

*Cantower XXXI*Time and Distance: Feynman I, ch.5; *Insight*, ch.5.October 1st 2004.**31.1 Sticks and Tones**

The West Dublin Conference of August 2003 was, I would say, dominated by the mood, the tone, of two exercises: the exercise described in *Cantower XXVII* which had to do with the principle of displacement; the exercise to be described here of inventing a measure of space. But the word *tones* brings to our minds another mood-setting. The measuring exercise on the third day was preceded by the playing of the second and first movements - in that order - of Beethoven's *Pathetique* Piano Sonata; the 'water exercise' of the first day was laced into the playing of the Chopin Nocturne the six pages of which set the tone of the first six *Cantowers*.¹ Both exercises danced round the issue of adequate conception, the process of adequate conceptualization. It is a massively important topic in our daze of nominalisms: sticks and stones break bones, but mere naming hurts our hearts.

The issue was heightened by our discussion of a possible adequate concept of the *Pathetique*. Terry operated within a concept of the Sonata, as did Beethoven, and can anyone doubt but that molecules were involved in both conceptions? And are not molecules involved in the adequate concept? Are you and I not thinking, just 'now', of the Sonata in relation to molecular being; so we are trapped into the Yes answer

¹See *Cantower I*, p. 5. Our pianist on both occasions was Terry Quinn. The nocturne in question is the C minor, Op. 48, No. 1. I asked Terry to halt at bar 23, the middle of page two in the regular edition. I wish to recall here, conveniently, that the order of appearance of these *Cantowers* is not the order of their emergence. This, too, relates to the mood of that conference. I had written, and made available, the first section of *Cantower XL*, on "Functional Foundations", which homed in on the neuro-chemistry involved in both the tasting and the conception of Proust's tea and ours. As you will notice - and perhaps slowly intussuscept (? con-cept) - the central issue was the slowness of adequate conception and the concreteness of metaphysics.

fermented anyway by amygdalaic ears. And what of Chopin's nocturnes, played by and conceived of by Clara Weich Clara Schumann) or Fanny Mendelson (Fanny Henshel)?² It is a topic we have met before on various occasions. There is a different conception, a different playing, by what I sometimes talk of as a different species. I recall a stray remark that was called out of me during that conference, That the elements of meaning as regularly described by Lonerganists belong to No Body. The point, of course, was implicit in Sandy Gillis-Drage's contributions to the previous conference, now fermented forward into the tone of a book.³

I write repeatedly of *Tone* here. My handy *Webster's New World Dictionary* gives a spread of ten generic meanings, with subdivisions, and no doubt the OED would spread further. And the spread is relevant, as relevant as the spread of the tone that is a present topic. 5,a) of the Dictionary's meanings reads: "the prevailing or dominant style, character, spirit, trend, morale, or state of morals of a place or period".

This is a recall, of course, of the topic of *Cantower XVII*, section 1, or of the parallel section one of *Insight* chapter 17: the business of mystery. So the issue cuts to the bone and flesh: there is the groaning round, surround, of the tone of our conceptualizations, the conceptualization of our tones.⁴ A Platonic nominalism haunts our axial selves, cutting us off from the hints of Aristotle and Aquinas, for whom "the definition of man and, as well, scientific knowledge of man prescind from these bones

²A context is Jeffrey Kahlberg, *Chopin at the Boundaries. Sex, History and Musical Genre*, Harvard University Press, 1998. Around p. 60 are interesting details regarding Clara Schumann's *Notturmo, op.6, no.2*, and Fanny Mendelson's G-minor *Notturmo*.

³Sandy Gillis-Drage, *Beyond Present Feminism. ? Woman What Gives*, Axial Press, Halifax, 2003. As she notes in various parts of the text this introductory book slips past various more difficult topics such as neurodynamics, religiosity, thinghood, etc. But it points to key turns in the road.

⁴"Groaning round"? This perhaps brings to mind the round, surround, of functional specialization as a toned, tuned, morality, treated of in *Cantower XVIII*.

and this flesh but not from bones and flesh.”⁵

The point is as relevant to water and sticks and circles⁶ as it is to nocturnes and sonatas. It involves, invites, an intussusceptive transposition of the Hegelian insight that Lonergan lauded.

“As the labor of introspection proceeds, one stumbles upon Hegel’s insight that the full objectification of the human spirit is the history of the human race. It is in the sum of the products of common sense and common nonsense, of the sciences and the philosophies, of moralities and religions, of social orders and cultural achievements, that there is mediated, set before us the mirror in which we can behold, the originating principle of human aspiration and human attainment and failure.”⁷

What is the direction of that intussusception? It is towards a third-stage luminosity regarding and guarding the distinction between technique and understanding. Humans live by technique, especially the technique of talking, and in the third stage of meaning we will live in the luminous tone of that living, so that a fresh meaning for Quintillian’s claim will be in the air, a parent to daily doings: ‘paene

⁵*Verbum: Word and Idea in Aquinas*, 165. The reference given there is to *In Boet. De Trin.*, q.5, a. 2c.

⁶See *Phenomenology and Logic*, 357. One understands the circle within a geometry, and further still in the story of geometries reaching for the meanings of similar symmetries.

⁷I quote from p. 14 of a Lonergan archival file labeled A697. It contains a typescript numbered pp. 8-23. Very plausibly it is a continuation of the sketch of a first chapter of *Method*, found in file V.7, where there are nine pages of typescript that is the beginning of that first chapter. File V.7, the discovery file of functional specialization (February, 1965) is reproduced as chapter 2 of Darlene O’Leary, *Lonergan’s Practical View of History*, Axial Press, Halifax, 2003.

iam quidquid loquimur figura est'.⁸

How THEN are you present, for instance, to a Ballade of Chopin? Certainly, with Steiner, many can admit to a heart-break lifting.⁹ But is the lifting not larger for the mind-bent, finger- molded, hand-clasped, muscled? And is that mind-bent think-skinned lifting not also a lifting of the conceptualization that haunts the larger listener's molecules?

We wade water here that is the edge of an ocean, a notion, and we must turn from the edge to our seemingly simpler exercise.¹⁰

For the exercise of that Wednesday morning I had to hand the apparatus of the previous Monday: the coat hanger with two candles attached, the jug of water. But I also had manufactured that morning two pieces of wood, one about a foot long, the other a little less than 1/9 the length of the other. **Long? Length?** And so we began.

It was an old exercise for me, done in various ways in two decades of undergraduate classes. Yet it was a fresh exercise, a new reach for a more adequate conceptualization of what we call, figure as, *measurement*.

How to conjure up the reaching on paper? How to restore us to our humble

⁸*Institutio oratoria*, IX,1,12. See note i in the new edition of *Insight*, 802. My loose suggestive translation is "Almost all our speaking is shadow-boxing".

