, however, provided at the beginning of the book, should not be considered anything like exhaustive. After all, Insight was written "from a moving viewpoint" [20], so other aspects of interiority remain to be discovered in later pages of the book. And those aspects of the knower or doer, we must remember, not the contents treated, are its main message to us.

Such lessons as the timelessness of insight and the explanation of knowing as identity [21] rather than as reproduction have to find their ground in each student's live experience of insight. And the properties of inquiry, too, such as its unlimited openness, have to be discovered or verified in the same way. So, too, the definitiveness of the unconditioned, incredible to thinkers who do not attend to their own conscious experience, by incontrovertible, and astounding, and immeasurably precious, to someone who has just found himself under a genuine need to make one affirmation, through a genuine 'Yes' or 'No'.

9. The Extrinsic Teaching Material

I have already made it clear that the main material presented directly to the children consisted of simple puzzles

for them to work on, and riddles and jokes. But other comparable material was required as well. Projects for invention are also aimed at insight, and may be more suited to those with practical minds. They must be asked, too, to formulate their solutions, and to vary such formulations, to ask a wide range of questions and then to reflect on, and sort into categories, the questions they have just asked. At times such requests need not be stated explicitly, as ways can be found of providing cues that lead into such activities.

Simple factual questions within the range of their own familiarity can be put to them, eliciting a firm 'yes' or 'no', whose source can then be investigated. For instance, Is there a carpet in this room? Are we in Melbourne? Are we in Sydney? Have Collingwood ever won the grand final of the Victorian Football League?

Concrete illusions can be put before the class. An attempt to show the traditional stick bent in water led to the much more striking case of a sudden break in, and varied displacement of, a vertical ruler at the surface of water in a cylindrical plastic kitchen container.

For the switch to interiority the main questions that I put before them, at the appropriate times, that is, when I was reasonably sure that the minds of a few, at least, of the students were already active in the intended mode, were: What am I? What can I do? How do I feel? How is this sort of activity related to (one of the other sorts of activity that we have already identified)? Can I discover some rules for ensuring that this particular activity is being done properly [22]?

10. What I Discovered about Readiness

As a result of this teaching experience I have established the following points to my own satisfaction, and I am convinced that others who follow Lonergan can do the same.

1. Children at the age of eleven have not reached self-appropriation with regard to understanding, or wonder, or judgment, but can easily be taught to do so.

2. They have, however, some quite definite self-knowledge with regard to responsibility, and this could be developed, and integrated with knowledge of themselves as knowers. Due to the limited time available, however, I did not work in this area.

3. They were very open to, and appreciative of, an approach to the fruit of the Holy Spirit [23] through interiority.

As they were being prepared for Confirmation, I allowed myself one day on this after we had discussed the notion of spirit as found in themselves as human beings.

4. They have an insatiable appetite for puzzles. They are proud of what ability they have to solve them, and they can learn about the nature of spirit and the characteristics of their own spiritual powers by reflection on fresh instances of such activity.

5. Jokes, or riddles with answers, can serve the same purpose, and are very useful for teaching purposes, especially as directed to the whole class. But puzzles should not be neglected, as their solution is a more personal triumph, and has a greater impact, and, especially when it has required a week or two of effort, provides strong evidence for the difference between understanding and not understanding, and for the unavailability of insight to direct action by the will or to unenriched sensation.

6. The simplest jokes suffice for these purposes. Those found in books of jokes for children are quite satisfactory. Dead jokes, however, must be strictly excluded, as much of the value of the exercises is destroyed if hope of gaining a genuine intellectual achievement is undermined. By dead jokes I mean those whose only point is that there is no point. If they do come up, some lessons regarding inverse insights can, of course, be drawn, but a strong assurance should be given that each puzzle or riddle set by the teacher has a genuine insightful solution.

7. The time available for drawing full philosophical profit from a puzzle is about ten minutes. The end of this is signalled when one of those called upon, instead of continuing with suggestions or questions regarding that issue, comes out with "Another puzzle please." If the point being made when this limit is reached needs to be completed or reinforced, a new joke can be a way of making a fresh start with less waste of time.

8. After a few months, a puzzle may occasionally be set whose content is not merely recreational. For instance, puzzles about our souls, their relationship to our bodies, about angels, or God. Students can, when well prepared, find serious depths in these. Of course, they themselves may be the ones to raise them. In this case, it is generally wise to deal with the issue immediately, even if a fuller treatment has to be postponed.

