

Cantower XII**“A Problem of Interpretation Arises”¹****March 1st 2003****12.1 An Elementary Paradox**

I hope to interest you here in “The Elementary Paradox” that is the topic of the section from which I take the title of this **Cantower**, but the elementary paradox that concerns me here is connected with the problematic nature of my hope. Perhaps I have lost a percentage of my readership already, and am about to lose more in the course of this first paragraph. What is the elementary paradox that I have in mind? Dare I tie it in with the Old Testament story of the sick Commander, Naaman, who found the simple solution to his problem somewhat distasteful?² You are interested in the task of interpretation and so in “the self-knowledge of the interpreter”.³ Here we have, in section 5.4.1, a very precise challenge to exercise one’s interpretative powers on a simple problem, part of the “natural bridge over which we may advance from our examination of science to an examination of common sense”.⁴ But, let’s be honest, it is not a very attractive challenge to either me or you. It is much worse than a Zen koan: yet unfortunately it is a THEN GO-ON.

¹*Insight*, 162[186].

²*The Second Book of Kings*, chapter 5. When Naaman charioted up to Elisha’s door Elisha gave him the simple task of bathing in the Jordan seven times. “Naaman was indignant and went off”(v.12).

³*Insight*, xxix [23]. This is the first reference to interpretation in *Insight*; my title is the second zone of reference 162-4[186-8], sadly not indexed.

⁴*Insight*, 140[163].

Cantower IX talked of the life-work of foundational growing to position through poosition to a beginnings of protopossession. We paused over the problem of “objectivity spontaneously being a matter of meeting persons and dealing with things that are really out there”⁵ and noted the later goal of psychic unity.... an impossible dream? “So it comes about that the extroverted subject visualizing extension and experiencing duration gives place to the subject oriented to the objective of the unrestricted desire to know and affirming beings differentiated by certain conjugate potencies, forms, and acts grounding certain laws and frequencies”.⁶ This remark is made a mere 140 pages later in the book, in the thin air of a brief pointing to a new science of metaphysics. It is a short read of part of the book, but the issue before us now is a long read of a part of oneself. Here, certainly, one feels the discomforting distinction expressed “with the greatest of brevity: one has not only to read *Insight* but also to discover oneself in oneself”.⁷

In **Cantower IX** I suggested a long reflective pause over those terrible Eiger Face words, “so it comes about”.⁸ Here we have a piece of that climb, that bridge, that ice-face. Seamus Heaney writes “Yeats told of his aspiration to a form of utterance in which imagination would be ‘carried beyond feeling into the aboriginal ice’”.⁹

⁵*Insight*, 385[410].

⁶*Insight*, 514[537].

⁷*Method in Theology*, 260.

⁸*Insight*, 514[537]. You may not as yet have come to grips with this fundamental type of reading, although it is “obvious” that we speak biography to biography in history. Did you, for instance, think up till now of “interpretation “ and “the practical insight F” of strategic communication as extending over a year, a decade? Your spontaneous notion of being certainly reaches, but feebly, to your biography and mine in history and beyond: metaphysics, the Black Tower climb of **Cantower IV**, is the sustained life-long effort to make that luminously present.

⁹Seamus Heaney, *The Redress of Poetry*, Farrar, Straus and Giroux, New York, 1995, 156-7. The essay quoted talks of Miroslav Holub, Yeats, Philip Larkin.

And Heaney goes on to write of “Yeats’s rejection of the body heat of the pathetic and the subjective in art, for his embrace of the dramatic and the heroic, his determination to establish the crystalline standards of poetic imagination as normative for the level at which people should live”.¹⁰ Here we have Lonergan inviting an aspiration for a vastly deeper Redress of Poise, a heroic embrace of “simple things”¹¹ that yet would lift one closer to home,¹² honing the imagination towards being a crystalline fountain of contemplation and meaning-control. At issue is the home-craving home-going bent, buried in this cultural slum, that may be freshly roped in and up by the climbing-ropes of the first and second words of metaphysics. Here our focus - again I recall the discomfiting advice - is on the simplest of realities, the realities symbolized by “ p_i ” in either word.¹³ And both words of metaphysics are involved: there is the odd invariance of expressions, there is the set of conjugates of physics whose secondary determinations ground the reality of Space and Time.¹⁴

¹⁰*Ibid*, 157.

¹¹Insight, chapter one, paragraph one.

¹²Follow up note 9 above, through “home” as it is mentioned in *Method in Theology* 14, 350. That home can reach a “primary meaning and fundamental meaning” in which “God is not an object”(*ibid.*,342), in a fresh galactic intimacy of Space and Time.

¹³I do not want to complexify the project here, but I would suggest that on a second or twenty second reading of this *Cantower* you might struggle with the fact the conjugates of physics are aggregatively layered up through all levels of being, right up to the level of being properties of a divine person. But even staying on the level of physics - if you like, on the level of a fraction of the first minute of the universe in the popular literature - we are not inclined to hold to a full concrete intention of real materiality. The complex mesh of secondary determinations of the multiplicity of physics conjugates within the many things of physics is, in any small region of SpaceTime, a massively elusive fractally-messed compaction of geometries, analogous perhaps to chemical stews of the next level of being. And of course, a full accounting of the reality and occurrence of p_i would include all the chemical stews, including the negentropic stew of the human brain.

¹⁴The sentence raises many difficulty questions involving physics and geometry. They are raised in a fuller context in P.McShane, “Elevating *Insight*: Spacetime as Paradigm Problem”, *Method*:

But let us not get into that here. Rather, think about the problem of interpretation as it is discussed in rather elementary fashion in chapter seven of *Method in Theology*.¹⁵ Our topic offers a paradigm exercise for that chapter. And may I note immediately that the “*Principle of the Empty Head*”¹⁶ doesn’t survive too well in this simple context.