⁹"A tune, a momentary cadence can come to possess our consciousness.... generate shared prayer and mediation unleash tribal mania and collective fury. A solo voice, out of sight, arching from the dark or from the quiet of morning, can transmute the space, the density, the tenor of the world. It is not only 'cheap music', the cunning jingle of the crooner, the trash-tune on the electric guitar, that breaks the heart: it is a Monteverdi lament, the oboes in a Bach cantata, a Chopin ballade". I quote from a magnificent essay on music in George Steiner, *Errata: An Examined Life*, Weidenfeld and Nicolson, London, 1997, 73.

¹⁰We shall return briefly to the notion, and to its relation to the transposition of the Hegelian insight, in the concluding section. Its fuller treatment will carry us through *Cantowers LXVI - LXXXI*, on symbolization, and indeed push us forward towards the Eschatological *Cantowers* of the final years.

empirical selves? Certainly, a how-to question beyond a corner of a *Cantower*, beyond the “hodicant” of these next decades, perhaps even these next centuries. Still, a pause over our Lazarus stink-state - not four days but four millennia - may stretch jacketed molecules, so that poor jack might fleetingly sense immortal diamond, and dumb molecules of dead description may stir towards an ex-plaining, and a sonata can fracture a heart.¹¹

The mature thinker, a poised extreme realist, can conjure up the meaning of our reaching through an hour in common phantasm; the beginner begins naively yet most profitably. In primitive poise I draw our attention to two rough sticks. The little one can slide, sufficiently straight whatever that means, along the big one: whatever big means. There is multiply present a primitive sameness: the two sticks can be anywhere in the room; anyone can do the conjuring; etc etc: the pause can carry one back or forward to an ABC puzzling.¹² Our hidden interest is to escape the fogginess of here and there, like early Egyptians or ancient Orientals, to a safe common *nomos*, in such talk as might link breadth of hand and height of horse. Our interest here? A trickier topic, best reserved for a following section. There is, then, us and the two sticks. I place the little stick against the larger, mark its end-reach and slid it along so that the other end lines up with the mark, and I can mark again. How simple: we are on the way to making a ruler.

But has something, anything, happened in the slide-along? I move a small piece of iron very slowly along the top of an old-style stove or range and it gets bigger or smaller depending on whether it is over colder or hotter zones. Might there not be something in the here-and- there air? So we assume, we let ourselves assume, even without noticing the assumer, the assuming, the assumed. Like Greek atomists, we

¹¹I am referring to such a context as is given by the work of Candace Pert, considered in *Cantower IV*. There are also the references to the Hopkins’ poem, “that nature is a heraclitean fire” quoted in a related context as the preface to the final chapter of *Music That Is Soundless: A Fine Way for the Lonely Bud A*, Axial Press, Halifax, 2004.

¹²*Insight*, 26-7[[51]; 504[527-8].

might be boggled by the task of marking end-points: for what and where are the points? The task could trip, like the caterpillar coordinating its own legs. So, practicality dominates: we need to divide land, to erect shrines.

Such primitive pausing helps us along before we settle on a more modern need, such as I describe in *Wealth of Self*, when we pattered with the Boyle's Law apparatus.¹³ Do you recall it: the mercury in the bent tube etc? There, as every schoolgirl used to know, the task is to relate the volume to the pressure. Relate? What we are doing herenow - or therethen - is reaching for the meaning of a line in *Insight*: "... finds its ground, not in experience as such but in the combination of combinations etc etc"¹⁴ Did the first reading of that line reach you as an invitation to pause, reaching for such a complex meaning as "the correlation of correlations of correlations" that is the leap to Boyle's Law?¹⁵

Our classroom experience, therethen, was of tensions, impatient axial molecules: for you reading herenow perhaps not as discomfoting, for perhaps you are not reading with us, with our pace, a page an hour or less. Less? The ruler-making can grow into an appreciation of the silliness of our Euclidean effort, the gap between our *nomos* and the real deal, the secretly dreaded existential gap between our horizon and the field. "The field is *the* universe but my horizon defines *my* universe."¹⁶ And the field, the stick, I measure is thus measured by a frail creation of my minding.

¹³*Wealth of Self*, 24.

¹⁴*Insight*, 81[104].

¹⁵*Wealth of Self*, 24. *Insight* 90[113] has "combinations of combinations of combinations".

¹⁶*Phenomenology and Logic*, 199. You might profitable follow up the index there, under *Field*.

You have the advantage of unhurried anxiety¹⁷: the practicality of getting somewhere in a two-hour class-session carried us on that day. But one delightful pause of our group-therapy may tickle your fancy and your fantasy. I had to hand the apparatus of the previous searching into the principle of displacement: a coat-hanger to which was attached two candles. I dangled the coathanger, so that the candles hung vertically. As it happened - it was not pre-planned - the distance between the dangling candles (including the holding strings above them) was roughly the same as the long stick. I ranged the stick across the coathanger and lowered it between the strings, the candles. Does the stick change as I move it down, horizontal to the ground? Is it getting longer, so that it presses the candles outward in its descent? Might this be the case? So, gradually we find that the strings are not parallel, that as the candles approach the centre of the earth they come closer to touching, that our little cube of water of the previous Monday was really a piece of a pyramid, as Archimedes well knew. And so on. The stick, then, does not change in its descent, in some Minkowskian messiness. Or does it? But we must go on, ready to stumble forward out of today's horizon into tomorrow's fresh reach for the field.

Perhaps this simple rambling, as we proceed, can help you towards an understanding of that key paragraph in chapter 5 of *Insight*, beginning with "This possible revision of standards sets a logical puzzle", and centering on the fact that "A basic revision, then, is a leap." There are layers of revisions involved in what we are doing here: we shall tinker or toil with some of them in the next section, depending on your mood and on the degree of revisioning, your revitalization, your degrading of sick axial impatience. The revisioning envisioned by *this* section is indeed a basic

¹⁷Lonergan picks up, in *Insight*, on Harry Stack Sullivan's notion and points to a possible systematization in *Phenomenology and Logic*.

revisioning, engramming,¹⁸ and the leap will be a miracle leap of the lamed twined decade-wiser into muscular habits. The lesser leap discussed in chapter 5 of *Insight* is a leap to a fullsome heuristics of measurement, a heuristics that escaped Einstein and Feynman, heartily suspected as absent by John Bell.

But let us get back to our simpler leaping. We have succeeded in inventing the set of correlations that is our rough ruler, measurer. Now we can tackle the Boyle's Law experiment and apparatus. Do you have memories of the experiment from your school days, of adding mercury and watching changes of heights? So, you correlated your ruler to two different changes of heights, one related to volume, the other related to pressure.¹⁹ Two lists emerge: correlations of correlations; and there remains the non-logical leap to be juggled forth, giving the correlation of correlations of correlations that is Boyle's Law. And, if the leap occurs, there remains only briefly the remains, an episodic molecular memory unless it be soaked in semantically.²⁰

Have my six pages held you for six hours? They have held me for decades of surprize in an embracing of the universe.

31.2 A Logical Note

What have we been at in the previous pages? It seems appropriate to throw in here the larger context given by the short section 2.6 of *Insight* chapter 5. The section is

¹⁸The revisioning here is simply print-grammed to you: engrammic presence is another world, a felt field-stretch talked of in chapters 2 and 3 of *Lack in the Beingstalk*. *Engram*, you may know, is a word from biology or psychology, pointing to a permanent tissue or psychic change.