9. One example of a philosophical question that the children can raise in the appropriate context is the relation of the answer, 'Maybe' to the answers, 'Yes' and 'No'. Another, is the question "Who caused God?" This question did not occur to John Stuart Mill until put to him by his father, nor to Bertrand Russell until, about the age of 18, he read it in Mill [24]. One of these eleven-year-olds raised it gingerly in class, and it was clear that three or four others had previously thought of it by themselves, and had treated it quite seriously. It is a point that has to be faced clearly by any theist, and those who have raised the question for themselves are in a position to pursue it with more vigor than did either Mill or Russell, and to master it with lasting profit.

10. It would probably have been possible to formulate puzzles based directly on their current school-work. As I was not familiar with this material I made no attempts at this. Though I had given occasional lectures in the upper forms of secondary school in recent years, it was 35 years since I had taken regular classes in one, and I had never taught in a primary school. No doubt those who have done so could find suitable material where insights are important, and turn occasionally to the interior mode while dealing with this. For the sort of mathematics we used to do thirty years ago almost any page of Westaway's wonderful book Craftsmanship in the Teaching of Elementary Mathematics [25] has appropriate suggestions. For a higher level, George Polya has the same healthy and exciting orientation in his Mathematical Discovery [26].

11. While we are talking about teachers we can report how the students can appreciate very well how the great joy that a teacher has in communicating his understanding is not due to his having learnt the idea concerned from the student but to his own active experience of that idea itself in conjunction with his success in communicating it.

12. This joy in the content of the insight is accompanied by another type of joy in his or her own spiritual activity, the joy of being a giver, and the joy of that deep personal union that is possible in spiritual events. The students were thus prepared to realize that if they ever feel what is often called "love at first sight," it may well be interpreted more correctly as something that they have already experienced in this class -- namely, love at first insight.

13. Right from the start the students recognized the value of personal achievement in solving a problem, and were ready to respect the right of others not to be deprived of the opportunity for such achievement. This value overrode that of proving before the whole class their own priority of achievement.

14. When called upon, most of those who had genuinely reached an insight were able to indicate clues or evidence that would be helpful to others in making the same discovery. Thus they had a natural ability to become teachers. There would have been an opportunity to go on and make this more explicit.

11. The Philosophical Content

Regarding the philosophical content that we reached through this work at self-appropriation, I found that these students at the age of eleven were able to appreciate, and savor, the following topics, which I give now first of all in standard philosophical form rather than in the expressions I used with the children. I will follow this with a list of the same points in Lonergan's terminology, along with an indication of the way I formulated each of them for the children. Later on I will recite in full the exact set of revision notes that I proposed for them to memorize. Among the topics were:

(a) The nature of consciousness. (b) The agent intellect, or intellectus agens. (c) The real distinction between essence and existence. (d) Substantial form and prime matter. (e) A solution to the critical problem. (f) The basic a priori. (g) The notion of being. (h) The analogy of being. (i) The contingency argument for the existence of God. (j) The notion of an eternal God. (k) Reconciliation of God's providence and human freedom.

(l) Though I made only a brief exploration in the following area, it was enough to give me hope that within a few more months these students would have been able to reconstruct the basic elements of a number of the classical schools of philosophy, in a way that would have enabled them to recognize these in future years when they were capable of reading the original texts.

12. Restatements

Let me repeat each of these in Lonergan's terminology, and then in a way which children can appreciate:

a. Consciousness as experiential data [27], with merely experiential objectivity [28], as a basis for generalized empirical method [29].

I can know myself and what I can do only after I have felt myself doing it, and I can do this only indirectly -- by attending to something other than myself. By looking at something green I see green, but I also feel seeing and a seer. By asking what green is I may come to know something about light and colors, but I also gain a feeling of inquiry and of an inquirer.

b. Inquiry [30]; the drive behind every question -- and every answer.

I am a wonderer, and my main drive to knowledge is in wondering. All the knowledge that I reach is a fulfilment of wonder and so is wonderful.

c. The distinction between essence and existence, based on the distinctions between the three levels of the structure of knowing [31], and more specifically, the distinction between understanding and judging, between what is intelligible in itself and what is intelligible only in another [32].