We have the task of understanding the object, the words, the author, oneself, in a very simple instance. But may I note that, however simple the instance, there is the peculiarity of any object calling forth all the problems associated with the hermeneutic circle. Whatever the object, “the conceptualization of understanding is, when fully developed, a system... the concept emerges from understanding, not an isolated atom detach from all context, but precisely as part of a context, loaded with the relations that belong to it in virtue of a source that is equally the source of other concepts.”¹⁷ And here, certainly, the context is vibrantly present in our Milky Way’s 100 billion stars, a sliver of formed extension-duration among millions of other galaxies within a “unity grounded in prime potency”.¹⁸ And that wonderland is not out there. Can we here struggle towards starting to bring that beyondness of endless numbers and variety “under the sweeping rubric of conjugate potencies, forms, and acts, so that we include under the same categories the space and time that, from the viewpoint of sensitive extroversion, contain both the totality of sensible objects and the totality of senses and sensitive acts”?¹⁹

Journal of Lonergan Studies (19) 2001, 203-229.

¹⁵155-162.

¹⁶*Ibid.*, 157.

¹⁷*Verbum*, 1997, 238.

¹⁸*Insight*, 510[533].

¹⁹*Ibid.*, 513[537].

The exercise of section 12.2 is a key step. It should be taken in itself, worked on as a challenge to revealing just where you stand with regard to interpreting Lonergan's writing on this particular topic, on this particular page. It is worth delaying over, and further it is worthwhile to return to the challenge of **Cantower XI**, section 4, to see whether you are led to some modification of your self-judgment as witness, simply categorical witness or witness to Lonergan's meaning. Do you have the patience for this turn-around, this conversion?

The section to follow, 12.3, is on measurement. It can be seen to parallel Lonergan's reflections on the same topic in section 4.2 of chapter five, just as section 12.2 seems to parallel section 4.1 in Lonergan. But it aims at turning you to elementary exercises in a manner that could reveal to you new levels of meaning in Lonergan's discussion, indeed can lead to a fresh perspective on the question of geometry, its nature and its reference. Section 12.4 connects our effort with the problem of reflective interpretation of Chapter 17 of *Insight*, and points briefly to larger issues. Learning and teaching in Lonergan studies is touched on briefly in the following section. The concluding section 12.6 returns to the question of Poise that was aired in **Cantower IX**, with focus on the contemplative push towards theory.

12.2 The Twin Paradox

I have to hand an old standard text in physics which I shall use as source in this matter.²⁰ You may well have something equivalent, but it is of no consequence: I will aim at a reasonable introductory treatment of the problem and the struggle with the problem in this **Cantower**. We may start, however, with the problem and "the answer"

²⁰Paul A. Tipler, *Physics*, Worth Publishers, New York, 1982. To be referred to below as Tipler. Later, at note 30, I shall add a version from Cornelius Lanczos. I do this not only for variety, not only for to show that this isn't just an "undergraduate text" business, but to call in a man I respect as one of the sharpest minds I met in any discipline. Lanczos was part of the Institute of Theoretic Physics in the 1950s and 1960s. Escaping the cultural disorientation is no mean task.

as presented in my text.

Possibly the problem is familiar to you. There are twins, named in the text Homer and Ulysses. Ulysses travels at high steady speed to a planet beyond the solar system and returns at the same speed. Homer awaits his return. To have decent numbers to work with, the planet P is placed at distance $L = 8$ light years away from Earth in Homer's reference frame on Earth.²¹ The high speed of Ulysses is taken to be $.8c$, $4/5$ ths the speed of light, which is a pretty brisk pace of about a million miles every seven seconds. I presume now that you have *Insight* to hand. At the centre of our challenge is the interpretation of section 4.1 of chapter five.²² The challenge is complexified by the fact that section talks of three interpretations, and indeed these interpretations are spread out in history: but we cannot venture into the issue of history in this short essay. We stay with the simple presentation of the problem in terms of Ulysses' journey, and I require that you use the text of *Insight* as basis for our reflections. So, I hold to the two reference frames talked of in *Insight*, K for Homer, K' for Ulysses on the way out and K'' for Ulysses on the way back. So, we now have a number for the relative velocity, u , of *Insight*: $.8c$, $4/5$ of the velocity of light. This gives a definite value for H: not too difficult for you to work out, since $1 - (u/c)^2$ is $9/25$, the positive square root of which is $3/5$. That gives us a value of $H = 5/3$. OK?

How much of the context of contemporary physics or of chapter five of *Insight* do you need for a decent interpretation? That is a challenge you have to face. But certainly you have to have digested the second half of section 3.5 of chapter 5, which is quite tricky. You need diagrams, and contentment about the different synchronizations of clocks. We will have something more on the question of context for interpretation in section 12.5.

²¹There is nothing mysterious about light years. They are a distance: a light year is the distance light travels in one year. In five seconds light travels about one million miles.

²²*Insight*, 161-4[185-8].

At any rate you have an image, a diagram: Homer fixed, Ulysses out to the edge of the page and back: or some such. Frame K for Homer and Frames K' and K" for Ulysses. Now, let's hear it from Tipler's text.

"It is easy to analyze the problem from Homer's point of view. According to his clock, Ulysses coasts in K' for a time $L/u = 20$ years and in K" for an equal time. Thus Homer is 20 years older when Ulysses returns. The time interval in K' between leaving earth and arriving at the planet is shorter because it is proper time; the time to reach the planet by Ulysses' clock is

$$dt' = 1/H(L/u) = 3/5(10) = 6 \text{ years}$$

Since the same time is required for the return trip, Ulysses will have recorded 12 years for the round trip and will be 8 years younger than Homer.

From Ulysses point of view, the calculation of his trip time is not difficult. The distance from earth to planet is contracted and is only

$$L/H = 3/5(8) = 4.8 \text{ light years.}$$

At $u = 0.8c$, it takes only 6 years each way. The real difficulty in this problem is for Ulysses to understand why his twin ages 20 years during his absence."²³

Tipler goes on to bring out the paradox involved by letting Homer do the moving, but this is not important for us. What is important is to think your way through the piece I have quoted: to interpret this piece of Tipler's text. This is interpretation in the limited sense of the effort to understand that is prior to the attempt to communicate.²⁴ I have added some footnotes to the piece to get you over some of the bumps on the road. Are they enough for you? I am not talking here about a

²³Tipler, 949-950. I have modified the text to conform the symbols etc to those of Lonergan, as I do with Lanczos text, below, note 29.