¹⁹How related and correlated, with what hidden assumptions? Scope for more delight! I urged my class to cultivate, engram in their psyches, the attitude sloganized as "thank God I do not understand!"

²⁰I note that, in a mature metaphysics, permanent comprehension and Newman's 'real assent' are to be thematized within a contemporary neurodynamics of molecular embeddedness.

worth quoting fully here:

“It is to be observed that transformation equations, operations of transforming, the definition of tensors by their transformation properties, and the whole foregoing account of the differentiation of geometrical manifolds belong to higher-order statements.

For distinct reference frames assign different specifications to the same points and instances, and they assign the same specifications (numbers) to different points and instants. Accordingly, they must belong to different universes of discourse, else endless ambiguities would result. Now the relations between different universe of discourse can be stated only in a further higher-order universe of discourse; in other words, the relations between different universes of discourse regard, not the things specified in those universes, but the specifications employed to denote the things. Thus a transformation equation does not relate points or instants, but it does relate different ways of specifying the same points and instants. Similarly, such a property as invariance is a property not of a geometrical entity, but of an express regarding geometrical or other entities”.

This present section is a reflective pause, a taking the measure of our measure of measurement that can add a little²¹ to the reading both of the previous section, of the next section, indeed of the entire *Cantower* project in which you are.

²¹How little is perhaps best intimated by adverting to two other contexts. There is the context of mathematical logic given by Lonergan’s *Phenomenology and Logic*, and I would draw attention especially to Hao Wang’s reflections on languages and metalanguages that layer upwards in pairs. There is the fuller context of functional specialization, the meaning of my slogan, **A rolling stone gathers Nomos**, measure. In “Elevating *Insight*: Space-Time as Paradigm Problem” (*Method: Journal of Lonergan Studies*, 19(2001), 215-17) I draw attention to the need for functional specialization in physics. But more immediate is the context mentioned earlier, at note 9, the notion that is you yearning for an engraving of total history.

In which you are?

So, I bring you to muse over the central words of the quoted logic note of Lonergan: “different universes of discourse”. From note 9 and note 21, as well as other hints, you must suspect that I am rounding out and on and off these ‘gestation *Cantowers*’²² towards a fresh contextualization of the climb?

If you have been with me to some degree, degrading of axial sickness, through the thirty essay that branched out from the beingstalk,²³ then the phrase “universe of discourse” calls forth harmonies of meaning in this fresh reading of the short section of *Insight*. What might Lonergan have meant by “universe of discourse” here? Do not underestimate him, as if the rest of the book came to him as a shock. He is poised in the middle of this bridge to the human sciences, heading in this poor interpretation of himself, towards a heuristic contextualizing of all universes of discourse in the strange viewpoint that he cultivated in himself on the way towards his inadequate expression of it.²⁴

What universe of discourse were we in in section 31.1? But there is no **we** with a common universe of discourse, but you and I corded together in a struggle of what I would hope is an effort of “ a reflective interpretation suffering from two obvious

²²For the record I note that the *Cantowers* up to February 2004, up to number 23, were posted on the Website by March 2003. The “gestation *Cantowers*”, as I call them, numbers 24-33, (March - December 2004) are being posted on the Website in blocks: 24-27 on December 1st 2003; 28-30 on March 1st 2004; 31-33 on June 1st 2004. They celebrate Lonergan’s pre-natality. Might they vibrate through layers of styles and universes of discourse, like Joyce’s “Oxen of the Sun” (*Ulysses*, chapter 14) to birth a new mothering tongue?

²³The proximate context of this present effort is chapter four of *Lack in the Beingstalk*, where I parallel our efforts with the developments of the calculus of variation in the nineteenth century.

²⁴Adequacy and inadequacy of expression: that is a tricky topic that I shall try to move into a new context in section 3 of *Cantower XXXIII*.

difficulties.”²⁵ There is the shifting manifold of you; there is deeper mess of “such obscure objects” as your supposed universes of discourse out of which I may be vainly trying to get you to leap.

For starters, however, there are our two universes of discourse, mine pirouetting on forty five years of reading this paragraph, yours leaning on a lesser dance. The years of climbing have left me with my own GUT, my own version of UV, and you may well be heading there. The question of reflective interpretation is, how do I help you to luminously get there. Note the placing of the adjective *luminously*. The effort of reflective interpretation is to have luminousness internal to the process, to move in the light of one’s own development. I invite, then, a change in your universe of discourse.²⁶

But in the process, What universe or universe of discourse are we in? What universes of discourse are glided through in chapter five of *Insight*, where the gliding is luminously controlled by Lonergan, but regularly missed in a first reading.

Let us take a ramble through the first section above. What was it about? *About*? Where have we seen that word before “about about about”. We were talking about measurement, were we not? But were we not also talking about our talk of measurement? Indeed, you will notice that I was talking about our talking about. And doesn’t spontaneous measurement itself involve talking about the measured? And doesn’t instruction in measurement, be it the instruction of simple metric measurement, or the instruction in ethical *nomos*, involve more twists of talk about? Do all these shifts involve different universes of discourse? Do they overlap, converge, even conflict, like

²⁵*Insight*, 563[586].

²⁶You may be helped towards discerning your own universe of discourse by reflecting on those of MacKinnon and Jaspers as they are briefly presented in *Method in Theology*, 253-265.

when one asks whether the adjectives *short* and *long* are short?²⁷

So, “a problem of interpretation arises,”²⁸ the title of *Cantower XII*, and the problem is much more complex than the muddle of the twin paradox treated in that essay. But let us make matter worse. Does my universal viewpoint include heuristically your viewpoint and mine? Surely it must, for metaphysics is a luminosity of the concrete intention of all, including the intentions of each intender. Would not Russell enjoy our muddling along here in a class of all classes? Does my universal viewpoint include heuristically the viewpoint of the Incarnate Word, in which, certainly, “the universe can bring forth its own unity in the concentrated form of a single intelligent view.”²⁹

How does one sort out this muddle of expressions and worlds and discourse-universes? And within that muddle there is the simpler muddle to which the short section 2.6 of chapter five of *Insight* directly refers. Is talk of ‘Minkowski space’ talk of a real space? Can you re-write *Cantower XII* in the light of that question?

31.3 Feynman’s Chapter Five

My original idea at this stage was to deviate into Einstein’s view of the clock paradox³⁰ - that key problem of chapter five of *Insight* - before venturing into two sections on the chapter 5s of Feynman and Lonergan. It certainly would be an illuminating exercise in universes of discourse and their confusions in a great mind like

²⁷In the larger context that follows *Cantower LVI* we should be able to develop a heuristics of the standard range of paradoxes, including those lurking in incompleteness theorems. The implicit reference above is to Grelling’s paradox (see, e.g. Kneale and Kneale, *The Development of Logic*, 656).

²⁸*Insight*, 161[186].

²⁹*Insight*, 520[544].

³⁰*Die Naturwissenschaften* 6 (1918), 697.