I can sometimes responsibly say 'Yes', and this is equivalent to "This is so," and an answer to "Is that so?" Such an answer, and what I reach through it, is different from the intelligibility I reach through an insight, which has to be expressed in a sentence or a word, such as is presupposed by, by complemented by, a 'Yes'.

d. Things, with their central forms and central potency [33].

Each dog is a single individual and makes sense as a set of intelligible parts which are intelligently related to each other, and which are involved in a large number of ways of interacting among themselves, which also make sense in the life of this dog.

A willow tree is a similar single individual, and yet it can be changed into many distinct willow trees by taking cuttings from its branches and sticking them in the ground.

e. Critical realism [34].

I have been tricked by illusions, and realized that they are not reality. I avoid illusions by asking a wide range of intelligent questions and reaching all the answers that are relevant to the issue. And this leads to the very meaning of what we have always referred to as reality -- namely, that which is to be reached by intelligent grasp and reasonable affirmation.

And through my wonder I am immediately in contact with that reality, and indeed with the whole of being, even before such grasp and affirmation. All that remains to be done is to discover and formulate distinctions within this realm of being.

f. The basic a priori, like the agent intellect, is what we experience as wonder or inquiry [35].

While I get knowledge by seeing and hearing and touching, etc., the most important contribution that my mind makes to knowledge is in wondering. This drives me to look, and listen, and feel, and to ask why and whether, and will I.

g. The objective of the pure desire to know [36].

I communicate frequently and successfully through the words 'is', 'am', 'are', 'was', 'were' and 'be'; and what I mean in using each of them is summed up in the word 'being'. The way that I use these words shows that I reach being as the answer to intelligent questions, that is, as the goal of wonder.

h. The notion of being penetrates every other cognitional content [37].

Everything I learn is different from everything else, but everything I learn and everything about it is the goal of my wondering, so there is something very much the same about all things. My wonder is absolutely open to all questions, so it directs me to the very idea of being, which is a grasp of everything about everything.

i. An explanation that needs no further explanation [38].

All the things I see need some sort of explanation, but none of them can be explained satisfactorily unless eventually through something that needs no further explanation at all, precisely because it understands itself fully, as well as everything else.

j. The timelessness of insight, and therefore of an insight into insight [39].

Every insight comes suddenly and is rich and exciting. It can be relished instantaneously, and so is not intrinsically dependent on time. An insight that understands absolutely everything, including itself, must be enormously rich and exciting and in no need at all of being spread out in time. You and I find our life and enjoyment in a time that we call 'now'. But, for us, one 'now' is separated from another. An insight into insight is not subject to this limitation. It can have all its 'nows' at once.

k. God's grasp of all possible worlds: his choice of the actual world; his application of each agent to its action, so that he cooperates in the production of everything that is; his permission of basic sin, which is the failure, due to the free choice of a creature, of an intelligibility that might have been if that creature had made a more positive and intelligent choice [40].

If I understand myself fully and everything about everything in the light of that insight, I would be able to see all possibilities and choose to actuate some of them. One such possibility would be something that would be independent of me to the extent of being able to choose its own destiny, which it would reach by collaborating with the help I would offer it, or sometimes choosing to be silly enough not to join in such collaboration.

1. I know, from my own experience of acting in these different ways, just what contribution to knowing is made by each of my cognitional activities. So I can indicate the weaknesses that there would be in a philosophy that neglected any one of these and failed to include it in its account of knowledge. Then I could guess the adjustments, or additions, that a philosopher with such a view might make, in order to try to account for the data that he cannot avoid having in performing the type of activity that his philosophy has omitted [41].

13. Teachers Can Learn and Enjoy All This

One unexpected bonus from this experiment was the personal interest many teachers showed in learning some philosophy themselves in a similar way. Though no opportunity for an extended course offered itself, a number of seminars of an hour and a half to two hours were arranged with different groups of teachers, and most of them expressed delight at what they themselves gained from the seminar. Though they would, of course, have required much more extensive training before they could teach a similar course, they could see the possibility of their doing so, and could appreciate the value it would have for their own students.

14. Opportunities and Applications

If extended and developed, this method of teaching could help ordinary children at about the age of eleven to gain one of the great benefits of a philosophical education -- a well-based orientation to the most basic issues of life.

They would then be far more open than at present to a theological education and the grounding that that can give in religion.