²⁴I do not wish to complicate the matter, but it is worth recalling in passing that interpretation as it is presented in section 3 of *Insight* chapter 17 involves presentation, a second expression. Of course, interpretation involves expression to oneself, and its patient development can be a measure of one's seriousness. That is all meshed into the present exercise.

comprehensive perspective, though it is good to at least envisage that: the sort of remote enterprise of reaching a pure formulation of Tipler's content and context that is mercilessly sketched in "The Sketch" of section 17.3.6 of *Insight*. I am talking about a level of understanding sufficient to make slightly luminous to you the relation of Tipler's effort to "a first interpretation"²⁵ of the oddity of rods getting shorter and clocks getting slower.

There are various possibilities here. You may be among those who have come to a clear perspective on the facts that simultaneity is "analogous to such notions as 'now' and 'here'"²⁶, that the intelligibility of Space and Time is reached in invariants the simplest of which involves the photon dispersion that we call light,²⁷ one that grounds an appropriate Minkowski geometry that stands against imagination's longing for local habitations pretense of theoretic reach. That stance is rare: it is not Tipler's²⁸; it was not Einstein's; it is not Cornelius Lanczos'.²⁹

²⁵*Insight*, 162[186].

²⁶*Insight*, 169[193].

²⁷Here I am skimming over tricky issues of metaphysical equivalence. Might there be some parallel to the distinction of central and conjugate form to the distinction between a fermionic unity and a bosonic conjugacy? One might find a helpful parallel in thinking of an animal and its pulse. What is the reality of a pulse?

²⁸Tipler's text is very comfortable with the first interpretation, with "Timer Dilation and Length Contraction" (the title of one of his sections, 937-940).

²⁹Cornelius Lanczos, *The Variational Principles of Mechanics*, University of Toronto Press, 1977, 299ff. It is worth having Lanczos version as another take on the subject: "The clock paradox. One of the 'paradoxes' of relativity, which released a flood of literature in half-learned magazines (from the pen of less than half-learned authors), is the so-called 'clock paradox,' which was first posed around 1918 and completely analyzed and elucidated by Einstein. (*Die Naturwissenschaften*, 6, 697 [1918]) In view of the transformation equations, if an observer in system K' compares the readings of his clock with those of system K, he finds that the clocks of system k move faster (that this is not caused by any real change in the rates of the clocks is demonstrated by the fact that an observer in A would find exactly the same, if he were to compare the readings of his

Most likely is the stance, your stance perhaps, that reached some nominal comfort with Lonergan's discussion of section 5.4.1 of *Insight*: his view seemed plausible if slightly obscure, and the first interpretation "inspired by the Lorenz contraction"³⁰ one to be considered obviously deviant. And now I bring you uncomfortably back to that first interpretation. Can you walk and talk your way out of it? If you are discomforted it means that you simply have not interpreted the section in any serious sense. Or, more directly, you failed in the first rule of interpretation, failed to understand the object. At all events, you now have the possibility of checking your interpretative achievement by seeing how you handle the presentations of Tipler or Lanczos. Or perhaps you have to hand the comic stuff of Stephen Hawking?³¹

clock with those of system K'). If the relative velocity u is almost the velocity of light, his clock may register a time interval of let us say 1 second, while the clocks he encounters of system K may register 1 year. This may be expressed in another form. Suppose that a man is being shot out of a cannon with almost the velocity of light and travels to the star Sirius, and is then shot back to earth again with almost the velocity of light. He will arrive back at his starting point after, let us say, 16 seconds according to his own time - that is without aging at all - whereas the inhabitants of the earth will have aged by 16 years. Although this result appears highly paradoxical according to our 'commonsense' notions - which are based on the wrong assumption of an absolute time - there is in fact nothing self-contradictory in it. The traveler to Sirius and back passed through entirely different parts of the space-time world than the inhabitants of the earth and thus there is no reason why they should age by the same amount. The alleged 'paradox' is evident in the following kinematic formulation of the experiment. Homer says: 'I saw Ulysses moving to the right with the velocity u and returning with the same velocity to the starting point'. The observation of Ulysses relative to Homer is exactly the same, except that 'right' is changed to 'left'. Why then should there be a dis-symmetry in the aging of Homer and Ulysses? This purely kinematic description of the events, in fact, omits essential elements of the situation and is thus physically incomplete. If the two participants Homer and Ulysses each carry an accelerometer, the accelerometer of Homer shows zero permanently, which the accelerometer of Ulysses gives a strong reading at the moment of time when Ulysses arrives on Sirius and is kicked back again. The principle of symmetry is not violated because the physical states of Homer and Ulysses are completely different."

³⁰*Insight*, 162[186].

³¹Stephen Hawking, *The Universe in a Nutshell*, Bantam Press, 2001, 9-10, 135-7.

12.3 Measurement

In section 12.1 I already commented on the peculiarities of this section. In section 12.5 the whole experiment of this *Cantower* comes into better focus. But it is as well to clue in to aspects of the experiment as we go along. In the previous section the task was a “simple” reading of *Insight* 5.4.1, or perhaps better a challenging of a simple reading. This is a familiar exercise in science, a version of the process described in sections 1-5 of *Method in Theology*, chapter 7. One is struggling for understanding. I added to that struggle in a manner familiar from science teaching: illustrations and exercises that shake up the reading, help the reader along, expose superficial reading. In a classroom situation in mathematical physics, the next day would involve a return to those illustrations, to the attempts of students to cope, to a further communal effort to move forward. This, I hope, brings the task of interpretation so briefly described by Lonergan³² into the real world. The practical insight (F) is distributed over weeks, as are the other divisions between “it” - really “them” in perhaps a month-spread - and (A), which in the present case is the comfortable control of the solution to “The Elementary Paradox” of oddities of measurement. The next section of Lonergan’s book tackles the general notion of measurement. What I am tackling, however, is an interplaying of my tentative (B) and (D) regarding readers’ perspectives [(C) and (E)]. I am. Indeed, back in my first year class of philosophy, indeed I am on page 24 of the elementary book, *Wealth of Self and Wealth of Nations*, and I might as well quote the relevant passage:

“Think of the question, What is pressure? The immediate answer will be in terms of push and pull. The answer in terms of gas laws involves correlations of correlations of correlations. The repetition is deliberate. Do you recall the simple apparatus used? A volume of gas, a column of mercury, a ruler, etc? Now a ruler already involves a first set of correlations - the reader should not take this for granted:

³²*Insight*, 562[585].

it is an opportunity to wonder and insight into measurement, coupled with the possibility of self-attentive reflection”.³³

This text was the beginning of perhaps a week’s work (three classes. Mon, Wed, Fri, with the work-time in between) for the young ladies: what about you? It is important to pause over this, especially if you are not used to serious scientific reading, which contrasts with most “philosophic reading”. It is a nice illustration of the point made in the first paragraph of *Insight*: a simple illustration of generalized empirical method. And note that to do it justice here would require at least a “three-hour-long” text.

The ruler exercise is the key to chapter five of *Insight*, done with the self-attention of the later definition of generalized empirical method, or following my slogan “when teaching children geometry, one is teaching children children”. You are to slowly teach yourself. My memories of classroom goings-on here are happy one’s: a play time. It can only be reproduce here if you are in an unhurried fun-state.

So, you begin with a meter (or foot, or so) “straight” stick. Next you need a little stick (an inch, centimeter, long...). You have the job of calibrating (...the Arabic, *qalib*), inch by inch, your big rod: let’s presume it is metal. Move the little piece along etc. (In class one delays here to discuss the moves, what might be happening to the little piece... run it back to the previous section to see is it still the same might it not change back and forth etc) So one arrives at a first correlation - the last one of my three above - and with lots of assumptions. What direction is the rod lying in, or does that matter? Is it in a stable context? In class we used to envisage an old-time range, with some circular fueling plates. The rod lying on the stove or range would be hot in spots, not uniform. Etc, etc. So, the correlating is quite tricky. I skip the other two correlates involved: one type in getting a measure of P and of V separately, then the correlation that gives the data for the leap to law. But we were never in a hurry in class, nor should

³³McShane, *Wealth of Self and Wealth of Nations*, 24.

you be: what is the hurry, anyway, if this is contemplation and the fostering of a glimpse of the divine?

What is this *qalibing* all about? We're trying, say, to get the measure of the stove (just as, in the gas experiment we try for the measure of the volume): like trying to get the measure of an opponent in a game. "She's only 5" tall". Still, she might be dynamite on the court, in the field (if you are sharp you'll enjoy the overtones of 'field'!³⁴) You are trying to "get at" the reality of the stove, and this is a start, a very poor start. You get a match with the rod in various directions, with the help of some quite extraordinary assumptions. Which may be way off: the middle of the rod gets hot and expands over the circular fueling-plate; the stove fluctuates similarly. But it is the best you can do, and it may be enough to conclude that this primitive heating thing (it is an odd unity of things) will fit in the corner of your cave, already *qalib*-rated, some distance away (did the rod change in the trip? The question never occurs to you).

Gradually you find that this *qalib*-rating is almost *ad-lib*-rating: it is extremely subjective!³⁵ Now doesn't that take the Euclidean biscuit (or is it a cookie in the New World?). Being five-feet tall has nothing to do with the reality, the real threat, of the opponent. "They will bring rulers and compasses to measure the words", says

³⁴See the index to *Phenomenology and Logic*, under *Field*.

³⁵This is the zone of the key insight in the matter of measurement, frames of reference, etc. Our measures of space and time are conveniences. We are pushed to improve them by the invariants we stumble upon as physics advances. The tentative invariants tease us to try harder. The real geometry of finite dispersedness keeps eluding us. But we would be much better off if we could think straight heuristically in terms of things and their properties and primary relations and secondary determinations. Recall note 13 above, on the stew of things that must be thought of as we envisage an initial emergence of the material universe. On a simpler level think of how Minkowski space-time replaces Newtonian space-time in our thinking: you may find that, while it gives a new frame of reference, contemporary muddles make it a frame-up. And various present adventures in complexifying our thinking of space-time continue the self-hoaxing. We are here, perhaps, at the transposition from poetry to physics of "the witching heat of subjectivity" of Yeats "carried beyond feeling into the aboriginal ice" (see note 9 above).

Aristophanes the *Frogsman*. Your frame of reference may be way off. But if you are just reading on here, you are certainly not getting it, unless you got it before. “Then no method or effort is needed to understand as Aquinas understood,”³⁶ or Lonergan. Otherwise it is the business of “slow repetitious labor of going over and over the data..” How else do you think you might cross the bridge of chapter five of *Insight*, one that Einstein didn’t cross?

What has the simple-minded bundle of Euclidean assumptions to do with the stove, with the tennis player? The stove or the tennis player have each an aggregate of determined conjugates, properties, that give it, her, a real form (real forms, in fact) of spread-out-ness. Well, all one can claim is that it’s a feeble start, with a feeble standard.³⁷

I certainly cannot anticipate the blocks you are finding here, but may you not sense a need for new ways of edging into physics, new twists on the *Foundations of Physics*, new angles on the foundations of geometry, right from the early school grades? Frames of reference are stumbling searchings clamoring - in our human psyche - for the solidity of Moses’ stones of law. What is the real dispersedness of the stove, the tennis player? The stove is a tensed tensile wonder; the tennis player is a tense topologically-wonderous negentropic capacity-for-performances. So what is this mantra of Sanskrit that lives in geo-metry? What is stovometry, soccerometry, Ashestadiumetry? And think of the rich concrete (secondarily determined, then) topology of the production and sales of stoves, the promotion and performance of a world cup or a Wimbledon. Euclid should perhaps have broken down earlier, but that boson-conjugation that is entitivized in photons eludes our little measures until Maxwell nudges us to bow to an invariance of its form. Surprise, surprise: the tennis

³⁶*Verbum*, 1997, 223. That wonderful Epilogue passage.