Feynman's, but it seemed eventually to be too much of a difficult distraction from the main drive of these five *Cantowers*. At all events, the matter is taken up very competently by Quinn, and I invite you to share his adventure in functional interpretation.³¹ Besides, we have Feynman's confusions of universes of discourse to contend with, sufficient for the day.

It is evident, and will become more so as we move along - especially in *Cantower LIV*, that I admire the teaching skills and the commitment to understanding of Feynman. But there remains the fact that escaping an entrenched culture is a massive achievement. I share, and have always shared, Feynman's suspicion of philosophy.³² But Feynman's suspicion is that of a truncated subject's rejection of the rejection of understanding by a culture of truncation. Our rejection now, I would like to think, is the broader rejection of truncation in the present culture, but primarily in ourselves, primarily through our grim and jolly little exercises in GEMb

Such exercises are just not in Feynman's world, horizon: the heuristics of the field³³ simply eludes him. But let us not drift into a semblance of third-order consciousness. Let us keep to the mood of elementary exercises and reflections: though I would presume that the previous section has really shaken up your notion of what we may regard as elementary!

With that shake-up in mind, in minding, in whatassing, it is **interesting to pause with** the first paragraph of his chapter. I reproduce it immediately:

"In this chapter we shall consider some aspects of the concepts of *time* and *distance*. It has been emphasized earlier that physics, as do all the sciences,

³¹In *Journal of Macrodynamical Analysis*, 4(2004).

³²"He watched his mind 'turning off'" (John Gribben and Mary Gribben, *Richard Feynman, A Life in Science*, A Plume Book 1998, 54) begins an entertaining account of his first turn-of in his undergraduate days. One should brood over the cultural block that twists the **watching** of so many brilliant people away from **minding**.

³³See note 16 above.

depends on *observation*. One might also say that the development of the physical sciences in their present form has depended to a large extent on the emphasis which has been placed on the making of *quantitative* observations. Only with quantitative observations can one arrive at quantitative relationships, which are the heart of physics”.

“Interesting to pause with”: does this bring back memories of our pause with the little cube of water, or with our two sticks? Do you find that “the pause” is a discomfoting challenge, something not of the culture? I am quite affirmative, normative, positional, regarding the reality in me of “interesting”: do I share with you the “detecting fever”?³⁴

In the next section we shall take up the first paragraph of Lonergan’s chapter by way of contrast, but you might well take the two together. Both are leads into the problem of time and motion: do they image the same universe(s) of discourse?

Commenting on the paragraph could be a lengthy business: best to nurture questions. What, then, is an aspect of a concept?

But the root question is, What does Feynman mean by *concept*? It is the root problem of systematic thinking, its emergence, its character, its control. And the problem fits into the larger context mentioned in his second sentence. Emphasized earlier? “*Observation, reason and experiment* make up what we call the *scientific method*”³⁵ We are back, are we not, in the discussion of section 28.3 and section 29.1 on the simple contrast between the standard model and what we actually do. The beginning of the next paragraph there poses the question unanswered anywhere in Feynman: “What do

³⁴A phrase taken from Conan Doyle’s fiction. See *Process*, ch. 1, section 5, “The Quest of Sherlock Holmes” . If following up on Feynman’s truncation eludes you, you might find it enlightening to follow up truncation in ones of literature.

³⁵Feynman I, 2-1. The italics are his.

we mean by ‘understanding’ something?” It is, of course, answered in some way by Feynman’s efforts to teach, a later topic.³⁶ And the problem of universes of discourse arises once again for you. Does the universe of discourse of a good teacher include somehow the universe of discourse regarding procedure: Is it not, for better or worse, on the edge of what I have named GEMb?

The third sentence deepens the issue with another “emphasis’: on *quantitative* observation. Certainly a correct emphasis, and our adventure with the little sticks illustrates an early reach for such control. But is Feynman, are you, sufficiently clear about what is meant by quantitative relation? If you are even vaguely familiar with the second section of chapter 16 of *Insight* you will sense a disorienting lacuna here. “An essential supplement to clarification here, and indeed throughout contemporaries theories of particle physics, is the distinction between primary relativity and secondary determinations”.³⁷ One must conclude, I think, to a massive methodological muddle lurking in this first paragraph.

So Feynman slips away from the task of taking the measure of measuring, on to Galileo’s elementary pulse-taking strategy of measuring. Measuring, indeed, is his central topic through this elementary introduction, though Feynman’s best contribution is the manner he communicates and diagrams the range of ‘distances’, from nuclear radius of 10^{-15} meters to the puzzling “edge of universe” at 10^{27} meters. The handy Frame of Reference for all this - recalling Lonergan’s reflections on such frames³⁸ - is a Euclidean space, based ultimately on our ruler-making with all its obscure assumptions, but not thus based, with positional clarity etc, by Feynman.

³⁶*Cantower LIV*: “Quantumelectrodynamics, Pedagogy, Popularization”.

³⁷*Phenomenology and Logic*, 320, note 3.

³⁸*Insight*, 5.2.3. What I am in fact pushing towards in this particular *Cantower* is the perspective on frames of reference that is raised in chapter 4 of *A Brief History of Tongue. From Big Bang to Coloured Wholes*.

Here I wish only to add a few further pointers by selecting odd bits of Feynman's text. I would note that my interest is broad communication, mind-opening suggestions, but it is good for you to note that there is the other direction to be eventually taken, the direction of functional interpretation, a task that will occupy us throughout 2005.

First there is the question of time. "We can speak of the lifetime of the newly discovered strange resonances (particles) mentioned in Chapter 2. Their complete life occupies a time span of 10^{-24} second, approximately the time it would take light (which moves at the fastest known speed) to cross the nucleus of hydrogen (the smallest known object). What about still smaller times? Does 'time' exist on a still smaller scale? Does it make any sense to speak of smaller times if we cannot measure - or perhaps even think sensibly about - something which happens in a shorter time? Perhaps not. These are some of the open questions which you will be asking and perhaps answering in the next twenty or thirty years."³⁹

They were not asked then. What about the first half of this century? We need a much deeper communal academic positional grip on the durational dispersedness of things if we are to get out of the set of muddles that bedevils the *nomos* of elementary physics. Might you in these decades be asking, or encouraging the asking, of these questions, questions that are not genuinely open but contracted by axial universes of discourse?

So we may move to the same problem regarding extensional dispersedness. There is in Feynman the discomfoting context, shared with so many others, of a space

³⁹Feynman, I, 5-3. Later the question of large-scale time comes up. "At some time more than five billion years ago, the universe started. It is now believed that at least our part of the universe had its beginning about ten or twelve billion years ago. We do not know what happened before then. In fact we may well ask again: does the question make any sense? Does an earlier time have any meaning?" (Feynman, I, 5-5) As noted in the text above, the question is not open but enclosed in a crippling cultural context: my thesis, as you know by now, is that the opening of questions pivots, spirals, on the recyclings represented by the hodic tower. More on this in the final section.