What they learn in this way about knowledge and about learning itself could help them to seek and grasp the essentials in all their further education.

The method would have possibilities far beyond the primary school, indeed beyond schools of any sort. Those who work among disadvantaged classes, such as the Australian aboriginal people, the poor in the third world, and those in occupied countries, often remark on their sense of humor and the pleasure they take in inventing and relating jokes. We can see now an explanation for this: such activities are an exercise of their human spirit and so help to support their self-esteem in face of their material destitution. And the jokes themselves could be a starting point for a direct and powerful education.

A chaplain at a hospice for the dying recently told me that he regularly approaches his people with a simple joke, and he agreed that the brightness this brings into their lives could be connected with a recognition of their spiritual worth as they exercise a truly human power.

15. Revision Notes

When I expressed a desire to help the children retain what they had learnt from me, the teachers ensured me that memory work would not be possible, but then Chris added, "They do, of course, enjoy learning songs." Here, then, are the lyrics [42] of my revision notes:

I'm a wonderful wonderer, wondering about
 All I see and I hear and I feel.
 My wondering brings me some moments of light,
 When an insight dawns fresh in my mind.
 With an insight I'm ready to talk and explain
 And apply and explore out beyond.
 But some judging is needed before I assent,
 When the relevant questions are closed.
 (Until I've done that, "I think" or "Maybe"
 Is all I'm entitled to claim.)
 When I've covered those questions I rightly say 'Yes',
 And it's then that I finally know.
 I'm in touch with reality, being, fact, truth,
 Through my earliest "Is it?" and "What?"
 It is thus that I spell out the wonderful world,
 Having skirted illusions and shams.
 My body's spread out, by my spirit unites,
 It ties things together, it plans.
 I decide at an instant with spiritual power,
 But fill in my designs over days.

I reach out to the edges of space and of time,
 Though my knowledge of them's all in me.
 Still it's rich and it's fun, and exciting, and strong,
 All the more that its 'now' needs no 'then'.

When I know myself thus, I can guess what I'd be
 If i'd mastered all puzzles in full.
 I'd be just one exciting enchanting insight,
 Quite the opposite feeling to bored.
 I'd be truth and assent, fulfillment and desire,
 Understanding and meaning as well.
 I'd have no need of space, or of time, or of friends,
 But could make all of these if I chose.

All the future and past would be present to me,
 So I'd not be restrained to one view.
 I could write an insight in the whole universe,
 That could not fit within any part.
 Or I'd fix up a set of particular laws
 To relate a few bits 'mong themselves.
 I'd put sense in the whole of good actions of men
 While allowing each freedom to sulk.

But in fact there are puzzles I just haven't solved,
 So I've no claim at all to be God.
 And while God understands both himself and the world,
 I've no grasp of his insights or plans.
 So to puzzles of faith, and of sin, and of hope,
 I'm most happy to answer, "God knows",
 Being grateful he gave me my own little mind.
 Soon in heaven I'll blow it with him.

16. Conclusion

Aristotle told us that the mark of intellect, as distinct from sense, is that one intense exercise of intellect stimulates lesser insights instead of dulling them [43].

This insight of mine into a new educational opportunity can throw light on an old historical puzzle. What did St. Thomas Aquinas mean when, at the age of 49, he stopped dictating and said to his secretary, All my writings are but straw [44]?

We must investigate the source of that straw, while being careful not to underestimate the value of the straw itself. In this we can be guided by Gottlob Frege, the founder of modern symbolic logic. In 1895, having met David Hilbert, who had just been appointed professor of mathematics at Göttingen, Frege wrote him a letter containing a metaphor which captures the value both of symbolism and of its source in thought:

Where a tree lives and grows it must be soft and succulent. But if what was succulent did not in time turn into wood, the tree could not reach a significant height. On the other hand, when all that was green has turned into wood, the tree ceases to grow. [45]

St. Thomas probably had that same metaphor in mind. Straw is the majestic structure in which the record of a plant's growth is preserved, in an orderly and discernible fashion.

But the living plant would be so much richer and more productive. When he spoke thus to Reginald, Thomas had just discovered the source of this growth, and had realized that he had to take time off from writing in order to forge a new philosophy in this more lively mode.

In brief, St. Thomas had just discovered Lonergan's approach, and has envisaged vast Canadian plains of green and growing wheat replacing his own dry, but oh so precious, supply of straw. The means for such widespread growth in the realm of the mind are now at hand.