³⁷“How, one may ask, can one reach new laws except through measurements based on old standards”(*Insight*, 166[190])

ball, the sound of its batting, its sighting, do not obey Euclid. What, then, is its form of being and being heard and seen, even before being heard and seen?

This last paragraph certainly leaps past your beginner's blocks, indeed, past present blocks of the culture of physics. Is there lurking here an acceptable view of the Space and Time of things? But to answer historically you must recall, call in, the new hodic context, the **Cantower** context: acceptable has new meaning statistically-shifted in the new mode of recycling. Think, perhaps, of Husserl's essay on Geometry, the sublation of which was a previous topic.³⁸ We have been coming towards, in homely fashion, his solemn question and title "Die Frage nach der Geometrie als intentional-historisches Problem."³⁹ Some front-runners in physics may be open to the pointing, but there is a prevalent ethos of Euclidean naivete that clings to a mythic space-time that has a structure. Is that spacetime a thing? Is spacetime not, rather, in an older terminology, a formal effect?

Things have conjugates with strange cosmic secondary determinations. The unity of the Galactic wonderland, "The Unity of the Universe", certainly calls for the measure of complex theories of invariants, but Grand Unification Theory is simply a reach beyond Euclid and Einstein to give one level of conjugate forms of a "formal unity constituted by its successive levels of conjugate forms which set up successive, intelligible fields."⁴⁰ Grand Unification does not reach out - even on the low and simple level of physics - to the Galactic secondary determinations of game, set and match at

³⁸It was a topic in section 5 of the original - rejected - Appendix A of *Phenomenology and Logic*, reproduced in *Lack in the Beingstalk*, 154-188. Husserl's view is also treated in *Pastkeynes Pastmodern Economics. A Fresh Pragmatism*, Axial Press, Halifax, 2002, 60-66.

³⁹The manuscript dates from 1936. It was edited and published under the above title by Eugen Fink in *Revue internationale de philosophie* 1 (1939) 203-25. It appears, as an Appendix, under the title "The Origins of Geometry" in Husserl, *The Crisis of European Sciences and Transcendental Phenomenology*, Trans. David Carr, Evanston, Northwestern University Press, 1970.

⁴⁰*Insight*, 510[533].

Wimbledon.

12.4 “A Reflective Interpretation is Guided”⁴¹

The previous paragraph to that quotation begins, “Now the simple interpretation gives rise to further questions”. ‘It certainly does’, sez you perhaps, ‘if 12.3 was somehow connected to a simple interpretation of Lonergan’s verbal flow regarding the paradox’. Lonergan’s practical insight (F) was certainly different from my practical insight (F’). Lonergan’s deceitfully flowing verbal flow made the point to his own satisfaction but not to the serious discomfoting satisfaction of the standard philosophic reader. My twisting flow pushed two ways: first, towards the elementary homework related to (E’), ground-floor gaps that need to be attended to, then, implicitly, to the remote differences between Lonergan’s optimistic or delusional (C) and my (C’). The possibility and probability of following through from the elementary beginning depends “remotely” on a complex of cultural gaps. What are these gaps? So, we enter something analogous to the reflective interpretation,⁴² a sort of joke of the book *Insight*. What, indeed, are the deficiencies of your grasp (E”) of the differences between (C’) and (C)? My (C’), of course, is not the one talked about in the book. I can certainly say that my audience are either physicists or non-physicists. Both are scotomatized by their different present cultures. And you are in one or other of those cultures? You must be: I have simplified, by the principle of contradiction, the problem of the “ever shifting manifold” and pretended to dodge the two real difficulties here with “a smart idea”. So, what is to be done? Audiences’ differences make individual tutorial work the only way to go. Unless?

But now I am leading you to thinking of the longer cycle of incline. So, we are

⁴¹*Insight*,563[586].

⁴²*Insight*,563[586].

thinking of a shift in culture that would make something like a genetic educational viewpoint a cultural ethos, a tone of the treatment of tiny tots and teens, a viewpoint on growing viewpoints and the pitfalls to growth. But, if we are thinking optimistically about that shift, then we are thinking hoddically, in **Cantower** optimism. Otherwise, the tight blind socioeconomic centralist recurrence-schemes of educational destruction will hold down the millennium. The notion of genetic education viewpoint, or universal viewpoint, could, in those destructive circumstances, be considered, like the reflective interpretation, “ a smart idea, a beautiful object of thought”.⁴³ To break beyond those circumstance requires that we make it an object of hodic thought: then indeed it becomes beautiful, efficient, smart. We are obviously on the edge of the problem of **Cantower XIII**, at the door of this decade’s reach for the hodic conception, affirmation and implementation of the integral heuristic that might be named a universal viewpoint.

12.5 Interpretation: Teaching, Learning, Telling

I halt thus at a sighting of the heights, telling you where the journey may lead. But is it a telling? Twenty five years ago I provided a telling of the structure of intra-specialist telling in the form of an order of 64 tellings, the matrix of hodic communications, \mathbf{C}_{ij} , where the \mathbf{i} and \mathbf{j} varied from 1 to 8, and the matrix in its generality could be considered non-symmetrical (\mathbf{C}_{12} not equal to \mathbf{C}_{21} , etc). One could consider it as symmetrical if a matrix element were thought of as a conversation rather than one specialist telling another.

My telling then was not a success. I suspect that the telling will be success only when hodic conversations occur and are discovered to occur: then someone will come up with the bright idea of a periodic table of 64 elements, and the chemistry of hodic communication will get properly, luminously, under way.

⁴³*Insight*,563[587].