(and time) that has a curious objectivity, that puts us 'very realistically' in the problem of his question marks regarding the edge of the universe.⁴⁰ "Space is more or less what Euclid thought it was."⁴¹ Wow! But again, let us venture towards the question of the small in extension. "The length unit 10^{-15} meter is called the *fermi*, in honor of Enrico Fermi (1901-1958). What do we find if we go to smaller distances? Can we measure smaller distances? Such questions are not yet answerable. It has been suggested that the still unsolved mystery of nuclear forces may be unraveled by some modification of our idea of space, or measurement, at such small distances."⁴²

Obviously in all this we are back at problems of the canons of inquiry, but in the larger context of the canons of hermeneutics and of the transposition of the view associated with Kuhn.

How do we break forward to the needed modifications? Might you, at this stage, share seriously with me the notion that the needed modifications need prior modifications, modifications in the idea of oneself and of ourselves as measurers? What modifications? We are back with my old song and its context in Lonergan: self-study of the organism begins....⁴³ The song is to be sung with the support, the staff [Sanskrit, *stabh*, and all the bundle of later meanings are relevant, worth brooding upon] of W1, the first word of metaphysics.

Who is Feynman, and who are we that juggle towards the invention of the primitive ruler? More up-front, What are we that seek the forms of the realities of physics? There is a sense in which there is no realistic debate about the object of inquiry in physics. As Lonergan says more sweepingly about his view, common sense

⁴⁰Feynman, I, 5-9.

⁴¹Feynman, I, 5-6.

⁴²Feynman, I, 5-10.

⁴³*Insight*, 464[489].

is on our side, even if there is massive confusion about the number and character of the things of physics.

But it seems to me that the fullest turn to the subject inquiring, symbolized in an initial fashion in the first word, W1, is a key methodological turn towards sorting out the mess regarding times short or long, sizes big or small. Such a shift is a shift into a broad but precise explanatory perspective, and it freshens radically, discontinuously, the “open question” about the activity of measuring. We are not tackling that freshening in this *Cantower*, but only pointing suggestively to its need. Feynman, and you and I, are hierarchies of aggregates of aggregates etc. We have been over this ground before, yet I do not expect you to be at home in the horizon, that universe of discourse. So, reading in *Cantower XXIX* about the meaning of the semi-colon symbol “ ; ” is reading about a long inner climb that climbs away from axial muddling about Platonism and vitalism and reductionism.⁴⁴

The inner climb is something else, something way-out, something that seems quite foreign to the school that follows Lonergan. It needs a sub-community of crazies to generate a literature of prolonged experimentation in GEMb in different zones of science to take the climb out of that crazy community and make it a classroom project, a cultural presence.

To whom, then, am I talking when I describe Feynman as such a hierarchy? At the West Dublin workshop where we tackled the measuring business I avoided mentioning the explanatory perspective that was my universe of discourse, although I did pause over the strange position from which I spoke, and some resonated with that strangeness, pushing beyond, in their eyes and ayes, the homely room of our little sticks and our company as “a matter of meeting persons and dealing with things that

⁴⁴The problem of the aggreformic thinking - the meaning of “ ; ” - was raised in *Cantower VII* and tackled, but only in a modest way, in section 4 of *Cantower XXIX*.

are 'really out there'".⁴⁵ Certainly, I mentioned their molecularity and the neurodynamics of our efforts, but I could not push the group, with realistic efficiency, to include their "capacities and habits and acts of sensing and imagining under the sweeping rubric of conjugate potencies, forms, and acts."⁴⁶ Another day, perhaps. Maybe today, maybe with you.

So, the you that tackles the problem with the two sticks is a thing dominated by a schemes on the level u_m , schemes that ground certain reorientations of the organic hierarchy towards aligning (itself a tricky process to lift into metaphysical equivalence) the two *per-accidens* unities that are two sticks. Where are the ends of the real sticks that one *imagines* as aligned. Imagination must bow before the subjectivity of its simple frame of reference, nudging aside Euclid and Einstein, disputing Copenhagen's universe of discourse.

But we are getting quite far out. Sufficient, perhaps for the moment.⁴⁷

31.4 Lonergan's Chapter Five

Yet I would contend that we are simply edging towards the universe of discourse of Lonergan's work *Insight*. Are you in at least some limited agreement with this? Notice that, in raising this question and proposing this contention, I am muddling along, old style, rather than pushing for the precisions of functional specialization. In asking you to notice this I am drawing attention to the fact that I am no more successful at implementing this new context than the rest of Lonergan scholars of the first two generations. We, or should I say you of the next generation, must have the courage to attempt it badly. So, applying the canon of successive approximation to myself, I would note that my contention belongs in dialectic, as does your limited agreement. But, if I

⁴⁵*Insight*, 385[411]. This is the focus of attention in *Cantower XXXII*.

⁴⁶*Insight*, 513[537].

⁴⁷See note 50, below.

switch to foundational talk, then Lonergan slips out of the picture: I speak then directly, like Thomas does regularly in the body of his *Summa* articles. Foundational talk and fantasy are indeed my primary bent, but I do not see me following that bent in these *Cantowers*, except perhaps in 2010-11, when precise heuristic eschatological talk will reach forward riskily. I shall return to the problem of cultivating this shift - it is the heart of the entire project - in the final section here, and in more accurate and homely fashion in next year's focus on functionality. But meantime we continue our undifferentiated ramble round chapter five of *Insight*.

The movement through these last five *Cantowers* has likewise been a ramble, with a definite emphasis on pedagogical pointers. But two aspects of the movement are clear: the effort to contextualized these chapters a) in the non-moving context of the Lonergan of 1953, b) in the fuller context of his completed works. What I am talking about in this section is primarily a). In the final section b) will receive some attention, leading into the broader sweep of *Cantower XXXIII*.

I would hope that my contention is not in serious dispute, but certainly it is not one that is clearly accepted by my colleagues. Since Easter of 1961 I have had conversations with Lonergan about the emergence of the stuff of *Insight*, conversations that filled out the standard scholarly work on the subject with aspects of his concrete struggle. How far had he got towards *Insight* before he began? Michael Shute and William Mathews give us the flavour of his reach, his starter's vision. But perhaps you might get that flavour simply by revisiting "Finality, Love, Marriage", where, as he remarked to me once, "I already had emergent probability". His doctorate thesis as well as old unpublished notes show that he had soaked up Aristotle and stepped beyond him, indeed beyond Einstein, on the matter of time and motion.⁴⁸

⁴⁸I draw attention to one significant page on motion in *Phenomenology and Logic*, pp.13, note 13: Aristotle's view of motion is shed in favour of what is talked about on *Insight* 437[462]. But I am raising here a large topic related to our struggle with his view of energy skimmed over in *Cantower XXX*. At least the skimming there brings out the

But I must pass on, winding up my content by drawing yours to the discomfoting conclusion of the seventh chapter of *Insight*: “May we note, before concluding that, while common sense relates things to us, our account of common sense relates it to its neural basis and relates aggregates and successions of instances of common sense to one another”.