NOTES

- [1] B. Lonergan, Insight: A Study of Human Understanding [London: Longmans, 1957], p. 3.
- [2] Aristotle, Metaphysics, I, 1, 980a 22.
- [3] Lonergan, Insight, p. 3.
- [4] Descartes, The Geometry of Rene Descartes [NY: Dover, 1954], p. 22. It appeared originally as one of three essays accompanying the Discourse on Method: see Descartes, Oeuvres, ed. Charles Adam and Paul Tannery [Paris: Cerf, 1897-1910], Vol. 6, pp. 367-485.
- [5] Lonergan, Insight, pp. 31, 32. [6] Ibid., p. 3.
- [7] B. Lonergan, "Cognitional Structure," Collection [Montreal: Palm Publishers, 1967], Ch. 14, #3, p. 225, Collected Works of Bernard Lonergan, eds. F. E. Crowe and Robert M. Doran [Toronto: U. of Toronto Press, 1988--henceforth CWL], Vol. 4, p. 209.
- [8] B. Lonergan, Method in Theology [London: Darton, Longman & Todd, 1972], p. 7.
- [9] B. Lonergan, Understanding and Being, eds. E. A. Morelli and M. D. Morelli [NY: The Edwin Mellen Press, 1980, second edition forthcoming as CWL, Vol. 5], p. 1.
- [10] Through Insight, p. 4, footnote: Eliot Dole Hutchinson, in P. Mullahy, ed., A Study of Interpersonal Relations [NY: Hermitage Press, 1949], pp. 386-445. Hutchinson himself refers us to an equally valuable set of reports collected by Washington Platt and Ross A Baker, "The Relation of Scientific 'Hunch' to Research," Journal of Chemical Education, 8 [1931]: 1969-2002. My favorite is from D. Wesson: "I had been studying to improve circulation of oil in pipe coils for several days. Sunday in church the correct principle came like a flash as the preacher was announcing the text. I put it in practice. It was correct. Strange to say I have always remembered the text and the sermon." [Ibid., p. 1980]
- [11] Lonergan, Insight, p. 423. [12] ibid., p. 72; also xi, 243, 382.
- [13] I have since found that Jerome S. Bruner, in his Beyond the Information Given: Studies in the Psychology of Knowing, Selected, edited and introduced by Jeremy M. Anglin [NY: W. W. Norton, 1971] does advise us "to keep an eye out for the tinker shuffle, the flying of kites, and kindred sources of surprised amusement" [p. 209]. he remarks (my emphasis) that "Children, of course, will try to solve problems if they

recognize them as such" [p. 447], but he then goes on to say that "how to lead children to discover the powers and pleasures that await the exercise of retrospection" is "one of the great problems one faces in devising curricula" [p. 449]. Many other fascinating but scattered remarks by Bruner could easily be interpreted into a powerful strategy of education by Lonergan's philosophy. For instance, "the best introduction to a subject is the subject itself" including "the forms of connection, the attitudes, hopes, jokes, and frustrations that go with it" [p. 446].

[14] Bruner is quite explicit on this, when he speaks of the "reward that is discovery itself" [Ibid., p. 406], and tells us that "the reward of understanding is a more robust lure to effort than we have yet realized" [p. 447].

[15] For their acceptance of this project and their extremely friendly and efficient cooperation I am very grateful to Miss Lucy Spano, Principal of St. Joseph the Worker School, North Reservoir, Victoria, Australia, Australia, Jenine Fogarty and Chris Gleeson, Grade 6 teachers, Paul Walsh, their support teacher, Marella Pace, Religious Education Coordinator, Fr. Joseph Yu, Parish Priest, Fr. Victor Farrugia, curate, and especially all the boys and girls of the 1987 Grade 6 classes.

[16] See the motto on the title page of Insight, referred to on p. 677 as "Aristotle's . . . famous statement on insight in the De Anima that forms are grasped by mind in images." Also pp. 70-78, 87-89, 103-104, 220, 481; B. Lonergan, Verbum: Word and Idea in Aquinas [London: Darton, Longman & Todd, 1968], p. 14, "Isomorphism of Thomist and Scientific Thought," Collection, pp. 147-48, 150 [CWL 4, pp. 137-38, 140].

[17] Method in Theology, pp. 83, 115, 261-62, 274-75.