So I do not want to pursue that topic here. I want rather to tell something in a telling fashion, in a reasonable efficient fashion. I am back to questions raised in the final section of chapter 1 of *Lack in the Beingstalk*: “Your Fitting Survival”, questions of teaching and learning and telling: now. I note, however, that you would find it interesting to return also here to the last section of the chapter on Interpretation in *Method in Theology*: “Stating the Meaning of the Text”. It will give you a start in thinking about the specialist interpreter telling the text differently to different colleagues, listening to colleagues in specialized fashions, and also about the missing categories of extra-Tower communications, in relation to both research and communications. Here I wish to be more pragmatic, perhaps to be taken in the mood of the first principle of the third canon of hermeneutics.⁴⁴ A few words, then, about how optimally to contribute to the genesis of serious interpretation of Lonergan’s work. That, after all, is what this **Cantower** is about.

Or what not to do when you are trying to interpret Lonergan.

I have, on numerous occasions, drawn attention to the normative location of *Comparison* in the new structure. Comparison may well be useful in what I call **C₉**: communication outside any zone of specialization. That could be seen to resemble Thomas’ *sicut*, or the earlier Lonergan’s ‘clarification by contrast’. But in the new structure it belongs in Dialectic, in the rhythm of the program of page 250 of *Method in Theology*. So, let’s leave that aside, even though it ties in with the problem I have in mind.

That problem can be identified by reflecting on what Lonergan has to say about the exegete speaking to his or her pupils. One communicates best in the seminar set-up, sharing clues and trails, etc. It can be “an exhilarating experience for students”.⁴⁵

⁴⁴*Insight*, 588[611].

⁴⁵*Method in Theology*, 170.

That is a positive suggestion to which I add a normative negative suggestion. It brings to my mind reflections of Lonergan - I do not have a particular reference to hand - on the manner in which really good scholars could cut through, end a debate, settle an issue definitively. You may find it useful to add the contexts of Lonergan's writings on coming to a judgment on just where you are at with regard to an issue or a text or a zone of inquiry. My suggestion is, not to do the seminar thing when you are writing to your academic colleagues, especially if you have not arrived at precision, most especially if you are not competent to so arrive. The community really shouldn't have to share your confusion and ineptitude. This is only a loose suggestion, and certainly it is withdrawn if you must publish or perish, or if you suffering through the thesis process. I will come to positive sides to my suggestion presently, but let me pause over a few illustrations of what I mean.

There has been a good deal of writing about feelings and values in the past three decades, touched off by the Florida conference and the publication of *Method in Theology*. I do not think it very helpful, either to advancing Lonergan's work or to educating students. Regular the work is not thorough: rather there can be simple-minded reference to a mythic later Lonergan who is different from a mythic early Lonergan, for whom willing was some rationalist operation. Regularly, too, the discussion omits any consideration of the complex process of deliberation, a topic with a long history that channels through John of Damascus. Finally, the discussion persists in being descriptive and, indeed, superficial so. This is the sort of thing that brings me back to the Wit and Satire of **Cantower XI**, but it is no joke for a community of disciples to make the heuristics of Lonergan a laughing matter among neurochemical psychologists, who struggle with such questions as, What exactly are feelings? I have touched on this problem in various ways in the previous **Cantowers** and in *Lack in the Beingstalk*.

A second zone of obscure and unhelpful discussion is “Lonergan’s new notion of value”, where the same descriptive obscurity and incompetence is carried into the deeper waters of the fundamental exigence⁴⁶ at the centre of human nature. Those deep waters must be entered without the concrete mafic blocks of the previous obscurity. It must be entered with a larger contemplative self-attention mediated by the heart of Aquinas. Certainly there is a problem here regarding Lonergan’s searchings, his derailment by circumstances and superiors, his exhaustion.

But the problem will not be solved by shuffling - Denzinger-fashion - texts from Lonergan, or by calling in Augustine or Pascal. Have we not here a nice illustration of the problematic process described so briefly in *Method in Theology*, chapter 7, section 2: “understanding the object”. And, further, the first paragraph there is relevant, indeed relevant to this entire **Cantower**: “A distinction has to be drawn between the exegete and the student. Both learn, but what they learn is different. The student reads a text to learn about objects that as a yet he does not know.... the exegete may know all about the object treated in the text”. If you do not know about the object, then you are more a student than an exegete. And certainly you do not become the wise author of a learned article. The object that is to be understood in this particular case is your own concrete exigence for **all** to be conceived more fully and more operationally than the conception expressed in Lonergan’s various treatments of the notion of being and the notion of value, of the interplay of the capacities-for-performance that are human intellect and human will.

A third illustration is had from the growing interest of the past decade in the nature of systematic theology. What I have said of the first two illustrations holds here. Furthermore, an entire **Cantower** was already used to air the matter.⁴⁷

⁴⁶I have been regularly referring to this reality of history, the natural desire for identity with All.

⁴⁷*Cantower VII*.

The fundamental analogue for the new perspective on systematics - in any field - is genetic method as found within biology, and I incline to add, particularly within botany. Lonergan's clear telling of that dates from 1953, the time of writing the Epilogue of *Insight*. It seems that he hasn't really told too many people yet. But then, how many people in philosophy or theology had a serious grip on the nature of even static system fifty years ago? How many people have such a grip now? Here, certainly, we have a slope to climb, one we must climb as students. But if one is to discover what Lonergan gradually grew to mean by theological systematics, by an integral dynamic pragmatics adequate to ground the eighth functional specialty, surely one should take seriously his early invitation to find out about the growth of flowers?

The mention of systematics as grounding the eighth specialty brings us back to the heart of the **Cantower** venture, the promotion of functional specialization, and to the positive side of my negativity. That hodic enterprise will pick up the three problem zones mentioned and slowly recycle them upwards with the energy of emergent probability. But emergent probability includes also immediate recurrence-schemings. So, I suggest once again the possibility of indulging, even privately, the "the scientific moment" of identifying your own positional commitments as you tackle these or any other issue involving the interpretation of Lonergan. Then you might even have the courage to go public, and preface your interpretative effort with statement of positional persuasions or positional competence. Now why does that remind me of the first time I heard Lonergan lecture, in Dublin, when he told the story of the physicist being asked to explain relativity, but without equations, "just in my own simple word"? Wouldn't it be refreshing to read, at the beginning of an article, "I'm writing in my own simple words (and perhaps yours) about feelings, or about system, or about... not because I wish to reach you at your level, but because that is my level best". We are back in the zone of wit and satire, but the point is worth a sad laugh. After fifty years there have emerged few who might teach *Insight*.