What need to emerge is a linguistic pragmatism pointing towards the manner in which theory and common sense, within GEMb, are to exercise dominion over the neural basis through the genesis of neural demand symbolic functions and functionals. More on this in section 3 of *Cantower XXXIII*.

But let me return to more elementary reflections, and parallel the discussion of Feynman’s fifth chapter by quoting the first paragraph of *Insight*’s chapter five. Like Feynman’s, it deserves a sort of isolated intussusception.

“For a variety of reasons attention is now directed to the notions of space and time. Not only are these notions puzzling and so interesting,, but they throw considerable light on the precise nature of abstraction, they provide a concrete and familiar context for the foregoing analyses of empirical science, and they form a natural bridge over which we may advance from our examination of science to the examination of common sense.”

A first brooding pause might focus on “and so interesting”. You may recall - shuffle back a few pages - my bracketing of the Feynman first chapter with reflections on **interesting**, and on our battle with impatience during our water experiments and our measuring ramblings. Do you associate puzzling with impatience or with contemplative interest, the odd sort of attitude that almost hopes the puzzle will remain a puzzle? Indeed, profoundly, the puzzle always should remain a puzzle: the circle remains elusive, and the *Pathetique* is a permanent invitation. And is not chapter five of

fact that he had digested the universe of discourse represented by Lindsay and Margenau’s book: quite a meal, as anyone who has attempted it knows. Supplementary fragments in his archives await attention.

Insight a sort of piano sonata?

I recall one drunken evening with Lonergan finding him standing in another room, conducting a Beethoven piano concerto to which we were listening, remarking “I am Ozawa”. Sergei Ozawa was in fact the conductor. But this chapter of *Insight* is no concerto: there was no orchestra. Does the chapter throw considerable light on abstraction for you? Does it provide a familiar context? Is it a bridge you have crossed that saves you from misreading, controls you in your reading of, chapter 6?

The struggle to answer these questions with some degree of discernment will carry you towards a narrative positioning: but I would suggest that very few of these earlier generations of practitioners of GEMb can answer with three firm Yeses.

As in the previous section, so here I would note that the author is concerned with measurement, but in the present case the drive goes in another direction from Feynman. The drive is governed by the “actual context of questions and answers”, by a universe of discourse into which the reader is being invited by the entire book. Small or short, long or large are not the issues, but the double discovery: that measurement is a humble procedure led darkly by discoveries such as the strange constancy of dispersiveness of photons;⁴⁹ that the distant goal of the humble messing is the forms of things the acts - secondary determinations - of which give a topology of Space and Time, but only when they are meshed into an emergent probability that adds the context for the richer topologies of higher things. The Space-Time of any primate brain is a wonder beyond galactic glory.

There is no point in venturing further in this descriptive summary of the adventure of chapter five of *Insight*. The luminous search for invariants of physics, the forms of the cluster of elementary things, has yet to emerge out of the present muddling. The central block is confusion about measurement. So, it is something that

⁴⁹Putting in the phrase “dispersiveness of photons” instead of just mentioning the velocity of light is not the refining of an answer but the raising of further questions, such as the possibility that photonic reality is a reality of conjugation.

we must return to as we venture, later on, into the morass of problems surrounding Quantum Mechanics.⁵⁰ The venture is named in the headings of a sequence of future *Cantowers*. With luck, and I would hope collaborative assistance, we can move towards a fuller accurate heuristic of Quantum Mechanics, enlarge the context of discussion by pushing forward into methodological precisions both about energy, entropy and real geometry and about the integral Anthropic Principles,⁵¹ lift into the relatively secure zone of Quantumelectrodynamics⁵² on the road to the core, the nucleus of the matter, the zone named Quantumchromodynamics.⁵³ Then we may be in a position, poosition,

⁵⁰*Cantowers XLII - XLV*. The first of these, titled "Quantum Mechanics and Measurement" lifts our present simple approach to measurement, and the elementary approach of chapter five of *Insight*, into the fuller contemporary problematic. Some of my readers may be interested in pushing along with me, so I note here the few books that I have to hand. Few: my work is unfunded and besides this I am 100 kilometers from the nearest university library. So the books I mention are not perhaps the best but the cheapest conveniently available. Lindsay and Margenau's book, of course, remains key. A type of updated shot at the same thing, but not as philosophical, is Ian D. Lawrie, *A Unified Grand Tour of Theoretical Physics*, Bristol, 1998. I have found it convenient to use the series of books associated with the name Walter Greiner. In particular there are the three books, Walter Greiner, *Quantum Mechanics, An Introduction*, Springer pb, 2001; An Walter Greiner and Joachim Reinhardt, *Quantum Electrodynamics*, Springer pb, 2003; Walter Greiner, Stefan Schramm and Eckhart Stein, *Quantum Chromodynamics*, Springer pb, 2002. A context - but heavy! - for the updating of chapter 5 of *Insight* are Lochlainn O'Raiferteagh, *Group Structure of Gauge Theory*, Cambridge U.P., 1986; *The Dawning of Gauge Theory*, Princeton, 1997. A useful introduction to quantum mechanics is Feynman, vol. III. The three volumes of Feynman that I use here regularly are, I would say, essential for anyone serious about teaching the first five chapters of *Insight*.

⁵¹*Cantowers XLVI - L*. The problem of various strong and weak forms of the Anthropic Principle was raised in *Lack in the Beingstalk*, pp. 103-105. It will be dealt with more thoroughly in *Cantower XXXVIII : "Anthropic Principles"*.

⁵²*Cantowers LIV - LVII*. In that context I hope that we may reach forth light on both pedagogy and popularization, a topic raised at the end of the third chapter of *Lack in the Beingstalk*.

⁵³*Cantowers LX-LXII*.

to sublimate astronomy into the context of a heuristic eschatology.

So I conclude my evidently unsatisfactory visit to chapter five of *Insight*. Later generations will, perhaps, find my musings amusingly obvious. What is remarkable about Lonergan's achievement of more than fifty years ago is that he was right on in his reach for the physics underpinning "The Unity of the Proportionate Universe".⁵⁴ "the merely coincidental becomes space-time through the interrelations of gravitation and electromagnetic theory,"⁵⁵ and he would no doubt have added the theories of the other elementary forces were he writing in this century.

31.5 Thematizations and Symbolizations

It seems appropriate to begin this section with the concluding sentence of the article of Michael Vertin to which I already referred. He certainly has various other suggestions and pointers in this work, to which I shall return presently, but this is a fundamental conclusion that is common to us, though perhaps reached and viewed differently.⁵⁶ "A methodical prerequisite for anyone who would be a systematically skilled interpretative or determinately positive investigator is *specifically expressional self-appropriation*."⁵⁷

Vertin and I differ on a range of topics of which he treats, but here I am reaching

⁵⁴*Insight*, 509[533].