[18] Insight, pp. 4-5. [19] Ibid., p. 6.

[20] Ibid., xxiii-xxvi, pp. 591, 635-6.

[21] Verbum, pp. 32, 183-91, "Christ as Subject: A Reply," Collection, p. 192 n. 50 [CWL 4, p. 179].

[22] Lonergan often refers to such topics when speaking of interiority. For instance, in Method in Theology, "an appropriation of one's own interiority, . . . one's operations, their structure, their norms, their potentialities," in "a heightening of intentional consciousness" which "constitutes the evidence for one's account of knowledge" [p. 83].

[23] Gal. 5.22-23.

[24] B. Russell, Why I am Not a Christian and Other Essays [London: George Allen & Unwin, 1957], pp. 3-4.

[25] F. W. Westaway, Craftsmanship in the Teaching of Elementary Mathematics [London: Blackie, 1931].

[26] George Polya, Mathematical Discovery: On Understanding, Learning, and Teaching Problem Solving, 2 volumes [John Wiley, 1962, 1965].

[27] Insight, pp. 272-74, 320-21, "Christ as Subject: A Reply," Collection, pp. 173-92 [CWL 4, pp. 162-79], "Cognitional Structure," Collection, #3, pp. 224-27 [CWL 4, pp. 208-11].

[28] Insight, pp. 381-83.

[29] Ibid., pp. 72, 243; also xi, pp. 423-30.

[30] Ibid., pp. 4, 9, 105, 173-74, 350-52, 636-39.

[31] Ibid., pp. 274, 431-34.

[32] Understanding and Being, 1980, pp. 254-56.

[33] Insight, pp. 245-70, 434-42. *Method: Journal of Lonergan Studies* 9(1) pp.44-62

[34] Ibid., pp. 154-55, 283-87, 340, 350, 356-57, 374-84, "Cognitiveal Structure," #4, Collection, pp. 227-57 [CWL 4, pp. 211-14], Verbum, pp. 87-88.

[35] Giovanni Sala, Das Apriori in der menschlichen Erkenntnis: Eine Studie über Kants Kritik der reinen Vernunft und Lonergans Insight, Meisenheim an Glan: Verlag Anton Hain, 1971. See also Insight, x, p. 406.

[36] Insight, pp. 348-50. For hints at the nominal definition of being, which I give here, see p. 353, "that things are," "that there are many things," "Is it?" and F. E. Crowe in Ultimate Reality and Meaning 7 [1984]: 67.

[37] Insight, pp. 361-62, taken with pp. 356-57.

[38] Ibid., pp. 77, 644-45, 653-57, 677-86, Understanding and Being, CWL 5, Discussion 4, #2, "Probability Theory and the Existence of God."

[39] Insight, pp. 4, 516-20, 647-48, 660.

[40] Ibid., pp. 660-69, and Lonergan, Grace and Freedom: Operative Grace in the Thought of St. Thomas Aquinas, ed. J. Patout Burns [London: Darton, Longman & Todd, 1971], pp. 72-84, 88-91.

[41] For an indication of how this can be done with tertiary students, see my forthcoming, "Rediscovering Philosophies Through Cognitiveal Models."

[42] For the tune I am indebted to Loretta Brennan, CSB.

[43] De Anima, III, 4, 430a 27-b 6. See T. V. Daly, "How Lonergan Illuminates Aristotle," in Lonergan and You, ed. John Heesh and Neil Ormerod [Pymble, NSW: Lonergan Centre, 1986], pp. 11-31.

[44] For the data and a less adventurous interpretation, see James A. Weisheipl, Friar Thomas d'Aquino: His Life, Thought and Work [Garden City, NY: Doubleday, 1974], pp. 320-27.

[45] Gottlob Frege, Wissenschaftlicher Briefwechsel, herausgegeben von Gottfried Gabriel and others [Hamburg: Felix Meiner, 1976], p. 59, English translation by Hans Kaal, Philosophical and Mathematical Correspondence [Oxford: Basil Blackwell, 1980], p. 33. Hilbert endorsed Frege's view: "I believe that your view of the nature and purpose of symbolism in mathematics is exactly right. I agree especially that the symbolism must come later and in response to a need, from which it follows, of course, that whoever wants to create or develop a symbolism must first study those needs." Ibid., p. 59-60, ET p. 34.