I move to my fourth and last illustrative zone by quoting from the final paragraph of a thesis that relates to it. “Finally, there is something to be learnt from Lonergan’s own slow development on the question of method. His final position is the fruit of a life-time of stubborn wrestling with fundamental questions and a refusal to indulge in half-measures”.⁴⁸ The thesis and the zone is one I wish to reflect on in the **Cantower** to follow and the reflection here provides a suitable context for that reflection, indeed for the musings of the first twenty-one **Cantowers**. My emphasis here, and throughout these **Cantowers**, is on brevity, more specifically on doctrinal brevity and on a mode of openness and patience, perhaps I might even claim on something of the *niskama karma* of the *Gita*. There is no short Way to enlightenment, no short cut to the universal viewpoint, or to Lonergan’s flowering view that corresponded to that viewpoint. Fr. Coelho struggles magnificently with Lonergan and with a range of previous theses and studies of the question. My notes and comments on his work alone point to another large work. But they also point to the need for a change of attitude and a change of pace. Here I avail myself of two analogues, one from the immediate context, one from chapter four of *Lack in the Beingstalk*.

First, you might ponder the parallel between asking about the calculus of variation and asking about the universal viewpoint. You may recall, or go back to, the parallel drawn in that fourth chapter: the stages of maturing especially in the century around Husserl’s 1882 thesis on the topic. Present work in that area is done in the developed contemporary context, shared by the serious people in the field. “Asking about the universal viewpoint” fits into the same slow dynamically-sloping model: it is a hodic question. Coelho, Tekippe, Hefling, Crowe, Vertin, myself and others worked in the pre-hodic context. People will certainly continue in that context: getting the thesis in and passed is the job to be done, with a professor and a panel to please.

⁴⁸Ivo Coelho, *The Development of the Notion of the ‘Universal Viewpoint’ in Bernard Lonergan*, Gregorian University Thesis, Rome, 1994, 395..

But we must, as a community of students and theses directors, come to grips in the next couple of generations with the analogy with successful science. “Bolder spirits select the conspicuously successful science of their time”.⁴⁹ The on-going genesis of the universal viewpoint is a component⁵⁰ of the ongoing hodic collaboration. With luck and providence and the *annata* born of culture and grace and embarrassment the community will rise slowly to new levels of the communal wisdom that Coelho writes about.⁵¹ And this leads me to the parallel from our more immediate topic that you may find more **telling**.

It is, even to me as I brood over my finding of it now, a very telling parallel, telling of the slopes and leaps of the spiraling climb. Consider the two questions, (a) What is the universal viewpoint? (b) What is Spacetime? The early twentieth century struggle with (b) lead to the simple stage of a Minkowski Spacetime as context. But gradually the question has moved to a fuller methodological question that still stands against axiomatic seriousness and silliness. Silliness reaches for something like a single set of equations of Grand Unification; methodical physics struggles towards discovering correlations of things of physics that give invariants of concrete geometry. Gradually physics will find the hodic way. You see the parallel of (a) and (b)? The full

⁴⁹*Method in Theology*, 3.

⁵⁰One can study and debate the use of the word ‘component’ here: Coelho returns to the question regularly, summed up in the problem of whether the universal viewpoint was replaced by transcendental method or further by what I call hodic method. It can really become just a matter of words, about which one should not waste time. Above I take ‘viewpoint’ in the simple sense of, say, interested but not engaged perspective. But you could move its meaning along a spectrum of levels of involvement to a full *Praxis weltanschauung*: then the viewpoint would no longer be a component but some form of full involved methodological viewpoint. Section 2 of *Cantower XIII* may throw further light on this for you.

⁵¹ “Transcendental method is a framework for creative collaboration; it is a wisdom whose carrier is the community”(Coelho, *op. cit.*, 391). One should, as Coelho does, contextualize this by Lonergan’s various discussions of wisdom in Thomas and Aristotle.

Unified Viewpoint of Grand Unification for either question is the hodic viewpoint. Through that hodic operation over centuries there will emerge a sequence of thematic answers to both (a) and (b). (a)'s answer will be a better ordering of the totality of perspectives, shared by a community; (b)'s answer will be a better ordering of particles, similarly shared. But let me postpone further pointers on this matter to the third section of ***Cantower XIII***.

So, back to my own effort of earlier sections here. Was I teaching *Insight* chapter 5 in sections 12.3 and 12.4? I was merely illustrating elements in that teaching and indicating goals of that teaching, and in doing so perhaps indicating the general problem of teaching the book *Insight*. Over the years I have drawn a parallel between *Insight* and a book I happen to have to hand in the late 1950s, Georg Joos, *Theoretical Physics*, and it is worth recalling that parallel here. Joos book is the same length as *Insight*. It is something of a graduate text, covering Physics as it stood at that period. My regular comparison is to consider the section Joos has on "The Mechanic of a Single Particle", which runs for 25 pages. What is covered there I covered in lecturing during a full semester of three hours per week: about forty hours. I used various lengthy texts, and the students worked at detailed examples of motions under various forces and restrictions. Lonergan's chapter five is something over 30 pages. Like particle dynamics, it presupposes ground covered, discovered, already. It would require, surely, 40 hours of teaching, with the back-up of some lengthy serious texts and time spent in grappling with exercises. The big difficulty is that, first, Lonergan's graduate text does not come, as Joos' book does, in the wake of a century of serious texts. But, secondly, it represent a precise cultural shift for which there was little or no warning either in the scientific or in the philosophic community. No doubt there are those who would dispute the latter: then that problem is to be taken up, not here, but in the cycling seriousness of genuine dialectic analysis. What chapter five of *Insight* needs is the back-up of serious texts in both the new physics and the new philosophy: indeed

generalized empirical method invites these two to merge in a quite uncomfortable newness. What chapter five has found most commonly in “Lonergan teaching” is, I suspect, summary treatment if not summary dismissal.