⁵⁵*Ibid.*

⁵⁶The functional context of sorting this out is that described on page 250 of *Method in Theology*. This applies to the comments that occur immediately in the text, regarding differences, relevant convergence, being on the right track. Certainly Vertin and I can enter into dialogue, or a third party might join us, or comment, but the functional way, the way of efficient metaphysics, is the brilliantly proposed *Tao* of Lonergan. We will focus on that in as elementary a manner as possible in *Cantower XXXV*: "The Focus on Function"

⁵⁷Vertin, 86; italics his.

for a relevant convergence. Are we on the same track? I would say that I am moving on a more simple-minding level. Yet I take a stand on his contention, on the need for specifically expressional self-appropriation, and I juggle with his text to see where we move suggestively in tandem. Earlier he writes of the concrete goal of systematic study and remarks that “Many of my expressions, especially linguistic ones, are indeed intended to report what I have come to know about the things I have systematically studied.”⁵⁸ The heading of the section from which I quote is “The Eight Functionally Specialized Methods”, so it is not a huge twist to envisage that the expressions referred to are reports to members of that community.

Vertin here is in the process of patterning the collaborative operation of the functional specialties, and indeed he concludes this section with a diagram. Here again, I note a relevant convergence. Vertin is one of the few students of Lonergan who seems to agree with Lonergan when he writes of, and uses, diagrams in relation to the control of meaning. What Vertin writes, then, and how he writes, suggests a lift of Lonergan studies, a lift towards what we might both agree to call - with a broader, less subtle, meaning than he is struggling with - expressional self-appropriation. His diagram - he would say - is one that the systematizer should bear in mind. His diagram, titled “The Operational pattern of Functionally Specialized Interpretative Methods”, looks like half of a chess board.

This morning my wife Sally, pattering around with a chess board and a book on chess as we enjoyed the August sun, inspired a convenient hint of what I am pushing towards here. At the time I was thinking of the neurodynamics of functional specialization, and we shall get around to that. But let me throw out the image, a mild expression of expressional self-appropriation, that drafts is to chess what *Insight's* metaphysical venture is to functional specialization. You may play out this parallel in various suggestive ways. The pieces in drafts all have the same function (until

⁵⁸Vertin, 79.

crowned). The back line members in chess, on the other hand, have different functions. Might we think of the Queen and King, in positions 4 and 5, as somehow suggestive of the functions of dialectic and foundation? And what of the pawns? I have my own suggestions about them, and about the promotional operation called "queening". But let's leave it at that. What I am interested in is the simple image-lift and the fact that, on both Vertin's view and his performance, "what I am doing when I am *generating* a deed, a text", we need such lifts for expressional self-appropriation - even in such a "determinately positive investigator" as Feynman, or anyone stuck in the clock paradox. But certainly we need the lift in implementing Lonergan's suggestion of functional specialization.

Back to the neurodynamics of functional specialization. It is a huge topic that we have been circling round explicitly certainly since *Cantower IV*, where we talked both of the molecules of specialists and of the tower enterprize. On the same day of the West Dublin conference that had us juggling with two sticks I brought forth an image-lift that I now relate to Vertin's, and to the chess board. If you can image with me, or do a little scissors and paste, I took the top line of his Figure:

FS1 FS2 FS3 FS4 FS5 FS6 FS7 FS8

or, if you like the back line of the chess board, cut it out, twisted it round, and made a tower. I topped the tower with a previous diagram, which I add here in a footnote: and I must add the bright fact that the diagram, photocopied from chapter four of the book *Process*, fitted my tower perfectly! The topping diagram in fact is available on page 110 of *A Brief History of Tongue*; the tower walls are made of a cut-out from the diagram on page 124 - it is the diagram I have named W3. What corresponds to the Vertin line, or the chessboard line, is the long rectangle containing the eight subsections. Is not this an self-expression that hits the mark? The mark-hitting is molecular: and so we reach the question of neurodynamics. "What am I doing when I am *generating a deed or a product*

?"⁵⁹ The product is the image in you, a neurodynamic reality. That neurodynamic reality, like Proust's tasted tea, can move from episodic memory to an ethos dance in the bones.⁶⁰ But I am leaping altogether ahead in my *Cantower* effort. Does it help you to think of the chessboard diagram as present in the chess mistress, or the periodic table neuro-echoing in a conference room of chemists? And is not such inner structuring through symbolization a "Doing Justice to What We Know"?⁶¹

The section above, on logic of discourse, was leading to the position that "Doing Justice to What we Know in Physics" requires a like inner structuring that would control, differentiate, mesh luminously, the various universe of discourse, mesh them indeed in the complex unity I have been describing since *Cantower VII*. The unity is the unity of hodic method that sublates metaphysics into efficient beauty.⁶² So, Lonergan's answer to the clock paradox needs a structure of cultural recycling if we are to breath justice into the global search.⁶³

Before I say a little more about Vertin's searchings and about the recycling let me turn to the other article that raises the issue of thematization: Louis Roy O.P, "Can We Thematize Mysticism?" Again, I find convergence, and again I can quote the

⁵⁹Vertin, 86; italics his.

⁶⁰More of this in *Cantower XL*.

⁶¹I quote the subtitle of a book by Hao Wang, already mentioned in relation to levels of control in languages and meta-languages. The book is *Beyond Analytic Philosophy. Doing Justice to What We Know*, MIT Press, 1988, and it raises questions related to the present issue. I shall return to it in *Cantower LXVI*.

⁶²The lead on this is Lonergan's pointer regarding the unity of a science through efficiency given in *Topics in Education*, 160. I have been drawing attention to it for some time, but it is gradually moving into centre stage in my view of metaphysics, and it should stride forth in its mystical beauty in *Cantower XXXV*.

⁶³The full yearning global sweep is described in chapter 3 of McShane, *Pastkeynes Pastmodern Economics: A New Pragmatism*. Axial Press, Halifax, 2002.

concluding words with agreement. “The new science of mysticism that has progressively emerged in the course of the twentieth century, and that might flower in the twenty first, will have to face the tall order of dialectically appraising varied counterpositions and of strengthening its fundamental position”.

Obviously I can only skim along here. In the previous paragraph Roy remarks “The forms of expression that pertain to the symbolic genre can benefit enormously from sound philosophy and theology. Artists and writers need an adequate interpretative frame of reference for their expressions to be more than solipsistic ejaculations or wild speculation”. But the topics of the artists’ needs and of the dialectic task has been driving force of these 117 Cantowers.⁶⁴ The sweep of Roy’s reflections up to section 5, “The Possibility of Thematization” and section 6, “The Scope of Thematization”, which mesh with my own reachings.

But I would see the possibility of thematization as pragmatically pivoting on the process of re-cycling that I describe, and I would see the scope of thematization as a massively integral global winding towards general foundations. Moreover, I would see the Christian categorial thematization as rising to a rich revitalization of Thomas’ searchings for the vestigial Trinitarian tonalities of finitude⁶⁵ that would mesh with the divinity’s mysterious⁶⁶ “Doing Justice to What We Know” in the free speaking of a

⁶⁴ I would draw attention Especially to *Cantower VIII*, “Slopes: An Encounter”, which deals with the pragmatic convergence of foundational issues (especially see the diagram on p. 13) and in particular points to the problem of sublating the critical reflections of Seamas Heaney (p.17, note 48).