And perhaps the same holds for other sections of the book. I had the luck and the privilege of teaching graduate students chapter 19 of the book - on the question of God - for three consecutive years, each year a total of about 80 lecture hours. I stuck with the text, adding stuff from *Summa Theologica* I qq. 1-26. I avoided messing around with muddles that belonged elsewhere: that is the point made quite well in the fifth paragraph of the chapter, the paragraph on “going beyond”.⁵² Why turn into a pseudo-problem of god which is really a prior problem of dog? And still the time was too short; one lecture hour each on the 26 places of section 9 was too short. A semester on the 18th place there, meeting the point of intersection of the timeless with time, saying an adult hello to the prime collaborator in our creativity, would be too short. But we are edging here towards the strange view introduced under the principle called **Tomega**,⁵³ and the basic character of pilgrim human living.

And what might one do with the thirty odd pages on Interpretation in *Insight*? Particularly when there is the challenge of sublating those pages into the hodic context, twined round the ordinary canons of empirical method of the third chapter. Well, we will have to see what the community can do in the next decade: I am throwing in my beginner’s contribution in these next seventy **Cantowers**. Up to now, I’m afraid, the interpreting of interpretation has not been earth-shattering.⁵⁴

⁵²*Method in Theology*, 287.

⁵³The principle was introduced in *Cantower IV*. It simply draws attention to the significance of the claim of *Insight* 417[442]: “Theoretical understanding seeks to solve problems, to erect syntheses, to embrace the universe in a single view”.

⁵⁴In *Cantower IX* I gave as an example of such the failure the conference on Lonergan’s view of interpretation represented by the volume *Lonergan’s Hermeneutics* edited by Sean McEvenue and Ben Meyer, Catholic University Press of America, 1989.

Back then to the problem of teaching chapter five and dealing with the twin paradox. No: the problem is not solved by grappling simply with my few clues. It takes a great deal of solitary grappling with one's own dispersedness. Indeed, it will take a good deal of communal grappling to establish the ethos of new myth-free physics. It is a hodic task, in which we do for the muddles of centuries in physics what Schumpeter suggested for economics, "an incessant struggle with creations of our own and our predecessors minds."⁵⁵ And central to those creations has been, for millennia, an arrogant or frightened or estimative⁵⁶ objectivity that is attached to our feeble efforts at taking the measure of the dispersedness of our dark material companions in the galactic trek towards home.

12.6 Poises

In conclusion it seems as well to carry forward the context of *Cantower IX*, which moved around the topic of poises, positions. In so far as you did, indeed, carry forward that context, THEN it is very very well. But that is extravagantly optimistic. The data here, of course, is you, gathering up your reading of the present *Cantower* in its psychic reality, not just "all you know somehow with you"⁵⁷ but all of your somehow withness.⁵⁸ I would be extremely surprised if you could brightly claim that yes, you were **poisitioned** as you read along, pen and scribbler in hand-not-out-there and thought about extension and duration: you would have had luminous control of

⁵⁵Joseph Schumpeter, *History of Economic Analysis*, Oxford University Press, 1954, 4.

⁵⁶I am referring to the role of the *vis cogitativa* as we met it in various ways in *Cantowers VII-IX*.

⁵⁷*Insight*, chapter nine, conclusion.

⁵⁸I am referring back to the struggle of *Cantower XI*.

that “so it comes about”⁵⁹ turn for the brighter. But not to worry: such a brightness withness of being is only a serious probability for a mature third stage of meaning. But at least it is worth envisaging it: it is part of the destiny of our pilgrimage.

The poise that I would have you consider now, however, is the poise of *theoria*, of kataphatic contemplation. Discomfortingly, it would best be considered within its practice: that is the new norm of generalized empirical method in its attention to subject and object in tandem. It would best be considered, of course, precisely as you pursued the topic of section 12.3 in far more detail than was suggested there. So, for instance, one has to patiently, unhastenedly, with a type of peaceful eternal poise, draw out the meaning of the last nine lines of *Insight* 5.2.4: “For example, the wave front of a light signal....”. One does so by drawing it out and drawing it for the transformation mentioned, but then also for the curious possibility that the wave-front remain a sphere in a moving frame. That, at first sight, seems crazy. So, you are back with Homer and Ulysses, and you cover pages with equations and diagrams. I certainly did; Lonergan certainly did: are you really that bright to just be able to read on?

Read on. What a funny phrase. We might well go back to the “Dialectic Wit” of the previous *Cantower*. My first year university classes always enjoyed - and were relieved by - our **reading** of various course descriptions in the university calender: about **in-depth** half credits in this and that; about what was to be **covered**. But then, doesn’t Tom Brokaw offer **in-depth** coverage in a section of the evening news? You could well spend - and be led to spend by bad teaching - a life **covering** the meaning of Lonergan, or **covering** the meaning of the New Testament. I still remember vividly, Proustwise, my first evening in the Jesuit novitiate, September 7th, 1950, when we were “given points” for mediation on the morning of the 8th. The topic was the rich young

⁵⁹*Insight*, 514[537]. I invite you to finish the sentence there. What a biography lies hidden in that coming about!

man; the points were superficial. I suppose I already knew I was in the wrong place; I left twenty years later. But I had the luck of gradually finding that contemplating that “wave-front of light”, the Nativity stable, and contemplating the stable neutron were the same type of gentle project, indeed, part of the same project: even, the same project. What luck have you had? Did you get points for mediation on *Insight* that led to **covering** rather than **discovering, uncovering**? Or, God help us all, did you give such points? What is basically to be **uncovered** in this next generation of reading *Insight* is our selves in our cover-stories, holding down both jobs and minds.

So, with a bit of luck and unjust stewardship, “a problem of interpretation arises”, and becomes us in this generation, becomes a conversion-topic, a conversation peace, but above all a cross and a bridge⁶⁰ to a private pace and poise and placetime.

⁶⁰A fuller meaning of this cross and bridge will emerge in *Cantower XXXIII*.