⁶⁵Ia, q. 45, a.7, “Whether it is necessary to find in creatures a vestige of the Trinity”.

⁶⁶A context is *Understanding and Being*, a very moving reflection of Lonergan on the tensions of the divine that he gave in response to a question about suffering: 374-377.

Cosmic Word.⁶⁷

But, very obviously, I am moving into the complex topics of a richer foundations, a foundations moreover that would leap away from present commonsense disputes about religious experience to a context that could sublimate the chemistry of contemplative brain-reaching. Further, I would claim foundationally that the context would involve the anaphatic tradition in a massive kataphatic renewal of contemplation, one of integral listening to the world of flowers and photons.

What then of the essays of Roy and Vertin and of this *Cantower*? I wrote above of relevant convergence, and noted that the relevance pivoted on recycling. Beginning with *Cantower XXXIV* we will be musing over functionality and the luminous functioning of the specialties. Neither Roy nor Vertin nor I are at present writing within that luminosity. What might it be to do so? Obviously I cannot in a paragraph sweep us towards a grip on the distant achievement of a later generation. The neurodynamically intussuscepted tower that I drafted earlier would lift our communal searchings towards integral answers to the question "What am I doing when I am generating a product", whether that product be mystical of Minkowskian.

While the character of the recycling is a future **Cantower** topic, a little imaging may help here. It is *per accidens* that I bring these three essays together here - within the low probabilities of products of fractions. But suppose we changed our tune, our tone, our board game? Suppose the global community were struggling for light in a functional fashion, so that we wrote in a manner that located our effort precisely in a human relay race of recycling, a Vortex, *La Spirale*? Then the probabilities would lift into the context of sums of fractions: a rolling tone would gather *Nomos* to reach cumulative and progressive results in global hominization.

That gathering process would recycle our three efforts, functionally identified

⁶⁷See further, the conclusion of *Cantower XXXVIII*. But it is obviously a central topic of the concluding *Cantowers*.

and trimmed. We would not be simply debating with each other, or ignoring each other, or being published in a manner that grounds neglect. We would be part of the unity, beauty, efficiency, of the new metaphysics invented by Lonergan to give meaning to the word "implementation" within his original definition. As it is, Lonergan studies continues to play drafts. But History is on Lonergan side: the Chessman Cometh.

It seems good at this stage to move back to the simpler tone of the first section, or if you like to the apparently⁶⁸ elementary tone of chapter 9 of *Insight*. "The most general aspects of cognitional context are represented by logic and dialectic. Logic is the effort of knowledge to attain the coherence and organization proper to any stage of its development".⁶⁹

Last night I watched and listened as a young woman and her fiancé and her brother (the accompanist) wove us through some of wonders of Mozart and Bellini and Weber.⁷⁰ Had they conceptualized what they were to do? Oh yes: like Quinn with the *Pathetique*, they were chemoskinned in detailed conceptualization, abstract only in that the place in the room was irrelevant. The new control of meaning has to grow into such 'characterization' in this millennium.⁷¹ If the followers of Lonergan are not to remain breathless and late, then there is need for a suspicion of a missing leap. That is our

⁶⁸This appearance of being elementary allowed me to use the chapter in introductory courses during the decades 1974-1993. So, having got as far as *Wealth of Self*, chapter 5, I found it to be a good way towards a logic of what we had already achieved. But it is in fact a very subtle chapter. For instance, try thinking, talking, teaching your way round the two paragraphs on the borrowed content of judgment: 275-6[300-301].

⁶⁹*Insight*, 276[301].

⁷⁰Since they will reach fame some day, I might as well mention their names so that you may buy their recordings! Alison and Ian Bent, with Joe Angelo, came to our humble church from Banff Arts Centre and other global zones.

⁷¹I am, of course, pointing towards the full incarnational meaning of character that has been a regular topic for us.

central difficulty. In the next *Cantower* I shall be treating of a core cultural difficulty, weaving it round the strange part of Joyce's *Ulysses* that deals with birth of child and language. The problem of central difficulty is amusing captured in an anecdote of my own obtuseness relating to the beginning of that chapter in Joyce, and its relating may help in your hermeneutics of suspicion.

The Joyce chapter begins with a type of incantation:

"Deshil Holles Eamus. Deshil Holles Eamus. Deshil Holles Eamus"⁷²

I do not wish to get us lost in detail.⁷³ Holles is the street where the maternity hospital still is; 'eamus' is Latin for 'let us go'; 'deshil' means in Gaelic, roughly, 'go round to the right'. So, a nice lead in to the hospital episode. But it took me more than three decades to slip the 's' from Holles to eamus, to get a new invitation, the Joycean chuckle of a self-naming. Seamus: James. Go round all James. It could be taken as a slogan for *Finnegans Wake*. Or even for *Method in Theology*, as I did as I laced *Finnegans Wake* into the Florida paper dealing with functional specialization in musicology.⁷⁴

Over thirty years, then, I was missing a pointing, what you might call an obvious pointing. But does this not give hope for a new sighting of functional specialization? A sighting, after more than thirty years of *Method*, that would stir the treacle of conventional discussion towards the vortex of a global efficiency in the control of meaning? But more on that in the next 86 *Cantowers*. Still, it amuses me to discover

⁷²James Joyce, *Ulysses*, Penguin, 1986, 314.

⁷³I dealt with this first in *Lack in the Beingstalk*, at the end of both section 3.2 and section 3.4 (see notes 47 and 86 there).

⁷⁴The two papers I wrote for the Florida Conference were not published in the Florida Volumes, but separately, first as a small book, *Plants and Pianos*, later included in *The Shaping of the Foundations* as the first two chapters. *Plants and Pianos*, and the later two chapters, used the device of quotations from *Ulysses* and *Finnegans Wake* to parallel the two papers and Joyce's two books with the two books *Insight* and *Method in Theology*.

now and share a humorous title for the whole project: *Roun Doll, Home James*.⁷⁵

⁷⁵The 'home' is pretty obvious (see also *Method in Theology*, 14, 350-1; add the eschatology of the final *Cantowers*). 'Roun' is middle English for the modern English 'rune' and the old English 'run'. The Gaelic for secret is 'run', pronounced 'rue-n') Thus are mixed the tone of mystery with all the meanings of 'run' and 'round'. 'Doll'? One meaning is the obvious slang for a young woman: no offence meant, but rather a recall of the hope of *Cantowers IV* (dealing with Candace Pert's searchings) and *XXVI* ("Refined Woman and Feynman") for a feminist lift out of the axial period. Again, a range of overtones: think of Dolling up, dressing up in a new mode; think of 'dolly', the transport structure for heavy objects, an image that supplements the image of a hod. Perhaps the Lonerganesque song should be a cross-dressing burlesque "Hello Dolly!" At all events, I wind round to my original cantos title, since the Finnish for poem or canto is *runo*. And my final Webster dictionary entry on 'rune' reads: "3. a) Finnish or Old Norse poem or canto; b) [Poet.] any poem, verse or song, especially one that is mystical or obscure". As Joyce wrote to a friend once: "If I can throw any further obscurity on the matter let me know".